

**APPENDIX D**  
***Biological Resources Technical Report***



**DRAFT**

**Biological Resources Technical Report for the  
Municipal Waterways Maintenance Plan  
City of San Diego, California  
PTS #616992**

*Prepared for:*



**Transportation & Storm Water Department  
Storm Water Division –  
Operations & Maintenance Section**

2781 Caminito Chollas MS46  
San Diego, California 92105  
*Contact: Anne Jarque*

*Prepared by:*

**DUDEK**

605 Third Street  
Encinitas, California 92024  
*Contact: Scott Gressard*

**NOVEMBER 2019**



# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS

<b><u>SECTION</u></b>	<b><u>PAGE NO.</u></b>
<b>ACRONYMS AND ABBREVIATIONS .....</b>	<b>XXI</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>XXIII</b>
<b>1 INTRODUCTION.....</b>	<b>1</b>
1.1 Purpose of the Report.....	1
1.2 Project Description and Location.....	2
1.3 Regulatory Setting.....	16
1.3.1 Federal .....	16
1.3.2 State .....	18
1.3.3 Local .....	22
<b>2 SURVEY METHODS AND LIMITATIONS.....</b>	<b>29</b>
2.1 Literature Review .....	29
2.2 Field Reconnaissance .....	30
2.2.1 Resource Mapping .....	34
2.2.2 Flora and Fauna .....	34
2.2.3 Wetland Delineation .....	35
2.3 Focused Surveys for Sensitive Biological Resources .....	36
2.3.1 Focused Riparian Avian Surveys.....	37
2.3.2 Focused Sensitive Plant Surveys .....	39
2.4 Survey Limitations.....	39
<b>3 RESULTS .....</b>	<b>41</b>
3.1 Physical Characteristics .....	41
3.1.1 San Dieguito Watershed.....	41
3.1.2 Los Peñasquitos Watershed .....	42
3.1.3 Mission Bay Watershed .....	47
3.1.4 San Diego River Watershed.....	51
3.1.5 Pueblo San Diego Watershed .....	58
3.1.6 Sweetwater Watershed .....	69
3.1.7 Otay Watershed.....	70
3.1.8 Tijuana River Watershed .....	71
3.2 Biological Resources .....	75
3.2.1 Vegetation Communities.....	76
3.2.2 Jurisdictional Resources .....	94

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

<b><u>SECTION</u></b>	<b><u>PAGE NO.</u></b>
3.2.3 Floral Diversity .....	104
3.2.4 Wildlife Diversity .....	105
3.2.5 Sensitive Plant Species.....	106
3.2.6 Sensitive Wildlife Species .....	112
3.2.7 Wildlife Corridors and Habitat Linkages.....	118
<b>4 IMPACTS ANALYSIS .....</b>	<b>121</b>
4.1 Definition of Impacts and Significance.....	121
4.1.1 Direct Impacts.....	122
4.1.2 Indirect Impacts.....	130
4.1.3 Environmental protocols and Mitigation Measures .....	130
4.2 Direct Impacts in the San Dieguito Watershed .....	132
4.2.1 Green Valley Creek – Pomerado Facility Group .....	132
4.2.2 Green Valley Creek – Paseo del Verano Facility Group .....	134
4.2.3 Direct Impacts to Sensitive Plant Species in the San Dieguito Watershed ...	136
4.2.4 Direct Impacts to Sensitive Wildlife in the San Dieguito Watershed .....	136
4.3 Direct Impacts in the Peñasquitos Watershed.....	137
4.3.1 Peñasquitos Lagoon – Industrial Facility Group.....	137
4.3.2 Peñasquitos Lagoon – Tripp Facility Group .....	139
4.3.3 Los Peñasquitos Canyon Creek – Black Mountain Facility Group .....	141
4.3.4 Los Peñasquitos Canyon Creek – 5-805 Facility Group .....	144
4.3.5 Soledad Canyon Creek – Sorrento Facility Group .....	146
4.3.6 Carroll Canyon Creek – Carroll Facility Group .....	148
4.3.7 Soledad Canyon Creek – Flintkote Facility Group .....	150
4.3.8 Soledad Canyon Creek – Dunhill Facility Group .....	152
4.3.9 Chicarita Creek – Via San Marco Facility Group.....	154
4.3.10 10450 Sorrento Valley Road (HW04220) Structure .....	155
4.3.11 Direct Impacts to Sensitive Plant Species in the Peñasquitos Watershed .....	156
4.3.12 Direct Impacts to Sensitive Wildlife in the Peñasquitos Watershed.....	157
4.4 Direct Impacts in the Mission Bay Watershed .....	161
4.4.1 Torrey Pines – Torrey Facility Group.....	161
4.4.2 Alta La Jolla – Vickie Facility Group .....	162
4.4.3 Mission Bay – MBHS Facility Group.....	164

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

<b><u>SECTION</u></b>		<b><u>PAGE NO.</u></b>
	4.4.4 Mission Bay – Mission Bay Drive Facility Group .....	166
	4.4.5 Miramar – Engineer Facility Group .....	168
	4.4.6 Tecolote Creek – Chateau Facility Group .....	170
	4.4.7 Tecolote Creek – Genesee Facility Group .....	171
	4.4.8 Direct Impacts to Sensitive Plant Species in the Mission Bay Watershed ....	173
	4.4.9 Direct Impacts to Sensitive Wildlife in the Mission Bay Watershed .....	174
4.5	Direct Impacts in the San Diego River Watershed .....	175
	4.5.1 San Diego River – Nimitz Facility Group .....	175
	4.5.2 San Diego River – Valeta Facility Group .....	177
	4.5.3 Murphy Canyon Creek – Stadium Facility Group .....	179
	4.5.4 Alvarado Canyon Creek – Mission Gorge Facility Group .....	182
	4.5.5 Alvarado Canyon Creek – Alvarado Facility Group .....	185
	4.5.6 Murray Reservoir – Cowles Mountain Facility Group .....	187
	4.5.7 Norfolk Canyon Creek – Fairmount Facility Group .....	189
	4.5.8 San Diego River – Camino del Rio Facility Group .....	191
	4.5.9 1331 Washington (OT03537) Structure .....	193
	4.5.10 1277 Camino Del Rio South (IN10399) Structure .....	195
	4.5.11 5505 Friars Road (OT05573) Structure .....	197
	4.5.12 1660 Hotel Circle North (OT03321) Structure .....	198
	4.5.13 901 Hotel Circle South (HW02440) Structure .....	200
	4.5.14 2087 Hotel Circle South (HW02437) Structure .....	202
	4.5.15 Direct Impacts to Sensitive Plant Species in the San Diego River Watershed .....	204
	4.5.16 Direct Impacts to Sensitive Wildlife in the San Diego River Watershed .....	205
4.6	Direct Impacts in the Pueblo San Diego Watershed .....	212
	4.6.1 Washington Canyon Creek – Washington Facility Group .....	212
	4.6.2 Mission Hill Canyon Creek – Titus Facility Group .....	214
	4.6.3 Maple Canyon Creek – Maple Facility Group .....	216
	4.6.4 Powerhouse Canyon Creek – Pershing Facility Group .....	217
	4.6.5 San Diego Bay – 28th St Facility Group .....	219
	4.6.6 Chollas Creek – National Facility Group .....	221
	4.6.7 Chollas Creek – Rolando Facility Group .....	223
	4.6.8 Chollas Creek – Martin Facility Group .....	225
	4.6.9 Chollas Creek – J St Facility Group .....	227

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

<u>SECTION</u>	<u>PAGE NO.</u>
4.6.10 Auburn Creek – Home Facility Group .....	229
4.6.11 Auburn Creek – Wightman Facility Group.....	231
4.6.12 Chollas Creek – Megan Facility Group .....	233
4.6.13 Chollas Creek – 54th St Facility Group .....	235
4.6.14 South Chollas Creek – Southcrest Facility Group .....	237
4.6.15 South Chollas Creek – Euclid facility group.....	239
4.6.16 South Chollas Creek – Federal Facility Group.....	241
4.6.17 South Chollas Creek Encanto Branch – Castana Facility Group .....	243
4.6.18 South Chollas Creek Encanto Branch – Imperial Facility Group.....	245
4.6.19 South Chollas Creek Encanto Branch – Jamacha Facility Group .....	247
4.6.20 Paleta Creek – Cottonwood Facility Group .....	249
4.6.21 Paleta Creek – Solola Facility Group.....	251
4.6.22 3644 Roselawn (OT03694) Structure .....	253
4.6.23 4202 J Street (HW04013) Structure .....	254
4.6.24 1206 Goodyear (OT04671) Structure.....	256
4.6.25 Direct Impacts to Sensitive Plant Species in the Pueblo San Diego Watershed .....	257
4.6.26 Direct Impacts to Sensitive Wildlife in the Pueblo San Diego Watershed ....	258
4.7 Direct Impacts in the Sweetwater Watershed.....	266
4.7.1 Sweetwater River – Parkside .....	266
4.7.2 Direct Impacts to Sensitive Plant Species in the Sweetwater Watershed.....	267
4.7.3 Direct Impacts to Sensitive Wildlife in the Sweetwater Watershed.....	268
4.8 Direct Impacts in the Otoy Watershed .....	268
4.8.1 Nestor Creek – Nestor Facility Group .....	268
4.8.2 Nestor Creek – Outer Facility Group .....	274
4.8.3 Direct Impacts to Sensitive Plant Species in the Otoy Watershed .....	275
4.8.4 Direct Impacts to Sensitive Wildlife in the Otoy Watershed .....	275
4.9 Direct Impacts in the Tijuana River Watershed.....	278
4.9.1 Tijuana River – Pilot & Smuggler’s Facility Group.....	278
4.9.2 Tijuana River – Tocayo Facility Group .....	280
4.9.3 Tijuana River – Smythe Facility Group .....	282
4.9.4 Spring Canyon Creek – Cactus Facility Group.....	285
4.9.5 Tijuana River – Siempre Viva Facility Group.....	288
4.9.6 Tijuana River – La Media Facility Group.....	290

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

<b><u>SECTION</u></b>	<b><u>PAGE NO.</u></b>
4.9.7 Direct Impacts to Sensitive Plant Species in the Tijuana River Watershed...	292
4.9.8 Direct Impacts to Sensitive Wildlife in the Tijuana River Watershed.....	292
4.10 Impacts to Wildlife Corridors and Habitat Connectivity .....	295
4.11 Indirect Impacts.....	296
4.11.1 Indirect Impacts to Vegetation Communities and Jurisdictional Aquatic Resources .....	296
4.11.2 Indirect Impacts to Sensitive Plant Species.....	298
4.11.3 Indirect Impacts to Sensitive Wildlife Species .....	298
4.12 Cumulative Impacts .....	299
4.13 Consistency with the Multiple Species Conservation Program .....	300
4.14 Deviations to Environmentally Sensitive Lands Regulations .....	318
<b>5 ENVIRONMENTAL PROTOCOLS AND MITIGATION MEASURES.....</b>	<b>323</b>
5.1 Environmental Protocols.....	323
5.2 Sensitive Vegetation Communities and Jurisdictional Aquatic Resources .....	328
5.2.1 San Dieguito Watershed .....	336
5.2.2 Peñasquitos Watershed .....	338
5.2.3 Mission Bay Watershed .....	354
5.2.4 San Diego River Watershed.....	364
5.2.5 Pueblo San Diego Watershed .....	388
5.2.6 Sweetwater Watershed .....	424
5.2.7 Otay Watershed.....	425
5.2.8 Tijuana River Watershed .....	430
5.3 Sensitive Plant Species .....	442
5.4 Sensitive Wildlife Species .....	443
5.5 Mitigation Measures for Indirect Impacts .....	448
5.5.1 Sensitive Wildlife Species .....	449
5.5.2 Water Quality .....	451
<b>6 REFERENCES.....</b>	<b>453</b>

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

### PAGE NO.

#### **TABLES**

1-1	Watershed Management Areas and Watersheds/Hydrologic Units in the City of San Diego .....	2
1-2	Proposed Channel and Ditch Facility Maintenance Plans by Watershed, Substrate, and Coastal Zone .....	4
1-3	Basin Facility Maintenance Plans by Watershed .....	14
1-4	Structure Facility Maintenance Plans by Watershed.....	15
2-1	Schedule of Field Reconnaissance Surveys .....	30
3-1	Sensitive Biological Resources Data Used For Constraints Analysis.....	75
3-2a	Wetland Vegetation Communities and Land Cover Types in MWMP study area .....	77
3-2b	Upland Vegetation Communities and Land Cover Types in MWMP study area .....	84
3-3a	Potential Jurisdictional Non-Wetland Aquatic Resources in the MWMP study area .....	95
3-3b	Potential Jurisdictional Wetland Aquatic Resources in the MWMP study area .....	97
3-4	Floral Diversity Within the MWMP study area .....	105
3-5	Wildlife Diversity within the MWMP Study Area .....	106
4-1	Significance of Impacts to Vegetation Communities and Jurisdictional Resources.....	125
4-2a	Sensitive Plant Species Mitigation .....	126
4-2b	Sensitive Wildlife Species Mitigation .....	129
4-3	Summary of Potentially Significant Impacts and Relevant CEQA Threshold of Significance .....	131
4-4a	Wetland Vegetation Community and Jurisdictional Resource Impacts in the Green Valley Creek – Pomerado Facility Group .....	133
4-4b	Upland Vegetation Community and Land Cover Impacts in the Green Valley Creek – Pomerado Facility Group .....	134
4-5a	Wetland Vegetation Community and Land Cover Impacts in the Green Valley Creek – Paseo del Verano Facility Group.....	135
4-5b	Upland Vegetation Community and Land Cover Impacts in the Green Valley Creek – Paseo del Verano Facility Group.....	136
4-7a	Wetland Vegetation Community and Land Cover Impacts in the Peñasquitos Lagoon – Industrial Facility Group.....	138
4-7b	Upland Vegetation Community and Land Cover Impacts in the Peñasquitos Lagoon – Industrial Facility Group.....	139

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

<b><u>SECTION</u></b>	<b><u>PAGE NO.</u></b>
4-8a	Wetland Vegetation Community and Land Cover Impacts in the Peñasquitos Lagoon – Tripp Facility Group ..... 140
4-8b	Upland Vegetation Community and Land Cover Impacts in the Peñasquitos Lagoon – Tripp Facility Group ..... 141
4-9a	Wetland Vegetation Community and Land Cover Impacts in the Los Peñasquitos Canyon Creek – Black Mountain Facility Group..... 142
4-9b	Upland Vegetation Community and Land Cover Impacts in the Los Peñasquitos Canyon Creek – Black Mountain Facility Group..... 143
4-10a	Wetland Vegetation Community and Land Cover Impacts in the Los Peñasquitos Canyon Creek – 5-805 Basin Facility Group..... 145
4-10b	Upland Vegetation Community and Land Cover Impacts in the Los Peñasquitos Canyon Creek – 5-805 Basin Facility Group..... 146
4-11a	Wetland Vegetation Community and Land Cover Impacts in the Soledad Canyon Creek – Sorrento Facility Group ..... 147
4-11b	Upland Vegetation Community and Land Cover Impacts in the Soledad Canyon Creek – Sorrento Facility Group ..... 148
4-12a	Wetland Vegetation Community and Land Cover Impacts in the Carroll Canyon Creek – Carroll Facility Group..... 149
4-12b	Upland Vegetation Community and Land Cover Impacts in the Carroll Canyon Creek – Carroll Facility Group..... 150
4-13a	Wetland Vegetation Community and Land Cover Impacts in the Soledad Canyon Creek – Flintkote Facility Group ..... 151
4-13b	Upland Vegetation Community and Land Cover Impacts in the Soledad Canyon Creek – Flintkote Facility Group ..... 151
4-14a	Wetland Vegetation Community and Land Cover Impacts in the Soledad Canyon Creek – Dunhill Facility Group ..... 153
4-14b	Upland Vegetation Community and Land Cover Impacts in the Soledad Canyon Creek – Dunhill Facility Group ..... 153
4-15a	Wetland Vegetation Community and Land Cover Impacts in the Chicarita Creek – Via San Marco Facility Group..... 154
4-15b	Upland Vegetation Community and Land Cover Impacts in the Chicarita Creek – Via San Marco Facility Group..... 155
4-16	Upland Vegetation Community and Land Cover Impacts at the 10450 Sorrento Valley Road (HW04220) Structure..... 156

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

<b><u>SECTION</u></b>	<b><u>PAGE NO.</u></b>
4-18	Direct and Indirect Impacts to Sensitive Wildlife by Facility Group and Facility Segment within the Peñasquitos Watershed ..... 157
4-19a	Wetland Vegetation Community and Land Cover Impacts in the Torrey Pines – Torrey Facility Group ..... 161
4-19b	Upland Vegetation Community and Land Cover Impacts in the Torrey Pines – Torrey Facility Group ..... 162
4-20a	Wetland Vegetation Community and Land Cover Impacts in the Alta La Jolla – Vickie Facility Group..... 163
4-20b	Upland Vegetation Community and Land Cover Impacts in the Alta La Jolla – Vickie Facility Group..... 164
4-21a	Wetland Vegetation Community and Land Cover Impacts in the Mission Bay – MBHS Facility Group ..... 165
4-21b	Upland Vegetation Community and Land Cover Impacts in the Mission Bay – MBHS Facility Group ..... 165
4-22a	Wetland Vegetation Community and Land Cover Impacts in the Mission Bay – Mission Bay Drive Facility Group ..... 167
4-22b	Upland Vegetation Community and Land Cover Impacts in the Mission Bay – Mission Bay Drive Facility Group ..... 168
4-23a	Wetland Vegetation Community and Land Cover Impacts in the Miramar – Engineer Facility Group ..... 169
4-23b	Upland Vegetation Community and Land Cover Impacts in the Miramar – Engineer Facility Group ..... 169
4-24a	Wetland Vegetation Community and Land Cover Impacts in the Tecolote Creek – Chateau Facility Group..... 170
4-24b	Upland Vegetation Community and Land Cover Impacts in the Tecolote Creek – Chateau Facility Group ..... 171
4-25a	Wetland Vegetation Community and Land Cover Impacts in the Tecolote Creek – Genesee Facility Group ..... 172
4-25b	Upland Vegetation Community and Land Cover Impacts in the Tecolote Creek – Genesee Facility Group ..... 173
4-27	Direct and Indirect Impacts to Sensitive Wildlife by Facility Group and Facility Segment within the Mission Bay Watershed ..... 174
4-28a	Wetland Vegetation Community and Land Cover Impacts in the San Diego River – Nimitz Facility Group ..... 176

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

<b><u>SECTION</u></b>	<b><u>PAGE NO.</u></b>
4-28b Upland Vegetation Community and Land Cover Impacts in the San Diego River – Nimitz Facility Group .....	177
4-29a Wetland Vegetation Community and Land Cover Impacts in the San Diego River – Valeta Facility Group .....	178
4-29b Upland Vegetation Community and Land Cover Impacts in the San Diego River – Valeta Facility Group .....	178
4-30a Wetland Vegetation Community and Land Cover Impacts in the Murphy Canyon Creek – Stadium Facility Group .....	180
4-30b Upland Vegetation Community and Land Cover Impacts in the Murphy Canyon Creek – Stadium Facility Group .....	181
4-31a Wetland Vegetation Community and Land Cover Impacts in the Alvarado Canyon Creek – Mission Gorge Facility Group .....	183
4-31b Upland Vegetation Community and Land Cover Impacts in the Alvarado Canyon Creek – Mission Gorge Facility Group .....	185
4-32a Wetland Vegetation Community and Land Cover Impacts in the Alvarado Canyon Creek – Alvarado Facility Group .....	186
4-32b Upland Vegetation Community and Land Cover Impacts in the Alvarado Canyon Creek – Alvarado Facility Group .....	187
4-33a Wetland Vegetation Community and Land Cover Impacts in the Murray Reservoir – Cowles Mountain Facility Group .....	188
4-33b Upland Vegetation Community and Land Cover Impacts in the Murray Reservoir – Cowles Mountain Facility Group .....	189
4-34a Wetland Vegetation Community and Land Cover Impacts in the Norfolk Canyon Creek – Fairmount Facility Group .....	190
4-34b Upland Vegetation Community and Land Cover Impacts in the Norfolk Canyon Creek – Fairmount Facility Group .....	191
4-35a Wetland Vegetation Community and Land Cover Impacts in the San Diego River – Camino del Rio Facility Group .....	192
4-35b Upland Vegetation Community and Land Cover Impacts in the San Diego River – Camino del Rio Facility Group .....	193
4-36a Wetland Vegetation Community and Land Cover Impacts at the 1331 Washington (OT03537) Structure .....	194
4-36b Upland Vegetation Community and Land Cover Impacts at the 1331 Washington (OT03537) Structure .....	194

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

<b><u>SECTION</u></b>	<b><u>PAGE NO.</u></b>
4-37a Wetland Vegetation Community and Land Cover Impacts at the 1277 Camino Del Rio South (IN10399) Structure .....	196
4-37b Upland Vegetation Community and Land Cover Impacts at the 1277 Camino Del Rio South (IN10399) Structure .....	196
4-38a Wetland Vegetation Community and Land Cover Impacts at the 5505 Friars Road (OT05573) Structure .....	197
4-38b Upland Vegetation Community and Land Cover Impacts at the 5505 Friars Road (OT05573) Structure .....	198
4-39a Wetland Vegetation Community and Land Cover Impacts at the 1660 Hotel Circle North (OT03321) Structure .....	199
4-39b Upland Vegetation Community and Land Cover Impacts at the 1660 Hotel Circle North (OT03321) Structure .....	199
4-40a Wetland Vegetation Community and Land Cover Impacts at the 901 Hotel Circle South (HW02440) Structure .....	201
4-40b Upland Vegetation Community and Land Cover Impacts at the 901 Hotel Circle South (HW02440) Structure .....	201
4-41a Wetland Vegetation Community and Land Cover Impacts at the 2087 Hotel Circle South (HW02437) Structure .....	202
4-41b Upland Vegetation Community and Land Cover Impacts at the 2087 Hotel Circle South (HW02437) Structure .....	203
4-43 Direct and Indirect Impacts to Sensitive Wildlife by Facility Group and Facility Segment within the San Diego River Watershed .....	206
4-44a Wetland Vegetation Community and Land Cover Impacts in the Washington Canyon Creek – Washington Facility Group .....	213
4-44b Upland Vegetation Community and Land Cover Impacts in the Washington Canyon Creek – Washington Facility Group .....	213
4-45a Wetland Vegetation Community and Land Cover Impacts in the Mission Hill Canyon Creek – Titus Facility Group .....	215
4-45b Upland Vegetation Community and Land Cover Impacts in the Mission Hill Canyon Creek – Titus Facility Group .....	215
4-46a Wetland Vegetation Community and Land Cover Impacts in the Maple Canyon Creek – Maple Facility Group .....	216
4-46b Upland Vegetation Community and Land Cover Impacts in the Maple Canyon Creek – Maple Facility Group .....	217

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

<b><u>SECTION</u></b>	<b><u>PAGE NO.</u></b>
4-47a Wetland Vegetation Community and Land Cover Impacts in the Powerhouse Canyon Creek – Pershing Facility Group.....	218
4-47b Upland Vegetation Community and Land Cover Impacts in the Powerhouse Canyon Creek – Pershing Facility Group.....	219
4-48a Wetland Vegetation Community and Land Cover Impacts in the San Diego Bay – 28th St Facility Group .....	220
4-48b Upland Vegetation Community and Land Cover Impacts in the San Diego Bay – 28th St Facility Group .....	220
4-49a Wetland Vegetation Community and Land Cover Impacts in the Chollas Creek – National Facility Group.....	222
4-49b Upland Vegetation Community and Land Cover Impacts in the Chollas Creek – National Facility Group.....	223
4-50a Wetland Vegetation Community and Land Cover Impacts in the Chollas Creek – Rolando Facility Group.....	224
4-50b Upland Vegetation Community and Land Cover Impacts in the Chollas Creek – Rolando Facility Group.....	225
4-51a Wetland Vegetation Community and Land Cover Impacts in the Chollas Creek – Martin Facility Group.....	226
4-51b Upland Vegetation Community and Land Cover Impacts in the Chollas Creek – Martin Facility Group.....	226
4-52a Wetland Vegetation Community and Land Cover Impacts in the Chollas Creek – J St Facility Group .....	228
4-52b Upland Vegetation Community and Land Cover Impacts in the Chollas Creek – J St Facility Group .....	228
4-53a Wetland Vegetation Community and Land Cover Impacts in the Auburn Creek – Home Facility Group.....	230
4-53b Upland Vegetation Community and Land Cover Impacts in the Auburn Creek – Home Facility Group.....	231
4-54a Wetland Vegetation Community and Land Cover Impacts in the Auburn Creek – Wightman Facility Group .....	232
4-54b Vegetation Community and Land Cover Impacts in the Auburn Creek – Wightman Facility Group.....	233
4-55a Wetland Vegetation Community and Land Cover Impacts in the Chollas Creek – Megan Facility Group.....	234

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

<b><u>SECTION</u></b>	<b><u>PAGE NO.</u></b>
4-55b Upland Vegetation Community and Land Cover Impacts in the Chollas Creek – Megan Facility Group.....	235
4-56a Wetland Vegetation Community and Land Cover Impacts in the Chollas Creek – 54th St Facility Group .....	236
4-56b Upland Vegetation Community and Land Cover Impacts in the Chollas Creek – 54th St Facility Group .....	237
4-57a Wetland Vegetation Community and Land Cover Impacts in the South Chollas Creek – Southcrest Facility Group.....	238
4-57b Upland Vegetation Community and Land Cover Impacts in the South Chollas Creek – Southcrest Facility Group.....	239
4-58a Wetland Vegetation Community and Land Cover Impacts in the South Chollas Creek – Euclid Facility Group .....	240
4-58b Upland Vegetation Community and Land Cover Impacts in the South Chollas Creek – Euclid Facility Group .....	241
4-59a Wetland Vegetation Community and Land Cover Impacts in the South Chollas Creek – Federal Facility Group .....	242
4-59b Upland Vegetation Community and Land Cover Impacts in the South Chollas Creek – Federal Facility Group .....	243
4-60a Wetland Vegetation Community and Land Cover Impacts in the South Chollas Creek Encanto Branch – Castana Facility Group.....	244
4-60b Upland Vegetation Community and Land Cover Impacts in the South Chollas Creek Encanto Branch – Castana Facility Group.....	245
4-61a Wetland Vegetation Community and Land Cover Impacts in the South Chollas Creek Encanto Branch – Imperial Facility Group .....	246
4-61b Upland Vegetation Community and Land Cover Impacts in the South Chollas Creek Encanto Branch – Imperial Facility Group .....	247
4-62a Wetland Vegetation Community and Land Cover Impacts in the South Chollas Creek Encanto Branch – Jamacha Facility Group.....	248
4-62b Upland Vegetation Community and Land Cover Impacts in the South Chollas Creek Encanto Branch – Jamacha Facility Group.....	249
4-63a Wetland Vegetation Community and Land Cover Impacts in the Paleta Creek – Cottonwood Facility Group.....	250
4-63b Upland Vegetation Community and Land Cover Impacts in the Paleta Creek – Cottonwood Facility Group.....	251

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

<b><u>SECTION</u></b>	<b><u>PAGE NO.</u></b>
4-64a Wetland Vegetation Community and Land Cover Impacts in the Paleta Creek – Solola Facility Group.....	252
4-64b Upland Vegetation Community and Land Cover Impacts in the Paleta Creek – Solola Facility Group.....	252
4-65 Upland Vegetation Community and Land Cover Impacts at the 3644 Roselawn (OT03694) Structure .....	253
4-66a Wetland Vegetation Community and Land Cover Impacts at the 4202 J Street (HW04013) Structure .....	255
4-66b Upland Vegetation Community and Land Cover Impacts at the 4202 J Street (HW04013) Structure .....	255
4-67 Upland Vegetation Community and Land Cover Impacts at the 1206 Goodyear (OT04671) Structure .....	256
4-69 Direct and Indirect Impacts to Sensitive Wildlife by Facility Group and Facility Segment within the Pueblo San Diego Watershed .....	259
4-70a Wetland Vegetation Community and Land Cover Impacts in the Sweetwater River – Parkside Facility Group .....	267
4-70b Upland Vegetation Community and Land Cover Impacts in the Sweetwater River – Parkside Facility Group .....	267
4-71a Wetland Vegetation Community and Land Cover Impacts in the Nestor Creek – Nestor Facility Group.....	270
4-71b Upland Vegetation Community and Land Cover Impacts in the Nestor Creek – Nestor Facility Group.....	273
4-72a Wetland Vegetation Community and Land Cover Impacts in the Nestor Creek – Outer Facility Group .....	274
4-72b Upland Vegetation Community and Land Cover Impacts in the Nestor Creek – Outer Facility Group .....	275
4-73 Direct and Indirect Impacts to Sensitive Wildlife by Facility Group and Facility Segment within the Otay Watershed .....	277
4-74a Wetland Vegetation Community and Land Cover Impacts in the Tijuana River – Pilot and Smuggler’s Facility Group .....	279
4-74b Upland Vegetation Community and Land Cover Impacts in the Tijuana River – Pilot and Smuggler’s Facility Group .....	280
4-75a Wetland Vegetation Community and Land Cover Impacts in the Tijuana River – Tocayo Facility Group .....	281

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

<b><u>SECTION</u></b>	<b><u>PAGE NO.</u></b>
4-75b Upland Vegetation Community and Land Cover Impacts in the Tijuana River – Tocayo Facility Group .....	282
4-76a Wetland Vegetation Community and Land Cover Impacts in the Tijuana River – Smythe Facility Group .....	283
4-76b Upland Vegetation Community and Land Cover Impacts in the Tijuana River – Smythe Facility Group .....	285
4-77a Wetland Vegetation Community and Land Cover Impacts in the Spring Canyon Creek – Cactus Facility Group.....	286
4-77b Upland Vegetation Community and Land Cover Impacts in the Spring Canyon Creek – Cactus Facility Group.....	287
4-78a Wetland Vegetation Community and Land Cover Impacts in the Tijuana River – Siempre Viva Facility Group.....	289
4-78b Upland Vegetation Community and Land Cover Impacts in the Tijuana River – Siempre Viva Facility Group.....	290
4-79a Wetland Vegetation Community and Land Cover Impacts in the Tijuana River – La Media Facility Group.....	291
4-79b Upland Vegetation Community and Land Cover Impacts in the Tijuana River – La Media Facility Group.....	291
4-81 Direct and Indirect Impacts to Sensitive Wildlife by Facility Group and Facility Segment within the Tijuana River Watershed.....	293
4-82a Project Consistency Determination with MSCP Land Use Considerations .....	300
4-82b Project Consistency Determination with MSCP Framework Management Plan.....	309
4-83 Summary of Compliance with Wetland Deviation Requirements Under Land Development Code Essential Public Project Option .....	321
5-1 Wetland Mitigation Ratios.....	332
5-2 Upland Mitigation Ratios <sup>1</sup> .....	334
5-3 Mitigation for Impacts to Jurisdictional Resources within the Green Valley Creek – Pomerado Facility Group .....	336
5-4 Mitigation for Impacts to Jurisdictional Resources within the Green Valley Creek – Paseo del Verano Facility Group.....	338
5-5 Mitigation for Impacts to Jurisdictional Resources within the Peñasquitos Lagoon – Industrial Facility Group (Acres).....	339
5-6 Mitigation for Impacts to Jurisdictional Resources within the Peñasquitos Lagoon – Tripp Facility Group (Acres) .....	341

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

<b><u>SECTION</u></b>	<b><u>PAGE NO.</u></b>
5-7	Mitigation for Impacts to Jurisdictional Resources within the Los Peñasquitos Canyon Creek – Black Mountain Facility Group.....342
5-8	Mitigation for Impacts to Sensitive Upland Vegetation Communities within the Los Peñasquitos Canyon Creek – Black Mountain Facility Group .....344
5-9	Mitigation for Impacts to Jurisdictional Resources within the Los Peñasquitos Canyon Creek – 5-805 Basin Facility Group.....345
5-10	Mitigation for Impacts to Sensitive Vegetation Communities Types within the Los Peñasquitos Canyon Creek – 5-805 Basin Facility Group .....346
5-11	Mitigation for Impacts to Jurisdictional Resources within the Soledad Canyon Creek – Sorrento Facility Group (Acres) .....347
5-12	Mitigation for Impacts to Jurisdictional Resources within the Carroll Canyon Creek – Carroll Facility Group.....349
5-13	Mitigation for Impacts to Sensitive Upland Vegetation Communities within the Carroll Canyon Creek – Carroll Facility Group.....350
5-14	Mitigation for Impacts to Jurisdictional Resources within the Soledad Canyon Creek – Flintkote Facility Group .....351
5-15	Mitigation for Impacts to Jurisdictional Resources within the Soledad Canyon Creek – Dunhill Facility Group (Acres) .....352
5-16	Mitigation for Impacts to Jurisdictional Resources within the Chicarita Creek – Via San Marco Facility Group .....353
5-17	Mitigation for Impacts to Sensitive Upland Vegetation Communities within the 10450 Sorrento Valley Road (HW04220) Structure .....354
5-18	Mitigation for Impacts to Jurisdictional Resources within the Torrey Pines – Torrey Facility Group.....355
5-19	Mitigation for Impacts to Jurisdictional Resources within the Alta La Jolla – Vickie Facility Group.....356
5-20	Mitigation for Impacts to Sensitive Vegetation Communities Types within the Alta La Jolla – Vickie Facility Group .....357
5-21	Mitigation for Impacts to Jurisdictional Resources within the Mission Bay – MBHS Facility Group.....359
5-22	Mitigation for Impacts to Jurisdictional Resources within the Mission Bay – Mission Bay Drive Facility Group.....360
5-23	Mitigation for Impacts to Jurisdictional Resources within the Miramar – Engineer Facility Group (Acres).....361

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

<b><u>SECTION</u></b>	<b><u>PAGE NO.</u></b>
5-24 Mitigation for Impacts to Jurisdictional Resources within the Tecolote Creek – Chateau Facility Group .....	362
5-25 Mitigation for Impacts to Jurisdictional Resources within the Tecolote Creek – Genesee Facility Group .....	363
5-26 Mitigation for Impacts to Jurisdictional Resources within the San Diego River – Nimitz Facility Group .....	364
5-27 Mitigation for Impacts to Jurisdictional Resources within the San Diego River – Valeta Facility Group .....	367
5-28 Mitigation for Impacts to Sensitive Upland Vegetation Communities Types within the San Diego River – Valeta Facility Group .....	368
5-29 Mitigation for Impacts to Jurisdictional Resources within the Murphy Canyon Creek – Stadium Facility Group .....	369
5-30 Mitigation for Impacts to Sensitive Upland Vegetation Communities within the Murphy Canyon Creek – Stadium Facility Group .....	371
5-31 Mitigation for Impacts to Jurisdictional Resources within the Alvarado Canyon Creek – Mission Gorge Facility Group .....	373
5-32 Mitigation for Impacts to Jurisdictional Resources within the Alvarado Canyon Creek – Alvarado Facility Group .....	376
5-33 Mitigation for Impacts to Jurisdictional Resources within the Murray Reservoir – Cowles Mountain Facility Group .....	377
5-34 Mitigation for Impacts to Jurisdictional Resources within the Norfolk Canyon Creek – Fairmount Facility Group .....	379
5-35 Mitigation for Upland Vegetation Community and Land Cover Impacts within the Norfolk Canyon Creek – Fairmount Facility Group .....	380
5-36 Mitigation for Impacts to Jurisdictional Resources within the San Diego River – Camino del Rio Facility Group .....	381
5-37 Mitigation for Impacts to Jurisdictional Resources within the 1331 Washington (OT03537) Structure .....	382
5-38 Mitigation for Impacts to Jurisdictional Resources within the 1277 Camino Del Rio South (IN10399) Structure .....	383
5-39 Mitigation for Impacts to Jurisdictional Resources within the 5505 Friars Road (OT05573) Structure .....	384
5-40 Mitigation for Impacts to Jurisdictional Resources within the 1660 Hotel Circle North (OT03321) Structure (Acres) .....	385

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

<b><u>SECTION</u></b>	<b><u>PAGE NO.</u></b>
5-41 Mitigation for Impacts to Jurisdictional Resources within the 901 Hotel Circle South (HW02440) Structure .....	386
5-42 Mitigation for Upland Vegetation Community and Land Cover Impacts within the 901 Hotel Circle South (HW02440) Structure .....	386
5-43 Mitigation for Impacts to Jurisdictional Resources within the 2087 Hotel Circle South (HW02437) Structure (Acres) .....	387
5-44 Mitigation for Upland Vegetation Community and Land Cover Impacts within within the 2087 Hotel Circle South (HW02437) Structure (Acres) .....	388
5-45 Mitigation for Impacts to Jurisdictional Resources within the Washington Canyon Creek – Washington Facility Group.....	390
5-46 Mitigation for Impacts to Jurisdictional Resources within the Mission Hill Canyon Creek - Titus Facility Group.....	391
5-47 Mitigation for Impacts to Jurisdictional Resources within the Maple Canyon Creek – Maple Facility Group.....	392
5-48 Mitigation for Impacts to Jurisdictional Resources within the Powerhouse Canyon Creek – Pershing Facility Group .....	393
5-49 Mitigation for Impacts to Jurisdictional Resources within the San Diego Bay – 28th St Facility Group.....	394
5-50 Mitigation for Impacts to Jurisdictional Resources within the Chollas Creek – National Facility Group.....	395
5-51 Mitigation for Impacts to Jurisdictional Resources within the Chollas Creek – Rolando Facility Group.....	396
5-52 Mitigation for Impacts to Sensitive Upland Vegetation Communities within the Chollas Creek – Rolando Facility Group .....	398
5-53 Mitigation for Impacts to Jurisdictional Resources within the Chollas Creek – Martin Facility Group.....	399
5-54 Mitigation for Impacts to Jurisdictional Resources within the Chollas Creek – J St Facility Group.....	400
5-55 Mitigation for Impacts to Jurisdictional Resources within the Auburn Creek – Home Facility Group.....	402
5-56 Mitigation for Impacts to Jurisdictional Resources within the Auburn Creek – Wightman Facility Group .....	405
5-57 Mitigation for Impacts to Jurisdictional Resources within the Chollas Creek – Megan Facility Group.....	407

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

<b><u>SECTION</u></b>	<b><u>PAGE NO.</u></b>
5-58 Mitigation for Impacts to Sensitive Upland Vegetation Communities within the Chollas Creek – Megan Facility Group.....	408
5-59 Mitigation for Impacts to Jurisdictional Resources within the Chollas Creek – 54th St Facility Group .....	409
5-60 Mitigation for Impacts to Jurisdictional Resources within the South Chollas Creek – Southcrest Facility Group.....	410
5-61 Mitigation for Impacts to Jurisdictional Resources within the South Chollas Creek – Euclid Facility Group .....	412
5-62 Mitigation for Impacts to Jurisdictional Resources within the South Chollas Creek – Federal Facility Group .....	413
5-63 Mitigation for Impacts to Sensitive Upland Vegetation Communities within the South Chollas Creek – Federal Facility Group .....	414
5-64 Wetland Vegetation Community and Land Cover Impacts in the South Chollas Creek Encanto Branch – Castana Facility Group.....	415
5-65 Mitigation for Impacts to Jurisdictional Resources within the South Chollas Creek Encanto Branch – Imperial Facility Group .....	416
5-66 Mitigation for Impacts to Jurisdictional Resources within the South Chollas Creek Encanto Branch – Jamacha Facility Group.....	418
5-67 Mitigation for Impacts to Sensitive Upland Vegetation Communities within the South Chollas Creek Encanto Branch – Jamacha Facility Group.....	419
5-68 Mitigation for Impacts to Jurisdictional Resources within the Paleta Creek – Cottonwood Facility Group.....	420
5-69 Mitigation for Impacts to Jurisdictional Resources within the Paleta Creek – Solola Facility Group.....	421
5-70 Mitigation for Impacts to Jurisdictional Resources within the 3644 Roselawn (OT03694) Structure .....	422
5-71 Mitigation for Impacts to Jurisdictional Resources within the 4202 J Street (HW04013) Structure .....	423
5-72 Mitigation for Impacts to Jurisdictional Resources within the 1206 Goodyear (OT04671) Structure .....	424
5-73 Mitigation for Impacts to Jurisdictional Resources within the Sweetwater River – Parkside Facility Group .....	425
5-74 Mitigation for Impacts to Jurisdictional Resources within the Nestor Creek – Nestor Facility Group.....	427

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## TABLE OF CONTENTS (CONTINUED)

<b><u>SECTION</u></b>	<b><u>PAGE NO.</u></b>
5-75 Mitigation for Impacts to Jurisdictional Resources within the Nestor Creek – Outer Facility Group.....	430
5-76 Mitigation for Impacts to Jurisdictional Resources within the Tijuana River – Pilot and Smuggler’s Facility Group .....	432
5-77 Mitigation for Impacts to Jurisdictional Resources within the Tijuana River – Tocayo Facility Group.....	434
5-78 Mitigation for Impacts to Jurisdictional Resources within the Tijuana River – Smythe Facility Group.....	435
5-79 Mitigation for Impacts to Jurisdictional Resources within the Spring Canyon Creek – Cactus Facility Group .....	437
5-80 Mitigation for Impacts to Jurisdictional Resources within the Tijuana River – Siempre Viva Facility Group.....	439
5-81 Mitigation for Impacts to Jurisdictional Resources within the Tijuana River – La Media Facility Group.....	441

## FIGURES

See the Figure Map Book at the end of this document for Figures 1, 2, 3A–3C, 4A–4C, 5, 6-1 through 6-136, and 7-1 through 7-136.

## APPENDICES

A	Plant Compendium
B	Wildlife Compendium
C	Southwestern Willow Flycatcher and Least Bell’s Vireo 45-Day Summary Report
D	Special-Status Plant Species Potential to Occur
E	Special-Status Wildlife Species Potential to Occur
F	Summary of Compensatory Mitigation Sites
G	Baseline Resource Mapping

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
AMM	avoidance and minimization measure
AMSL	above mean sea level
BCME	Biological Construction Mitigation/Monitoring Exhibit
BMP	best management practice
BTR	Biological Resources Technical Report
CCA	California Coastal Act
CCC	California Coastal Commission
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDP	coastal development permit
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGF	California Fish and Game Code
CFR	Code of Federal Regulations
City	City of San Diego
CNDDDB	California Natural Diversity Database
COZ	Coastal Overlay Zone
CRPR	California Rare Plant Rank
CSS	coastal sage scrub
CWA	Clean Water Act
EIR	Environmental Impact Report
EP-	Environmental Protocol
ESA	Endangered Species Act
ESHA	Environmentally Sensitive Habitat Areas
ESL	Environmentally Sensitive Lands
FESA	federal Endangered Species Act
FMP	Facility Maintenance Plan
FR	Federal Register
HMMP	Habitat Mitigation and Monitoring Plan
LCP	Local Coastal Program
LDC	Land Development Code, Chapters 11–14 of San Diego Municipal Code
MBTA	Migratory Bird Treaty Act
MHPA	Multi-Habitat Planning Area
MM-	Mitigation Measure

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Acronym/Abbreviation	Definition
MMC	Mitigation Monitoring Coordination
MSCP	Multiple Species Conservation Program
MWMP	Municipal Waterways Maintenance Plan
NWI	National Wetlands Inventory
NWR	National Wildlife Refuge
PQB	Principal Qualified Biologist
RIC	Revegetation Installation Contractor
RWQCB	Regional Water Quality Control Board
SDBG	San Diego Biology Guidelines
SSC	Species of Special Concern
TSW	Transportation & Storm Water Department
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WL	Watch List
WMA	watershed management area
WPCP	Water Pollution Control Plan

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## EXECUTIVE SUMMARY

The City of San Diego (City) Transportation & Storm Water Department is responsible for evaluating and conducting maintenance and repair of the storm water conveyance system throughout much of the City. This *Biological Resources Technical Report* provides an analysis of biological resource impacts associated with specific activities, methods, and procedures that will guide ongoing maintenance and repair of facilities. This report provides a comprehensive approach to identify, assess, and mitigate maintenance and repair impacts to biological resources within open storm water facilities, in accordance with the current *San Diego Biology Guidelines* (SDBG) (City of San Diego 2018), which includes conformance with the federal Endangered Species Act, Clean Water Act, and Migratory Bird Treaty Act; state Porter–Cologne Water Quality Control Act, California Environmental Quality Act, Sections 3511 and 4700 of the California Fish and Game Code, the California Endangered Species Act (California Fish and Game Code, Section 2050 et seq.), and the California Coastal Act; and the local City of San Diego *Multiple Species Conservation Program Subarea Plan* (City of San Diego 1997) and the City's Environmentally Sensitive Lands regulations.

This report includes project-level analysis of all facilities (facility segments and structures) proposed for maintenance and repair under the *Municipal Waterways Maintenance Plan* (MWMP). Project-level impacts and avoidance and minimization measures are described in the MWMP Facility Maintenance Plans (FMPs), which were prepared for each facility proposed for maintenance or repair and are included in Appendix A of the MWMP. The FMP facility segments were organized into 66 facility groups by watershed and then, within those facility groups, were subsequently broken into 113 facility segments and classified as channel, ditch, basin, or structural facilities. In addition to project-level analysis, this report provides a programmatic framework for future impact and mitigation analysis to incorporate additional facilities into the MWMP, as necessary.

Data regarding biological resources present within the MWMP study area were obtained through a review of pertinent literature and field reconnaissance, including vegetation mapping, programmatic jurisdictional delineation, and focused coastal and riparian avian surveys. Biological resources include sensitive vegetation communities, jurisdictional aquatic resources, sensitive plant and wildlife species, and wildlife corridors and habitat linkages that are typical for urban drainage systems.

Direct impacts of the MWMP FMPs include the permanent loss of sensitive vegetation communities, discharge of fill/dredge material within jurisdictional waters, the potential permanent loss of individual sensitive plant species, and loss of habitat and disruption of breeding for sensitive wildlife species. Indirect impacts of the MWMP FMPs include short-term adverse effects on these resources during maintenance, as well as long-term adverse effects as a result of the loss of wetlands and the removal of sediment.

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

Environmental Protocols are proposed as part of the MWMP and include measures to avoid and minimize impacts to biological resources, including preparation and verification of an FMP, biological construction monitoring, special handling of invasive species plant materials, and implementation of a *Water Pollution Control Plan*. Although implementation of these Environmental Protocols would minimize impacts from implementation of the MWMP, some direct and indirect impacts to sensitive biological resources would still be significant, absent mitigation. Therefore, this report also includes mitigation measures to reduce impacts to a level less than significant. Mitigation measures for direct and indirect impacts, for example, include implementation of compensatory mitigation at ratios established in the SDBG and avoidance of impacts to active bird nests and sensitive bird species during the breeding season. With implementation of the Environmental Protocols and mitigation measures, all impacts to biological resources would be less than significant.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 1 INTRODUCTION

Under City of San Diego (City) Charter Section 26.1 and Council Policy 800-04 (City of San Diego 2012), the City is responsible for maintaining adequate drainage facilities to remove storm water runoff in an efficient, economic, and environmentally and aesthetically acceptable manner for the protection of property and life (Figure 1, Regional Map). The City generally accepts responsibility for maintenance of public drainage facilities that are designed and constructed to City standards and located within a public street or drainage easement dedicated to the City. The City's storm water conveyance system serves to convey storm water flows to protect the life and property of its citizens from potential flooding within the City (Figure 2, Vicinity Map). The City's storm water conveyance system also serves to convey urban runoff from pervious and impervious surfaces and development, such as irrigated landscape areas, driveways, and streets that flow into drainage facilities and, ultimately, to the ocean. Additionally, the City's storm water conveyance system helps to protect water quality, and open facilities, such as channels, can support natural resources, including wetland habitat.

Although City Council Policy 700-44 (City of San Diego 1984) establishes the responsibility to protect private properties from flood damage to be with the property owners themselves, the City's Transportation & Storm Water Department (TSW) is responsible for evaluating and conducting maintenance and repair of the public municipal storm water conveyance system throughout much of the City. To maintain the system's effectiveness, the proposed MWMP identifies specific activities, methods, and procedures that would guide ongoing maintenance and repair of facilities. The MWMP provides a comprehensive approach to identify and regulate maintenance and repair activities, primarily within open storm water facilities (i.e., those facilities located above ground and not within closed systems, such as pipes).

### **1.1 PURPOSE OF THE REPORT**

This Biological Resources Technical Report (BTR) provides an analysis of potential biological resource impacts associated with implementation of the MWMP, in accordance with the current *San Diego Biology Guidelines* (SDBG) (City of San Diego 2018). This report includes an introduction; project description; summary of the applicable federal, state, and local biological resource regulations; survey methods and survey limitations; and description and analysis of existing biological resources, including sensitive biological resources, project impacts, and project mitigation program.

The project description, impacts, avoidance areas, and mitigation measures (MMs) are discussed in accordance with the federal Endangered Species Act (FESA), California Environmental Quality Act (CEQA), Clean Water Act (CWA), the Porter-Cologne Water Quality Control Act, Migratory Bird Treaty Act (MBTA); state Sections 3511 and 4700 of the California Fish and Game Code (CFGF), California Endangered Species Act (CESA) (CFGF Section 2050 et seq.), the California Coastal Act (CCA); and

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

local *City of San Diego Multiple Species Conservation Program (MSCP) Subarea Plan* (MSCP Subarea Plan) (City of San Diego 1997), and City Environmentally Sensitive Lands (ESL) regulations.

## 1.2 PROJECT DESCRIPTION AND LOCATION

The City's TSW is responsible for evaluating and conducting maintenance and repair of the storm water conveyance system throughout much of the City. To maintain the system's effectiveness, this BTR provides an analysis of biological resource impacts associated with specific activities, methods, and procedures as part of the MWMP that will guide ongoing maintenance and repair of facilities.

The City's regional landform features are typical of the coastal plain area. The coastal plain slopes gently upwards to the eastern foothills and has eroded into separate mesas. The coastal plain has been incised by numerous side canyons flowing into major creeks and rivers that generally flow westward toward the coast. These major drainage systems include San Dieguito River, Los Peñasquitos Canyon Creek, Rose Creek, San Diego River, Alvarado Creek, Chollas Creek, Nestor Creek, Otay River, and Tijuana River. The City jurisdiction spans six WMAs, including San Dieguito River, Los Peñasquitos, Mission Bay, San Diego River, San Diego Bay (including Pueblo San Diego, Otay, and Sweetwater watersheds), and Tijuana River.

For purposes of the MWMP, a combination of six WMAs, seven Hydrologic Units, and eight watersheds are used throughout this document to organize lists and figures of facilities and compensatory mitigation sites into eight watersheds (Table 1-1, Figure 2).

**Table 1-1**  
**Watershed Management Areas and Watersheds/Hydrologic Units in the City of San Diego**

Watershed Management Areas <sup>1</sup>	Hydrologic Units <sup>1</sup>	Watersheds Used in the MWMP
San Dieguito River	San Dieguito	San Dieguito River Watershed
Los Peñasquitos	Peñasquitos	Los Peñasquitos Watershed
Mission Bay		Mission Bay Watershed
San Diego River	San Diego River	San Diego River Watershed
San Diego Bay	Pueblo San Diego	Pueblo San Diego Watershed
	Sweetwater	Sweetwater Watershed
	Otay	Otay Watershed
Tijuana River	Tijuana	Tijuana River Watershed

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

This report includes an analysis of all facilities (includes facility segments and structures) proposed as project-level maintenance and repair areas in the MWMP (i.e., Facility Maintenance Plans [FMPs] prepared and included in Appendix A of the MWMP). These facilities were organized into 66 facility groups by watershed and then, within those facility groups, were subsequently broken into 113 facility segments and classified as either channel/ditch, basin, or structural facilities (Tables 1-2, 1-3, and 1-4). Figures 3A through 3C, Core Areas and Habitat Linkages, and Figures 4A through 4C, Facility Overview Map with Proposed FMP Impacts, illustrate the location of these facilities in relation to the City's MSCP identified cores and linkages and Multi-Habitat Planning Area (MHPA), respectively. There were an additional 16 facility segments that were evaluated under the MWMP, but were determined not to require project-level maintenance at this time; therefore, they are not included in the results or analysis of this report. Baseline resource mapping is included as an appendix at the end of this document as a reference for program-level analysis and if potential maintenance is required in the future.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 1-2**  
**Proposed Channel and Ditch Facility Maintenance Plans by Watershed, Substrate, and Coastal Zone**

Facility Number	Facility Group Name	Segment Name	Segment Number	Substrate	Coastal Zone – Permit Authority	Multi-Habitat Planning Area	Linear Feet of Maintenance Proposed <sup>1</sup>	Total Linear Feet <sup>1</sup>
<i>San Dieguito River Watershed</i>								
1-04-030	Green Valley Creek – Pomerado	Pomerado	1	Concrete	—	N/A	1,785	1,785
1-04-033	Green Valley Creek – Pomerado	Pomerado	2	Concrete	—	N/A	2,456	2,456
<i>Los Peñasquitos Watershed</i>								
2-01-120	Peñasquitos Lagoon – Industrial	Industrial	1	Earthen	Yes – CCC	Adjacent	25	285
2-01-122	Peñasquitos Lagoon – Industrial	Industrial	2	Concrete	Yes – City	Partially Adjacent	650	650
2-01-130	Peñasquitos Lagoon – Tripp	Tripp	1	Concrete	Yes – City	N/A	1,835	1,835
2-01-200	Los Peñasquitos Canyon Creek – Black Mountain	Black Mountain	1	Earthen	—	Adjacent	952	952
2-01-210	Los Peñasquitos Canyon Creek – Black Mountain	Black Mountain	2	Earthen	—	Partially Within and Adjacent	959	959
2-03-000	Soledad Canyon Creek – Sorrento	Roselle	1	Earthen	Yes – City	N/A	215	1,554
2-03-002	Soledad Canyon Creek – Sorrento	Roselle	2	Concrete	Yes – City	N/A	2,314	2,314

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 1-2**  
**Proposed Channel and Ditch Facility Maintenance Plans by Watershed, Substrate, and Coastal Zone**

Facility Number	Facility Group Name	Segment Name	Segment Number	Substrate	Coastal Zone – Permit Authority	Multi-Habitat Planning Area	Linear Feet of Maintenance Proposed <sup>1</sup>	Total Linear Feet <sup>1</sup>
2-03-012	Carroll Canyon Creek – Carroll	Carroll Canyon	1	Earthen and Concrete	—	Partially Within and Adjacent	184	241
2-03-100	Soledad Canyon Creek – Flintkote	Flintkote	1	Concrete	Yes – City	Partially Adjacent	992	992
2-03-150	Soledad Canyon Creek – Dunhill	Dunhill	1	Earthen	Yes – City	N/A	430	430
2-05-140	Chicarita Creek – Via San Marco	Via San Marco	1	Concrete	—	N/A	697	697
<i>Mission Bay Watershed</i>								
3-00-120	Torrey Pines – Torrey	Torrey Pines	1	Earthen	—	N/A	92	1,185
3-02-101	Mission Bay – Mission Bay High School (MBHS)	Pacific Beach (PB)-Olney	1	Earthen	Yes – City	Partially Adjacent	910	910
3-02-103	Mission Bay – MBHS	MBHS	1	Concrete	Yes – City	N/A	1,058	1,058
3-02-130	Mission Bay – Mission Bay Drive	Mission Bay Drive	1	Earthen	Yes – CCC	N/A	1,085	1,085
3-03-901	Miramar – Engineer	Engineer	1	Earthen and Concrete	—	N/A	1,220	1,220

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 1-2**  
**Proposed Channel and Ditch Facility Maintenance Plans by Watershed, Substrate, and Coastal Zone**

Facility Number	Facility Group Name	Segment Name	Segment Number	Substrate	Coastal Zone – Permit Authority	Multi-Habitat Planning Area	Linear Feet of Maintenance Proposed <sup>1</sup>	Total Linear Feet <sup>1</sup>
3-04-055	Tecolote Creek – Chateau	Chateau	1	Concrete	—	N/A	4,882	4,882
3-04-250	Tecolote Creek – Chateau	Chateau	2	Concrete	—	N/A	1,057	1,057
3-04-160	Tecolote Creek – Genesee	Genesee	1	Earthen	—	Partially Adjacent	767	767
<i>San Diego River Watershed</i>								
4-01-103	San Diego River – Nimitz	Nimitz	1	Earthen	—	N/A	116	116
4-01-105	San Diego River – Nimitz	Nimitz	2	Concrete	—	N/A	291	291
4-01-107	San Diego River – Nimitz	Nimitz	3	Earthen	—	N/A	476	476
4-01-120	San Diego River – Valeta	Valeta	1	Concrete	Yes – City	Adjacent	161	161
4-03-101	San Diego River – Camino del Rio	Camino del Arroyo	1	Concrete	—	N/A	642	642
4-03-103	San Diego River – Camino del Rio	Camino del Rio	1	Concrete	—	N/A	1,019	1,019
4-04-000	Murphy Canyon Creek – Stadium	Stadium	1	Earthen	—	Partially Adjacent	1,661	1,661
4-04-002	Murphy Canyon Creek – Stadium	Stadium	2	Concrete	—	N/A	207	207
4-04-006	Murphy Canyon Creek – Stadium	Murphy Canyon	1	Concrete	—	N/A	532	532

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 1-2**  
**Proposed Channel and Ditch Facility Maintenance Plans by Watershed, Substrate, and Coastal Zone**

<b>Facility Number</b>	<b>Facility Group Name</b>	<b>Segment Name</b>	<b>Segment Number</b>	<b>Substrate</b>	<b>Coastal Zone – Permit Authority</b>	<b>Multi-Habitat Planning Area</b>	<b>Linear Feet of Maintenance Proposed<sup>1</sup></b>	<b>Total Linear Feet<sup>1</sup></b>
4-07-002	Alvarado Canyon Creek – Mission Gorge	Mission Gorge	1	Earthen and Concrete	—	N/A	718	864
4-07-004	Alvarado Canyon Creek – Mission Gorge	Mission Gorge	2	Concrete	—	N/A	521	521
4-07-009	Alvarado Canyon Creek – Mission Gorge	Mission Gorge	3	Earthen and Concrete	—	N/A	700	862
4-07-011	Alvarado Canyon Creek – Mission Gorge	Mission Gorge	4	Concrete	—	N/A	515	1,261
4-07-021	Alvarado Canyon Creek – Alvarado	Alvarado	1	Earthen and Concrete	—	Partially Within and Adjacent	1,102	1,102
4-07-023	Alvarado Canyon Creek – Alvarado	Alvarado	2	Concrete	—	Partially Within and Adjacent	1,192	1,192
4-07-250	Alvarado Canyon Creek – Alvarado	Alvarado	3	Concrete	—	Partially Adjacent	517	517
4-07-901	Murray Reservoir – Cowles Mountain	Cowles Mountain	1	Concrete	—	N/A	697	697

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 1-2**  
**Proposed Channel and Ditch Facility Maintenance Plans by Watershed, Substrate, and Coastal Zone**

Facility Number	Facility Group Name	Segment Name	Segment Number	Substrate	Coastal Zone – Permit Authority	Multi-Habitat Planning Area	Linear Feet of Maintenance Proposed <sup>1</sup>	Total Linear Feet <sup>1</sup>
4-07-911	Murray Reservoir – Cowles Mountain	Cowles Mountain	2	Concrete	—	N/A	2,195	2,195
4-08-008	Norfolk Canyon Creek – Fairmount	Fairmount	1	Concrete	—	Partially Adjacent	248	248
4-08-011	Norfolk Canyon Creek – Fairmount	Fairmount	2	Concrete	—	Partially Within and Adjacent	575	575
4-08-014	Norfolk Canyon Creek – Fairmount	Fairmount	3	Earthen	—	Partially Within and Adjacent	29	820
4-08-017	Norfolk Canyon Creek – Fairmount	Fairmount	4	Concrete	—	Partially Within and Adjacent	1,250	1,250
4-08-105	Norfolk Canyon Creek – Fairmount	Baja	1	Earthen and Concrete	—	Partially Adjacent	1,369	1,369
<i>Pueblo San Diego Watershed</i>								
5-02-151	Washington Canyon Creek – Washington	Washington	1	Earthen	—	N/A	217	217

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 1-2**  
**Proposed Channel and Ditch Facility Maintenance Plans by Watershed, Substrate, and Coastal Zone**

<b>Facility Number</b>	<b>Facility Group Name</b>	<b>Segment Name</b>	<b>Segment Number</b>	<b>Substrate</b>	<b>Coastal Zone – Permit Authority</b>	<b>Multi-Habitat Planning Area</b>	<b>Linear Feet of Maintenance Proposed<sup>1</sup></b>	<b>Total Linear Feet<sup>1</sup></b>
5-02-153	Washington Canyon Creek – Washington	Washington	2	Concrete	—	N/A	2,210	2,210
5-02-162	Mission Hill Canyon Creek – Titus	Titus	1	Earthen	—	Partially Within and Adjacent	39	207
5-03-011	Powerhouse Canyon Creek – Pershing	Pershing	1	Concrete	—	N/A	1,598	1,598
5-03-100	Powerhouse Canyon Creek – Pershing	Pershing	2	Concrete	—	N/A	437	437
5-03-901	San Diego Bay Unnamed Tributary – 28th St	28th St	1	Earthen	—	N/A	67	67
5-04-004	Chollas Creek – National	National	1	Earthen and Concrete	Yes – City	N/A	816	1,976
5-04-006	Chollas Creek – National	National	2	Concrete	—	N/A	2,743	2,743
5-04-044	Chollas Creek – Rolando	Cartagena	1	Concrete	—	N/A	1,225	1,225
5-04-046	Chollas Creek – Rolando	Rolando	1	Concrete	—	N/A	374	374
5-04-048	Chollas Creek – Rolando	Rolando	2	Earthen	—	N/A	820	820

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 1-2**  
**Proposed Channel and Ditch Facility Maintenance Plans by Watershed, Substrate, and Coastal Zone**

<b>Facility Number</b>	<b>Facility Group Name</b>	<b>Segment Name</b>	<b>Segment Number</b>	<b>Substrate</b>	<b>Coastal Zone – Permit Authority</b>	<b>Multi-Habitat Planning Area</b>	<b>Linear Feet of Maintenance Proposed<sup>1</sup></b>	<b>Total Linear Feet<sup>1</sup></b>
5-04-101	Chollas Creek Unnamed Tributary – Martin	Martin	1	Earthen and Concrete	—	N/A	120	1,128
5-04-163	Chollas Creek – J St	J St	1	Earthen	—	N/A	15	404
5-04-220	Auburn Creek – Home	Home	1	Earthen	—	N/A	415	415
5-04-224	Auburn Creek – Home	Home	2	Earthen	—	N/A	160	920
5-04-227	Auburn Creek – Home	Home	3	Concrete	—	Partially Adjacent	369	369
5-04-231	Auburn Creek – Home	Home	5	Earthen and Concrete	—	Partially Adjacent	275	275
5-04-239	Auburn Creek – Wightman	Wightman	1	Earthen and Concrete	—	N/A	297	297
5-04-241	Auburn Creek – Wightman	Wightman	2	Earthen and Concrete	—	N/A	645	645
5-04-260	Chollas Creek Unnamed Tributary – Megan	Megan	1	Concrete	—	Adjacent	849	849
5-04-262	Chollas Creek Unnamed Tributary – Megan	Megan	2	Earthen	—	N/A	62	464

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 1-2**  
**Proposed Channel and Ditch Facility Maintenance Plans by Watershed, Substrate, and Coastal Zone**

<b>Facility Number</b>	<b>Facility Group Name</b>	<b>Segment Name</b>	<b>Segment Number</b>	<b>Substrate</b>	<b>Coastal Zone – Permit Authority</b>	<b>Multi-Habitat Planning Area</b>	<b>Linear Feet of Maintenance Proposed<sup>1</sup></b>	<b>Total Linear Feet<sup>1</sup></b>
5-04-280	Chollas Creek – 54th St	54th St	1	Concrete	—	N/A	264	264
5-05-006	South Chollas Creek – Southcrest	Alpha	1	Earthen and Concrete	—	N/A	1,007	5,024
5-05-008	South Chollas Creek – Southcrest	Ocean View	1	Earthen and Concrete	—	N/A	1,010	2,223
5-05-021	South Chollas Creek – Euclid	Euclid	2	Concrete	—	N/A	1,045	1,045
5-05-035	South Chollas Creek – Federal	Federal	1	Earthen and Concrete	—	Partially Adjacent	61	614
5-05-037	South Chollas Creek – Federal	Federal	2	Concrete	—	N/A	1,329	1,329
5-05-205	South Chollas Creek Encanto Branch – Castana	Castana	1	Earthen	—	N/A	66	260
5-05-306	South Chollas Creek Encanto Branch – Imperial	Imperial	2	Concrete	—	N/A	1,074	1,074
5-05-603	South Chollas Creek Encanto Branch – Jamacha	Jamacha	1	Earthen	—	N/A	703	5,141
5-06-005	Paleta Creek – Cottonwood	Cottonwood	1	Concrete	—	N/A	501	500
5-06-008	Paleta Creek – Cottonwood	Cottonwood	2	Concrete	—	N/A	1,899	1,899

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 1-2**  
**Proposed Channel and Ditch Facility Maintenance Plans by Watershed, Substrate, and Coastal Zone**

Facility Number	Facility Group Name	Segment Name	Segment Number	Substrate	Coastal Zone – Permit Authority	Multi-Habitat Planning Area	Linear Feet of Maintenance Proposed <sup>1</sup>	Total Linear Feet <sup>1</sup>
5-06-020	Paleta Creek – Solola	Solola	1	Concrete	—	N/A	2,625	2,625
5-06-023	Paleta Creek – Solola	Solola	2	Concrete	—	N/A	1,907	1,907
<i>Sweetwater Watershed</i>								
5-11-003	Sweetwater River – Parkside	Parkside	1	Concrete	—	N/A	1,197	1,197
<i>Otay Watershed</i>								
5-22-008	Nestor Creek – Nestor	Cedar	1	Earthen	Yes – City	N/A	65	427
5-22-010	Nestor Creek – Nestor	Cedar	2	Concrete	Yes – City	N/A	560	560
5-22-013	Nestor Creek – Nestor	Dahlia	1	Concrete	—	N/A	622	622
5-22-016	Nestor Creek – Nestor	Cerissa	1	Earthen	—	N/A	1,467	2,041
5-22-023	Nestor Creek – Nestor	Grove	1	Earthen and Concrete	—	N/A	1,039	1,039
5-22-028	Nestor Creek – Nestor	30th St	1	Earthen and Concrete	—	N/A	1,183	1,183
5-22-110	Nestor Creek – Outer	Outer	1	Earthen	—	N/A	385	385
5-22-112	Nestor Creek – Outer	Outer	2	Concrete	—	N/A	176	176
<i>Tijuana River Watershed</i>								
6-01-020	Tijuana River – Pilot and Smugglers	Pilot Channel	1	Earthen	Yes – City	Within	5,550	5,550

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 1-2**  
**Proposed Channel and Ditch Facility Maintenance Plans by Watershed, Substrate, and Coastal Zone**

Facility Number	Facility Group Name	Segment Name	Segment Number	Substrate	Coastal Zone – Permit Authority	Multi-Habitat Planning Area	Linear Feet of Maintenance Proposed <sup>1</sup>	Total Linear Feet <sup>1</sup>
6-01-100	Tijuana River – Pilot and Smugglers	Smuggler's Gulch	1	Earthen	Yes – City	Within	3,026	3,875
6-02-118	Tijuana River – Tocayo	Tocayo	2	Concrete	Yes – City	N/A	2,498	2,498
6-03-135	Tijuana River – Smythe	Via Encantadoras	1	Earthen	Yes – City	N/A	120	120
6-03-138	Tijuana River – Smythe	Via Encantadoras	2	Concrete	—	N/A	955	955
6-03-143	Tijuana River – Smythe	Via Encantadoras	3	Earthen and Concrete	—	N/A	886	886
6-03-147	Tijuana River – Smythe	Smythe	1	Earthen	—	N/A	1,355	1,355
6-03-150	Tijuana River – Smythe	Via de la Bandola	1	Concrete	—	N/A	716	716
6-06-011	Tijuana River – La Media	La Media	1	Earthen	—	Adjacent	5	223

City = City of San Diego; CCC = California Coastal Commission; N/A = not applicable

<sup>1</sup> Linear feet is approximate based on measurements made in GIS.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 1-3**  
**Basin Facility Maintenance Plans by Watershed**

Facility Number	Watershed	Facility Group Name	Segment Name	Segment Number	Coastal Zone – Permit Authority	Multi-Habitat Planning Area	Acreage/Linear Feet of Maintenance Proposed <sup>1</sup>	Total Linear Feet <sup>1</sup>
1-04-200	San Dieguito River	Green Valley Creek – Paseo del Verano	Paseo del Verano	1	—	N/A	0.29 acres	203
2-01-900	Los Peñasquitos	Los Peñasquitos Canyon Creek – 5-805 Basin	5-805 Fwy	1	Yes – CCC	Partially Within and Adjacent	1.44 acres	744
3-00-150	Mission Bay	Alta La Jolla – Vickie	Vickie	1	—	Partially Adjacent	1.13 acres	234
5-02-140	Pueblo San Diego	Maple Canyon Creek – Maple	Maple	1	—	N/A	0.12 acres	90
6-04-251	Tijuana River	Spring Canyon Creek – Cactus	Cactus	1	—	N/A	229 linear feet	229
6-04-253			Cactus	2	—	N/A	923 linear feet	923
6-05-110		Tijuana River – Siempre Viva	Siempre Viva	1	—	N/A	2,711 linear feet	2,711

**Notes:** All basins are earthen-bottom, except Paseo del Verano.

CCC = California Coastal Commission; N/A = not applicable

<sup>1</sup> Acreage/linear feet is approximate based on measurements made in GIS.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 1-4**  
**Structure Facility Maintenance Plans by Watershed**

<b>IAMFLOC</b>	<b>Watershed</b>	<b>Facility Group Name</b>	<b>Coastal Zone – Permit Authority</b>	<b>Multi-Habitat Planning Area</b>
HW04220	Los Peñasquitos	10405 Sorrento Valley Road	Yes – City	N/A
OT03537	San Diego River	1331 Washington	—	N/A
IN10399		1277 Camino Del Rio South	—	Partially Adjacent
OT05573		5505 Friars and Colusa	—	Partially Within and Adjacent
OT03321		1660 Hotel Circle North	—	N/A
HW02440		901 Hotel Circle South	—	Partially Within and Adjacent
HW02437		2087 Hotel Circle South	—	Partially Within and Adjacent
OT03694	Pueblo San Diego	3634 Roselawn	—	N/A
HW04013		4202 J Street	—	N/A
OT054671		1206 Goodyear	—	N/A

**Notes:** City = City of San Diego; IAMFLOC = Infrastructure Asset Management Functional Location; N/A = not applicable

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

## **1.3 REGULATORY SETTING**

### **1.3.1 FEDERAL**

#### **1.3.1.1 National Environmental Policy Act**

The National Environmental Policy Act (NEPA) established a national policy for protection of the environment. The objectives of NEPA are “to declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality” (42 United States Code [USC] 4321). To assist federal agencies in fulfilling the goals and effectively implementing the requirements of NEPA, in 1978 the Council on Environmental Quality issued regulations for implementing the procedural aspects of NEPA (40 Code of Federal Regulations [CFR] Part 1500–1508).

Review of the proposed MWMP under NEPA is only anticipated to be required as part of the U.S. Army Corps of Engineers (USACE) consideration of an authorization(s) under Section 404 of the federal Clean Water Act. No other federal funding or federal agency actions are anticipated to be required or utilized to implement the MWMP.

#### **1.3.1.2 Sensitive Species Protection**

##### **Federal Endangered Species Act**

FESA of 1973 (16 USC 1531 et seq.), as amended, is administered by the U.S. Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration, and National Marine Fisheries Service. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend and provide programs for the conservation of those species, thus preventing extinction of plants and wildlife. Under provisions of Section 9 (16 USC 1538[a][1][B]) of FESA, it is unlawful to “take” any listed species. “Take” is defined in Section 3 (16 USC 1532[19]) of FESA as, “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”

FESA allows for the issuance of “incidental take” permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans on private property without any other federal agency involvement. Incidental take is defined as “take that results from, but is

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

not the purpose of, carrying out an otherwise lawful activity” (USFWS 2004). Upon development of a habitat conservation plan, USFWS can issue incidental take permits for listed species.

## **Migratory Bird Treaty Act**

The MBTA prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, “take” is defined as pursue, hunt, shoot, wound, kill trap, capture, or collect, or any attempt to carry out these activities (16 USC 703 et seq.). Additionally, Executive Order 13186, “Responsibilities of Federal Agencies to Protect Migratory Birds,” requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 Federal Register [FR] 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

Currently, birds are considered to be nesting under the MBTA only when there are eggs or chicks, which are dependent on the nest.

### **1.3.1.3 Wetlands and Waters**

#### **Federal Wetland Regulation**

Federal wetland regulation applicable to the MWMP is guided by the CWA. The purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all waters of the United States. Permitting for projects that propose dredge and fill activities in waters of the United States (including wetlands) is overseen by USACE under Section 404 of the CWA. Projects are typically permitted on an individual basis or are covered under one of several approved general or nationwide permits. In addition, under Section 401 of the CWA, an applicant for a federal permit for an activity that may result in a discharge to a water body must obtain certification from the state that the proposed activity will comply with state water quality standards and water quality objectives. Section 401 provides the Regional Water Quality Control Board (RWQCB) with regulatory authority to certify or deny the proposed activity. A Section 401 Certification must be obtained from the RWQCB prior to issuance of a 404 Permit by USACE.

#### **U.S. Army Corps of Engineers**

Pursuant to Section 404 of the CWA, USACE regulates the discharge of dredged and/or fill material into “waters of the United States.” The term “wetlands” (a subset of waters) is defined in Title 33 of the CFR Section 328.3(b) as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support,

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the “ordinary high water mark,” which is defined in 33 CFR 328.3(e).

## **1.3.2 STATE**

### **California Environmental Quality Act**

CEQA requires identification of a project’s potentially significant impacts on sensitive biological resources and feasible mitigation measures and alternatives that could avoid or reduce significant impacts. CEQA Guidelines Section 15380(b)(1) defines endangered animals or plants as species or subspecies whose “survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors” (14 California Code of Regulations [CCR] 15000 et seq.). A rare animal or plant is defined in CEQA Guidelines Section 15380(b)(2) as a species that, although not presently threatened with extinction, exists “in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or ... [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered ‘threatened’ as that term is used in the federal Endangered Species Act.” Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guidelines Section 15380(c). CEQA also requires identification of a project’s potentially significant impacts on riparian habitats (such as wetlands, bays, estuaries, and marshes) and other sensitive natural communities, including habitats occupied by endangered, rare, and threatened species.

### **California Coastal Act**

The California Coastal Commission (CCC) was established by voter initiative in 1972 and was made permanent by the California Legislature through the adoption of the California Coastal Act (CCA) of 1976 (Public Resources Code Section 30000 et seq.). The CCC, in partnership with coastal cities and counties, plans and regulates the use of land and water in the coastal zone. Under the CCA, cities and counties are responsible for preparing Local Coastal Programs (LCPs) as a precondition to obtain authority to issue coastal development permits (CDPs) for projects within their jurisdiction. LCPs consist of land use plans, zoning ordinances, zoning maps, and other implementing actions that conform to the policies of the CCA. Until an agency has a certified (i.e., approved) LCP, the CCC is responsible for issuing CDPs.

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

The CCC reviews the portions of a project within the coastal zone that require a CCC permit or are eligible for appeal to the CCC. For a coastal development permit to be issued, the CCC requires findings of project consistency with specific CCA conditions related to public access and recreation, habitat protection, visual resources, water quality, and many other areas. Section 30007.5 of the CCA requires the CCC to resolve conflicts between CCA policies in a manner that, on balance, is most protective of coastal resources.

Under the CCA Section 30107.5, Environmentally Sensitive Areas (ESA) means any area within the Coastal Overlay Zone (COZ) “in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.” According to CCA Section 30240, “environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.” In addition, the CCC regulates impacts to coastal “wetlands” defined in Section 30121 of the CCA as, “lands within the COZ which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.” The CCA requires that most development avoid and buffer coastal wetland resources in accordance with Sections 30231 and 30233, including limiting the diking, dredging, or filling of wetlands to certain allowable uses, and these shall only be permitted “where there is no feasible less environmentally damaging alternative and where feasible mitigation measures have been provided to minimize adverse environmental effects” (CCA Section 30233). Vegetation communities within the study area that may be considered as ESAs under the CCA include areas within the COZ that support wetlands or coastal sage scrub habitat assumed to be occupied by coastal California gnatcatcher.

The MWMP includes proposed FMPs at nine channel facility groups that occur in the Coastal Zone. These occur within five adopted LCP land use plans, which were certified by CCC (Torrey Pines, Pacific Beach, Peninsula, Otay Mesa-Nestor, and Tijuana River Valley). The CDP approval process will be determined following verification of City versus CCC permit jurisdiction (i.e., deferred certification areas) for each proposed FMP area. However, for purposes of this report, it is assumed that the City will have jurisdiction to issue a CDP that allows for implementation of all nine proposed FMPs within the Coastal Zone. Following City issuance of a CDP for the MWMP, the CDP could be appealed to CCC because multiple segments occur within appealable zones.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

## **1.3.2.1 Sensitive Species Protection**

### **California Endangered Species Act**

The California Department of Fish and Wildlife (CDFW) administers CESA (CFGF Section 2050 et seq.), which prohibits the “take” of plant and animal species designated by the California Fish and Game Commission as endangered or threatened in California. Under CFGF Section 86, take is defined as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA Section 2053(a) stipulates that state agencies may not approve projects that will “jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy.”

CESA Sections 2080 through 2085 address the taking of threatened, endangered, or candidate species. CFGF Section 2080 states, “No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act (CFGF Sections 1900–1913), or the California Desert Native Plants Act (Food and Agricultural Code, Section 80001).”

### **California Fish and Game Code**

According to CFGF Sections 3511 and 4700, which regulate birds and mammals, respectively, a “fully protected” species may not be taken or possessed without a permit from the California Fish and Game Commission, and “incidental takes” of these species are not authorized.

According to Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 states that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. Finally, Section 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

For the purposes of the state regulations, CDFW Regulation 681.2(a) for CFGF Sections 3503 and 3503.5 currently defines an active nest as one that is under construction, preparing for use, or in use for egg laying. This definition includes existing nests that are being modified. For example, if a hawk

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

is adding to or maintaining an existing stick nest in a transmission tower, then it would be considered to be active and covered under these CFGC sections.

## **1.3.2.2 Wetlands and Waters**

### **CDFW Wetland Regulation**

CDFW exercises jurisdiction over waters of the state under CFGC Sections 1600–1616 based on the definition of regulated activity provided in CFGC Section 1602 and the definition of a stream provided in Title 14, Section 1.72, of the CCR.

CFGC Section 1602 states, “An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake” without notifying CDFW. Title 14, Section 1.72, of the CCR defines a stream as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.” This definition includes a broad range of vegetation communities, including some that do not contain wetland species but are in a riparian landscape position. CDFW jurisdiction typically extends to the outer limit of riparian vegetation, or to the top of bank of an unvegetated stream channel.

Under Section 1603 of the CFGC, upon notification, CDFW “shall determine whether the activity may substantially adversely affect an existing fish and wildlife resource.” If such a determination is made, CDFW reaches an agreement with the notifying entity (a Streambed Alteration Agreement) that includes measures to protect the resources CDFW has determined the activity may substantially adversely affect.

### **State and Regional Water Quality Control Board Wetland Regulation**

The intent of the Porter–Cologne Water Quality Control Act is to protect water quality and the beneficial uses of water, and it applies to both surface water and groundwater. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the RWQCBs develop basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under the Porter–Cologne Water Quality Control Act include isolated waters that are no longer regulated by the USACE. Developments with impact to jurisdictional waters must demonstrate compliance with the goals of the act by developing Storm Water Pollution

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

Prevention Plans, Standard Urban Storm Water Mitigation Plans, and other measures to obtain a CWA Section 401 certification.

## **CCC Wetlands Regulation**

As described above, the CCC regulates impacts to coastal wetlands, defined in Section 30121 of the CCA as, “lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.” The CCC interprets this definition to mean coastal wetlands exist in any area that meets at least one of three wetland parameters: hydrology, wetland vegetation, or hydric soils. Wetlands are considered ESHA and shall be “protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.” The CCA requires that most development avoid and buffer coastal wetland resources in accordance with Sections 301231 and 30233, including limiting the filling of wetlands to certain allowable uses.

Under the CCA, Section 30240, ESHAs shall be “protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.” Areas that are considered as ESHAs under the CCA include areas within the Coastal Zone that support wetlands.

### **1.3.3 LOCAL**

#### **San Diego Multiple Species Conservation Program**

The City is a participant in the San Diego MSCP, a comprehensive, regional long-term habitat conservation program designed to conserve biodiversity and to achieve certainty in the land development process for private and public-sector projects within approximately 900 square miles in the southwestern portion of San Diego County (County of San Diego 1998). The San Diego MSCP is a cooperative federal, state, and local program for conservation of native vegetation communities to address the habitat needs of multiple species. It serves as an approved habitat conservation plan pursuant to Section 10(a)(2)(A) of the ESA and the California Natural Communities Conservation Planning Act. The San Diego MSCP provides permit issuance authority for incidental take of Covered Species to the local regulatory agencies.

The San Diego MSCP is established and implemented within the City's jurisdiction through an Implementing Agreement and approved MSCP Subarea Plan with the wildlife agencies and through referenced companion documents such as the ESL Regulations and SDBG. An Incidental Take Permit from USFWS establishes the City's authority to take Covered Species subject to compliance with the MSCP. The MSCP Subarea Plan establishes a preserve system designed to conserve large blocks of

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

interconnected habitat having high biological value that are delineated in the MHPA. The City's MHPA is a "hard line" preserve developed by the City in cooperation with the wildlife agencies, property owners, developers, and environmental groups. The MHPA identifies core biological resource areas and corridors targeted for conservation, in which only limited development may occur (City of San Diego 1997).

The MSCP identifies 85 plants and animals to be "covered" under the plan (termed Covered Species). Many of these Covered Species are subject to one or more protective designations under state and/or federal law and some are endemic to San Diego. The MSCP seeks to provide adequate habitat in the preserve to maintain ecosystem functions and persistence of extant populations of the 85 Covered Species while also allowing participating landowners "take" of Covered Species on lands located outside of the preserve. The purpose of the MSCP is to address species conservation on a regional level and thereby avoid project-by-project biological mitigation, which tends to fragment habitat.

## **City of San Diego MSCP Subarea Plan**

The MSCP Subarea Plan (City of San Diego 1997) encompasses 206,124 acres within the MSCP Subregional Plan area. The MWMP study area is located within the northern, urban, southern, and eastern areas of the MSCP Subarea Plan area. The northern area includes the majority of the Los Peñasquitos Lagoon/Canyon Del Mar Mesa core habitat area, and developed and undeveloped land from Black Mountain Ranch, including core habitat areas, to Lopez Canyon and the North City Future Urbanizing Area. Urban habitat areas within the MHPA include existing designated open space such as Mission Bay, Tecolote Canyon, Marian Bear Memorial Park, Rose Canyon, San Diego River, the southern slopes along Mission Valley, Carroll and Rattlesnake Canyons, Florida Canyon, Chollas Creek, and a variety of smaller canyon systems. The southern area includes Otay Mesa, Otay River Valley, and Tijuana Estuary and Tijuana River Valley. The eastern area includes East Elliott and Mission Trails Regional Park.

The MSCP Subarea Plan is characterized by urban land uses with approximately three-quarters either built-out or retained as open space/park system. The City MHPA is a "hard line" preserve developed by the City in cooperation with the wildlife agencies, property owners, developers, and environmental groups. The MHPA identifies biological core resource areas and corridors targeted for conservation where only limited development may occur (City of San Diego 1997). Portions of the MWMP are located within and adjacent to the MHPA (City of San Diego 1997) (Figures 3A through 3C). The MHPA is considered an urban preserve that is constrained by existing or approved development and is composed of habitat linkages connecting several large core areas of habitat (Figures 3A and 3B and 4A through 4C). The criteria used to define core and linkage areas involves

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

maintaining ecosystem function and processes, including large animal movement. Each core area is connected to other core areas or to habitat areas outside of the MSCP either through common boundaries or through linkages. Core areas have multiple connections to help ensure that the balance in the ecosystem will be maintained (City of San Diego 1997). Critical habitat linkages between core areas are conserved in a functional manner with a minimum of 75% of the habitat within identified conserved linkages (City of San Diego 1997).

As part of the authorization of the MSCP, the City entered into an Implementing Agreement with USFWS and CDFW to ensure protection of “certain plant and animal species that are or may be found in the MSCP Area and which, pursuant to the ESA or CESA or other laws or programs, have been listed as threatened or endangered, have been proposed for listing as threatened or endangered, are candidates for listing as threatened or endangered, or which are otherwise of concern” (City of San Diego 1997). The species that have sufficient coverage under the MSCP are considered Covered Species. Covered Species are also subject to Take Authorization, granted by these resources agencies in accordance with the Implementing Agreement. If Take Authorization is issued, the species are referred to as “Covered Species Subject to Incidental Take,” which includes listed species, as well as species not presently listed as threatened, endangered, or candidate species. Conserving Covered Species equally under the MSCP, regardless of their listing status, allows the consideration of any Covered Species subsequently listed under the ESA or CESA in future permitting or mitigation requirements associated with development projects constructed in the MSCP area.

## **1.3.3.1 City of San Diego Municipal Code – Land Development Code**

### **Environmentally Sensitive Land Regulations**

The ESL Regulations provide a compliance and implementation mechanism for the MSCP Subarea Plan and its Implementing Agreement. According to the City Land Development Code (LDC) Section 143.0101, the purpose of the ESL Regulations are to “protect, preserve, and, where damaged restore, the ESL of San Diego and the viability of the species supported by those lands” (City of San Diego 2019). Specific development regulations pertaining to sensitive biological resources exist in the LDC in the ESL Regulations and the OR-1-2 Zone.

The ESL Regulations and LDC Section 113.0103 define sensitive biological resources as upland and/or wetland areas that meet any one of the following criteria:

- (a) Lands that have been included in the City of San Diego Multiple Species Conservation Program Preserve;
- (b) Wetlands;

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

- (c) Lands outside the MHPA that contain Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats;
- (d) Lands supporting species or subspecies listed as rare, endangered, or threatened under Section 670.2 or 670.5, Title 14, California Code of Regulations, or the Federal Endangered Species Act, Title 50, Code of Federal Regulations, Section 17.11 or 17.12, or candidate species under the California Code of Regulations;
- (e) Lands containing habitats with Narrow Endemic Species as listed in the Biology Guidelines in the Land Development [M]anual; or
- (f) Lands containing habitats of covered species as listed in the Biology Guidelines in the Land Development Manual.

This includes lands within the MHPA and other lands outside of the MHPA that contain wetlands; vegetation communities classifiable as Tier I, II, IIIA, or IIIB; habitat for rare, endangered, or threatened species; or narrow endemic species.

In specific scenarios, deviations from the ESL Regulations are allowed. Such allowances include deviations to wetlands regulations for any project that has been demonstrated to be an Essential Public Project, the Economic Viability Option, or the Biologically Superior Option according to the City's LDC Section 143.0150(d). The MWMP would be categorized as an Essential Public Project, since it will consist of the maintenance of public and linear infrastructure for purposes of considering deviations from ESL wetland regulations outside of the Coastal Zone. For projects within the Coastal Zone, deviations from the ESL Regulations requires an applicant to make supplemental findings in accordance with the City's LDC Section 126.0708(b).

### City of San Diego Wetland Definition

The extent of City wetland jurisdiction is determined based on the City definition of "wetland" provided in LDC Section 113.0103 that are regulated by the City under the ESL Regulations (Section 143.0141[b]), which state the following:

"Wetlands" are defined as areas which are characterized by any of the following conditions:

1. All areas persistently or periodically containing naturally occurring *wetland* vegetation communities characteristically dominated by hydrophytic vegetation, including but not limited to salt marsh, brackish marsh, freshwater marsh, riparian forest, oak riparian forest, riparian woodlands, riparian scrub, and vernal pools;

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

2. Areas that have hydric soils or *wetland* hydrology and lack naturally occurring *wetland* vegetation communities because human activities have removed the historic *wetland* vegetation or catastrophic or recurring natural events or processes have acted to preclude the establishment of *wetland* vegetation as in the case of salt pannes and mudflats;
3. Areas lacking *wetland* vegetation communities, hydric soils and *wetland* hydrology due to non-permitted filling of previously existing *wetlands*;
4. Areas mapped as *wetlands* on Map No. C-713 as shown in Chapter 13, Article 2, Division 6 (Sensitive Coastal Overlay Zone).

It is intended for this definition to differentiate for the purposes of delineating *wetlands*, between naturally occurring *wetlands* and *wetlands* intentionally created by human actions, from areas with *wetlands* characteristics unintentionally resulting from human activities in historically non-wetland areas. With the exception of *wetlands* created for the purpose of providing *wetland* habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating *wetland* characteristics, which are artificially created are not considered *wetlands* by this definition. Taking into account regional precipitation cycles, all adopted scientific, regulator, and technological information available from the State and Federal resource agencies shall be used for guidance on the identification of hydrophytic vegetation, hydric soils and *wetland* hydrology.

Under the definition, an area is considered wetland based on the presence at least one of three physical criteria (vegetation, hydrology, soils) or based on "Map No. C-713 as shown in Chapter 13, Article 2, Division 6" (LDC Section 113.0103). The same code section defines wetland buffers as additional "areas or feature(s) that protects functions and values of the adjacent wetland" where the functions and values include, "absorption and slowing of flood waters for flood and erosion control, sediment filtration, water purification, [and] ground water recharge."

### Land Development Manual – Biology Guidelines

The City developed the SDBG presented in the Land Development Manual "to aid in the implementation and interpretation of the ESL Regulations within LDC Chapter 14, Division 1, Section 143.0101 et seq., and the Open Space Residential (OR-1-2) Zone, Chapter 13, Division 2, Section 131.0201 et seq." (City of San Diego 2018). The SDBG also provide standards for the determination of impacts and mitigation under CEQA and the California Coastal Act (CCA).

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

Chapter 14 of the LDC describes specific development regulations pertaining to sensitive biological resources, including wetlands. Guidelines that supplement the development regulation requirements described in this section are provided in the SDBG (City of San Diego 2018). Additional information and explanation are provided in the SDBG for the definition of wetlands, including field delineation references and interpretations for problem areas, artificial wetlands, and other situations. Within the COZ, wetland buffers should be a minimum of 100 feet wide (as determined on a case-by-case basis in consultation with CDFW, USFWS, and USACE) adjacent to a wetland. The width of the buffer is determined by factors such as type and size of development, sensitivity of the wetland resource to edge effects, topography, and the need for upland transition (City of San Diego 2018).

The SDBG also ranks upland habitat values by rarity and sensitivity. The most sensitive habitats are Tier I, and the least sensitive are Tier IV. The varying mitigation ratios and conditions require that mitigation be either in-tier or in-kind and are based on the sensitivity of the habitat being affected, with higher ratios being applied to lower tiers (e.g., highest mitigation ratio requirements for Tier I habitats). In addition, the location of impact inside or outside of the City's MHPA also determines where and how much mitigation is required, with the highest ratios being required for mitigation outside of the MHPA when project impacts occur within the MHPA (City of San Diego 2018). Habitat mitigation requirements, along with seasonal grading restrictions, provide protections for sensitive species, with additional species-specific mitigation required for significant impacts to narrow endemic species. Limitations on development in the MHPA also protect wildlife movement corridors (e.g., linear areas of the MHPA less than 1,000 feet wide (City of San Diego 2018).

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 2 SURVEY METHODS AND LIMITATIONS

Data regarding biological resources present within the MWMP study area were obtained through a review of pertinent literature and field reconnaissance, both of which are described in detail below. Each facility study area is composed of survey areas and corresponding appropriate survey buffers. Survey areas were determined based on suitable habitat for the resource for which the survey was conducted. For vegetation mapping and focused coastal and riparian avian surveys (including southwestern willow flycatcher [*Empidonax traillii extimus*] and least Bell's vireo [*Vireo bellii pusillus*]), the survey area is defined as the facility group maintenance area and a 300-foot surrounding survey buffer.

### 2.1 LITERATURE REVIEW

The following data sources were reviewed to assist with the biological resources analysis:

- U.S. Department of Agriculture Web Soil Survey (USDA 2017a)
- CDFW California Natural Diversity Database (CDFW 2016a)
- California Native Plant Society Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2016)
- MSCP Subarea Plan (City of San Diego 1997)
- SDBG (City of San Diego 2018)
- USFWS Species Occurrence Data (USFWS 2016a)
- San Diego Geographic Information Source (SanGIS) database (SanGIS 2013)
- USFWS National Wetlands Inventory (USFWS 2016b)
- USGS National Hydrography Dataset (USGS 2016)
- Overview of San Diego Watershed Management Areas (SDRWQCB 2002)
- Aerial maps from the San Diego Association of Governments (SANDAG 2014) and Bing (Microsoft 2016)
- Topographic maps (Google Earth 2016)
- USACE/RWQCB/City RGP 63 Emergency Maintenance Notifications (14 MWMP facility segments maintained from July 13, 2010, to April 28, 2016)
- City of San Diego Substantial Conformance Review; Individual Biological Assessments for Routine Maintenance of 12 FMP facilities (May 2013 to April 2018)
- Master Storm Water System Maintenance Program (City of San Diego 2013a)

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

- Addendum No. 528126 to Program Environmental Impact Report (EIR No. 42891/SCH No. 2004101032) for the Master Storm Water System Maintenance Program (City of San Diego 2013a)

## 2.2 FIELD RECONNAISSANCE

Biological field surveys for the Project were conducted in 2016, 2017, and 2019 by Dudek and Balk Biological Inc. Field surveys included vegetation and land cover mapping, rare plant surveys, focused wildlife surveys, and program-level jurisdictional delineation. Table 2-1 lists the survey dates, times, surveying biologists, and weather conditions during the survey.

All biological surveys were conducted in accordance with the SDBG for Conducting Biological Surveys (Appendix II in City of San Diego 2018).

**Table 2-1**  
**Schedule of Field Reconnaissance Surveys**

Date	Time	Personnel	Weather Conditions
11-21-2016	12:48 PM-2:38 PM	Brynne Mulrooney	72°F; 0% cc; 2-2 mph wind
11-22-2016	12:48 PM-14:38 PM	Shelley Lawrence; Scott Gressard	72°F; 0% cc; 5-10 to 0-3 mph wind
11-22-2016	2:40 PM-3:14 PM	Brynne Mulrooney	72°F; 0% cc; 0-2 mph wind
11-30-2016	9:30 AM-10:52 AM	Shelley Lawrence	55°F-66°F; 0% cc; 0-2 mph wind
11-30-2016	11:22 AM-12:29 PM	Shelley Lawrence	61°F-67°F; 0% cc; 0-1 mph wind
11-30-2016	12:58 PM-1:58 PM	Shelley Lawrence	67°F; 0% cc; 2-4 to 3-5 mph wind
11-30-2016	2:15 PM-2:32 PM	Shelley Lawrence	65°F; 0% cc; 1-2 to 3-5 mph wind
11-30-2016	2:49 PM-3:36 PM	Shelley Lawrence	61°F-63°F; 0% cc; 2-5 to 3-5 mph wind
11-30-2016	4:00 PM-4:28 PM	Shelley Lawrence	61°F-64°F; 0% cc; 2-5 to 2-4 mph wind
12-01-2016	9:41 AM-10:00 AM	Shelley Lawrence	62°F; 40% cc; 4-7 to 2-4 mph wind
12-01-2016	10:36 AM-11:25 AM	Shelley Lawrence	61°F; 20% cc; 4-7 mph wind
12-01-2016	12:21 PM-1:08 PM	Shelley Lawrence	61°F-62°F; 20% cc; 3-5 to 8-13 mph wind
12-01-2016	1:37 PM-3:42 PM	Shelley Lawrence	60°F-65°F; 10% cc; 6-10 to 2-4 mph wind
12-01-2016	4:33 PM-5:05 PM	Shelley Lawrence	57°F-59°F; 10%-30% cc; 5-7 to 1-3 mph wind
12-02-2016	9:50 AM-10:23 AM	Shelley Lawrence	62°F-64°F; 0% cc; 3-5 to 4-6 mph wind

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 2-1**  
**Schedule of Field Reconnaissance Surveys**

<b>Date</b>	<b>Time</b>	<b>Personnel</b>	<b>Weather Conditions</b>
12-02-2016	11:01 AM-11:40 AM	Shelley Lawrence	66°F-67°F; 0% cc; 1-5 to 5-7 mph wind
12-02-2016	11:56 AM-12:36 PM	Shelley Lawrence	60°F-63°F; 0%-0% cc; 5-12 to 3-8 mph wind
12-02-2016	1:08 PM-1:28 PM	Shelley Lawrence	65°F; 0% cc; 6-8 to 10-16 mph wind
12-07-2016	7:15 AM-3:51 PM	Shelley Lawrence	53°F-61°F; 0%-100% cc; 3-5 to 1-4 mph wind
12-09-2016	11:19 AM-1:53 PM	Shelley Lawrence	63°F-67°F; 0%-20% cc; 3-8 to 4-8 mph wind
12-09-2016	2:16 PM-3:52 PM	Shelley Lawrence	65°F; 50%-60% cc; 6-10 to 8-10 mph wind
12-14-2016	7:30 AM-9:44 AM	Shelley Lawrence	51°F-66°F; 10%-30% cc; 2-4 to 1-2 mph wind
12-14-2016	10:30 AM-12:30 PM	Shelley Lawrence	70°F-76°F; 10% cc; 3-6 to 5-7 mph wind
12-14-2016	1:42 PM-2:26 PM	Shelley Lawrence	72°F-76°F; 10%-80% cc; 6-10 to 3-5 mph wind
12-21-2016	8:28 AM-10:42 AM	Shelley Lawrence	64°F-69°F; 100% cc; 10-15 to 8-10 mph wind
12-21-2016	11:17 AM-1:43 PM	Shelley Lawrence	70°F-73°F; 70%-100% cc; 6-10 to 3-5 mph wind
12-22-2016	10:04 AM-12:06 PM	Shelley Lawrence	60°F; 100% cc; 6-10 to 7-10 mph wind
12-22-2016	1:00 PM-1:51 PM	Shelley Lawrence	61°F-62°F; 100% cc; 3-5 to 5-8 mph wind
12-22-2016	2:13 PM-3:03 PM	Shelley Lawrence	60°F; 100% cc; 4-9 to 5-17 mph wind
01-05-2017	9:31 AM-11:02 AM	Shelley Lawrence	59°F-65°F; 100% cc; 10-15 to 3-5 mph wind
01-05-2017	11:06 AM-3:14 PM	Shelley Lawrence	60°F-66°F; 100% cc; 3-5 to 10-15 mph wind
01-06-2017	11:30 AM-3:53 PM	Shelley Lawrence	60°F-71°F; 0%-10% cc; 3-5 to 6-10 mph wind
01-10-2017	9:15 AM-3:46 PM	Shelley Lawrence	55°F-60°F; 50%-80% cc; 5-7 mph wind
01-10-2017	4:02 PM-4:17 PM	Shelley Lawrence	58°F; 30%-40% cc; 2-4 to 3-5 mph wind
01-11-2017	9:02 AM-1:11 PM	Shelley Lawrence	55°F-59°F; 80%-100% cc; 6-10 to 10-13 mph wind

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 2-1**  
**Schedule of Field Reconnaissance Surveys**

Date	Time	Personnel	Weather Conditions
01-13-2017	7:30 AM-1:07 PM	Shelley Lawrence	52°F-54°F; 90%-100% cc; 3-5 to 5-8 mph wind
01-16-2017	2:43 PM	Shelley Lawrence	57°F; 0%% cc; 6-10 mph wind
01-17-2017	9:13 AM-11:23 AM	Shelley Lawrence	52°F-62°F; 0% cc; 3-6 to 2-4 mph wind
01-17-2017	9:27 AM-11:23 PM	Alicia Omlid	60°F-62°F; 0% cc; 0-0 to 2-4 mph wind
01-17-2017	10:08 AM-2:38 PM	Summer Schlageter	62°F-64°F; 0% cc; 0 mph wind
01-17-2017	1:28 PM-2:55 PM	Shelley Lawrence	68°F-60°F; 0%-10% cc; 3-6 mph wind
01-18-2017	9:28 AM-2:59 PM	Alicia Omlid	57°F-54°F; 50%-100% cc; 2 to 4 mph wind
01-24-2017	9:34 AM-1:24 PM	Shelley Lawrence	48°F-56°F; 50%-100% cc; 1-4 to 0-4 mph wind
01-24-2017	1:26 PM-2:05 PM	Shelley Lawrence	58°F-59°F; 0%-60% cc; 3-5 to 3-7 mph wind
01-24-2017	2:12 PM-2:50 PM	Shelley Lawrence	60°F-54°F; 70%-90% cc; 6-10 to 0-2 mph wind
01-25-2017	9:44 AM-10:44 AM	Shelley Lawrence	51°F-55°F; 0% cc; 3-7 to 3-5 mph wind
01-25-2017	9:56 AM-2:28 PM	Alicia Omlid	53°F-54°F; 0% cc; 1 to 3 mph wind
01-25-2017	11:12 AM-12:28 PM	Shelley Lawrence	56°F-57°F; 0% cc; 0-4 to 3-5 mph wind
01-25-2017	1:22 PM-2:38 PM	Shelley Lawrence	56°F-57°F; 0% cc; 3-5 to 3-6 mph wind
01-25-2017	2:49 PM-3:18 PM	Shelley Lawrence	54°F-56°F; 0% cc; 3-5 to 5-10 mph wind
01-26-2017	8:43 AM-1:13 PM	Shelley Lawrence	46°F-58°F; 0% cc; 3-5 to 4-7 mph wind
01-26-2017	1:14 PM-2:12 PM	Shelley Lawrence	58°F; 0% cc; 4-7 to 5-7 mph wind
01-26-2017	2:14 PM-4:01 PM	Shelley Lawrence	53°F-58°F; 0% cc; 5-7 to 5-10 mph wind
01-26-2017	4:02 PM-5:01 PM	Shelley Lawrence	52°F; 0% cc; 7-10 to 5-7 mph wind
01-26-2017	9:41 AM-10:11 AM	Alicia Omlid	54°F-56°F; 0% cc; 1 to 2 mph wind
01-26-2017	10:47 AM-10:57 AM	Alicia Omlid	57°F-58°F; 0% cc; 3 to 5 mph wind
01-26-2017	11:26 AM-11:54 AM	Alicia Omlid	60°F; 0% cc; 1 to 2 mph wind
01-26-2017	1:11 PM-3:10 PM	Alicia Omlid	60°F; 0% cc; 1 to 2 mph wind
01-27-2017	9:51 AM-4:52 PM	Shelley Lawrence	56°F-63°F; 0%-40% cc; 0-3 to 3-6 mph wind
01-30-2017	9:31 AM-1:48 PM	Shelley Lawrence	66°F-75°F; 0%-10% cc; 1-3 to 2-5 mph wind

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 2-1**  
**Schedule of Field Reconnaissance Surveys**

Date	Time	Personnel	Weather Conditions
02-01-2017	9:04 AM-10:16 AM	Shelley Lawrence	48°F-49°F; 0% cc; 3-6 to 3-4 mph wind
02-06-2017	10:35 AM-12:16 PM	Jasmine Bakker	57°F-58°F; 100% cc; 0-2 to 1-3 mph wind
02-07-2017	10:22 AM-4:00 PM	Benjamin Rosenbaum	58°F-62°F; 70%-90% cc; 2-5 mph wind
07-12-2017	8:15 AM – 12:15 PM	Scott Gressard	64°F-71°F; 10%-30% cc; 0-2 to 3-5 mph wind
07-17-2017	9:45 AM – 2:25 PM	Scott Gressard	68°F-74°F; 10%-30% cc; 1-3 to 2-5 mph wind
07-20-2017	8:30 AM – 12:45 PM	Scott Gressard	66°F-76°F; 30%-50% cc; 1-2 to 3-4 mph wind
05-06-2019	7:19 AM-3:00 PM	Shelley Lawrence	60°F-74°F; 60%-70% cc; 3-7 mph wind
05-07-2019	11:57 AM-12:53 PM	Shelley Lawrence	62°F-64°F; 90% cc; 1-15 mph wind
05-09-2019	7:30 AM-11:34 AM	Shelley Lawrence	57°F-62°F; 90% cc; 0-5 mph wind
05-24-2019	9:20 AM-3:14 PM	Shelley Lawrence	73°F; 0% cc; 2-5 mph wind
05-28-2019	8:43 AM-2:45 PM	Shelley Lawrence	68°F; 70% cc; 5-8 mph wind
05-29-2019	8:00 AM-4:00 PM	Shelley Lawrence	66°F-68°F; 0%-20% cc; 0-2 mph wind
06-03-2019	8:45 AM-4:30 PM	Shelley Lawrence	64°F-68°F; 100% cc; 0-5 mph wind
06-04-2019	11:49 AM-3:45 PM	Shelley Lawrence	65°F-70°F; 100% cc; 0-5 mph wind
06-05-2019	8:00 AM-5:35 PM	Shelley Lawrence	68°F; 100% cc; 0-3 mph wind
06-09-2019	9:15 AM-12:20 PM	Shelley Lawrence	62°F-74°F; 100% cc; 0-5 mph wind
06-10-2019	8:45 AM-1:36 PM	Shelley Lawrence	76°F; 30% cc; 5 mph wind
06-11-2019	10:15 AM-2:00 PM	Shelley Lawrence	72°F; 10% cc; 0-5 mph wind
06-13-2019	9:51 AM-5:16 PM	Shelley Lawrence	68°F-70°F; 40%-60% cc; 0-5 mph wind
07-22-2019	10:01 AM-4:00 PM	Shelley Lawrence	78°F-80°F; 10%-30% cc; 3-7 mph wind
07-23-2019	7:15 AM-3:53 PM	Shelley Lawrence	77°F-88°F; 0%-20% cc; 2-11 mph wind
07-24-2019	10:44 AM-4:30 PM	Shelley Lawrence	80°F-84°F; 10%-40% cc; 1-7 mph wind
07-25-2019	10:15 AM-4:45 PM	Shelley Lawrence	81°F-93°F; 10%-90% cc; 0-8 mph wind
07-26-2019	10:04 AM-3:06 PM	Shelley Lawrence	81°F-85°F; 0% cc; 0-5 mph wind
07-31-2019	10:50 AM-3:43 PM	Shelley Lawrence	72°F-78°F; 0% cc; 0-5 mph wind
08-02-2019	9:40 AM-2:53 PM	Shelley Lawrence	77°F-84°F; 0%-60% cc; 0-3 mph wind
08-06-2019	9:58 AM-4:18 PM	Shelley Lawrence	76°F-80°F; 10%-80% cc; 2-5 mph wind
08-12-2019	12:54 PM-5:05 PM	Shelley Lawrence	75°F-84°F; 0% cc; 0-5 mph wind

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 2-1**  
**Schedule of Field Reconnaissance Surveys**

Date	Time	Personnel	Weather Conditions
08-13-2019	10:30 AM–5:04 PM	Shelley Lawrence	74°F–89°F; 0% cc; 0–5 mph wind
08-22-2019	12:34 PM–4:05 PM	Shelley Lawrence	73°F–75°F; 0%–70% cc; 0–5 mph wind
08-23-2019	10:50 AM–4:25 PM	Shelley Lawrence	74°F–80°F; 0% cc; 0–5 mph wind
08-26-2019	9:25 AM–4:23 PM	Shelley Lawrence	81°F–82°F; 0%–10% cc; 0–3 mph wind

**Notes:** °F = degrees Fahrenheit; cc = cloud cover; mph = miles per hour

## 2.2.1 RESOURCE MAPPING

Vegetation communities and land uses on and within the survey area were mapped in the field directly onto a 100-foot-scale (1 inch = 100 feet), aerial photograph-based field map with overlay of the appropriate MWMP survey area buffer. Following completion of the fieldwork, all vegetation polygons were transferred to a topographic base and digitized using ArcGIS, and a geographic information system (GIS) coverage was created. Once in ArcGIS, the acreage of each vegetation community and land cover present within the MWMP study area was determined.

As adopted in the SDBG (City of San Diego 2018), the vegetation community and land cover mapping follows the Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986) as modified by the County and noted in Draft Vegetation Communities of San Diego County (Oberbauer et al. 2008). Areas on site supporting less than 30% native plant species cover were mapped as disturbed land, and areas supporting at least 20% native plant species, but fewer than 50% native cover, were mapped as a disturbed native vegetation community (e.g., disturbed coastal sage scrub-chaparral). In addition, where vegetation communities occur on concrete-lined channels, this condition was noted in the resource mapping. Areas that have 80% or more vegetative cover occupied by invasive plants species (e.g., giant reed [*Arundo donax*]) are classified as invasive dominant to distinguish from disturbed wetlands with more heterogeneous plant species cover.

## 2.2.2 FLORA AND FAUNA

The plant species encountered during the field survey were identified and recorded directly into a field notebook. Those species that could not be identified immediately were brought into the laboratory for further investigation. A compiled list of plant species observed in the MWMP study area is presented in Appendix A, Plant Compendium. Latin and common names for plant species with a California Rare Plant Rank (CRPR; formerly California Native Plant Society List) follow the California Native Plant Society's On-Line Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2016). For plant species without a CRPR, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

and Naturalized Plants of California (Jepson Flora Project 2016) and common names follow the List of Vegetation Alliances and Associations (CDFG 2010) or the U.S. Department of Agriculture Natural Resources Conservation Service Plants Database (USDA 2017b).

Wildlife species detected during the field survey by sight, calls, tracks, scat, or other signs were recorded directly onto a field notebook. Binoculars were used to aid in the identification of wildlife. In addition to species actually detected during the surveys, expected wildlife use of the site was determined by known habitat preferences of local species and knowledge of their relative distributions in the area. A list of wildlife species observed in the MWMP study area is presented in Appendix B, Wildlife Compendium.

Latin and common names of animals follow Crother (2012) for reptiles and amphibians, American Ornithologists' Union (AOU 2016) for birds, Wilson and Reeder (2005) for mammals, North American Butterfly Association (NABA 2001) or San Diego Natural History Museum (SDNHM 2002) for butterflies, and Moyle (2002) for fish.

## 2.2.3 WETLAND DELINEATION

Dudek and Balk Biological biologists conducted a program-level jurisdictional delineation within the MWMP study area. Delineations were conducted concurrently with vegetation mapping, on foot with the aid of 1"=100' scale aerials and topographic map. Access was limited in certain portions of the MWMP study area, and in these areas the delineation was completed via aerial and topographic interpretation combined with upstream and/or downstream observations.

All areas with depressions or storm water facility channels were evaluated for the presence of waters of the U.S., including jurisdictional wetlands. Wetland determinations were completed at a program level, and soil pits were not excavated. Determinations were based on species of vegetation present and their wetland affiliations, above-ground hydrology indicators, topography, soil surface substrate, and best professional judgment.

Areas were determined to be a federal (USACE) wetlands if they satisfied 2 of the 3 required criteria (vegetation and hydrology; i.e., hydric soils were assumed present) established for wetland delineations as described in the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008), as applicable. Areas were determined to be non-wetland waters of the U.S. if there was evidence of regular surface flow (e.g., bed and bank) but the vegetation criterion was not met. Jurisdictional limits for these areas were delineated by the ordinary high water mark, which is defined in 33 CFR Section 329.11 as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of the soil;

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

destruction of terrestrial vegetation; the presence of litter or debris; or other appropriate means that consider the characteristics of the surrounding areas.” RWQCB-defined wetlands are the same as USACE wetlands in all locations within the MWMP study area.

CDFW jurisdictional boundaries were determined based on the presence of riparian vegetation or regular surface flow. Streambeds within CDFW jurisdiction were delineated based on the definition of streambed as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation” (California Code of Regulations [CCR], Title 14, Section 1.72). Riparian habitat is not defined in Title 14, but the section refers to vegetation and habitat associated with a stream. CDFW jurisdictional habitat also includes all riparian shrub or tree canopy (hydrophytic species) that may extend beyond stream banks and thus is not considered USACE and RWQCB jurisdictional.

City jurisdictional areas were based on the definition of wetlands described in the City’s ESL Regulations and include areas characterized by any of the following conditions: (1) All areas persistently or periodically containing naturally occurring wetland vegetation communities characteristically dominated by hydrophytic vegetation, including but not limited to salt marsh, brackish marsh, freshwater marsh, riparian forest, oak riparian forest, riparian woodlands, riparian scrub, and vernal pools; (2) Areas that have hydric soils or wetland hydrology and lack naturally occurring wetland vegetation communities because human activities have removed the historic wetland vegetation or catastrophic or recurring natural events or processes have acted to preclude the establishment of wetland vegetation as in the case of salt pannes and mudflats; (3) Areas lacking wetland vegetation communities, hydric soils, and wetland hydrology due to non-permitted filling of previously existing wetlands; or (4) Areas mapped as wetlands on Map C-713 as shown in Chapter 13, Article 2, Division 6 (Sensitive Coastal Overlay Zone). City-defined wetlands are the same as CDFW wetlands in all locations within the MWMP study area. Where these resource occur within the COZ, they are considered CCC-jurisdictional wetlands as well.

## **2.3 FOCUSED SURVEYS FOR SENSITIVE BIOLOGICAL RESOURCES**

Sensitive biological resources are those defined by the SDBG (City of San Diego 2018) as follows:

- (1) lands that have been included in the MHPA as identified in the City of San Diego MSCP Subarea Plan (City of San Diego 1997);
- (2) wetlands (as defined by LDC Section 113.0103);
- (3) lands outside the MHPA that contain Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats as identified in the SDBG (City of San Diego 2018);

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

- (4) lands supporting species or subspecies listed as rare, endangered, or threatened;
- (5) lands containing habitats with narrow endemic species as listed in the SDBG (City of San Diego 2018); and
- (6) lands containing habitats of covered species as listed in the SDBG (City of San Diego 2018).

Additionally, sensitive biological resources are defined as follows:

- (1) species that have been given special recognition by federal, state, or local agencies and organizations due to limited, declining, or threatened population sizes;
- (2) habitat types recognized by local and regional agencies as sensitive;
- (3) habitat areas or plant communities that are unique, are of relatively limited distribution, or are of particular value to wildlife; and
- (4) wildlife corridors and habitat linkages.

Sources used for determination of sensitive biological resources are as follows:

- plants–USFWS (2016a), CDFW (2016a), and California Native Plant Society (CNPS 2016);
- wildlife–USFWS (2016a) and CDFW (2016a, 2016b);
- plant communities–City of San Diego MSCP Subarea Plan (City of San Diego 1997), and SDBG (City of San Diego 2018).

Dudek and Balk Biological qualified biologists conducted surveys and/or habitat assessments for the following sensitive biological resources: sensitive upland and wetland (i.e., jurisdictional) vegetation communities; focused protocol surveys for southwestern willow flycatcher, and least Bell's vireo. Incidental detections of other sensitive wildlife species, either through sight, calls, tracks, scat, or other signs, were also recorded. A summary of the dates and site conditions for the field efforts performed as part of this biological report are presented above in Section 2.2, Table 2-1. The following sections provide specific details regarding each survey.

## 2.3.1 FOCUSED RIPARIAN AVIAN SURVEYS

The southwestern willow flycatcher is federally and state listed as endangered, and an MSCP Covered Species. Focused protocol presence/absence surveys for southwestern willow flycatcher were conducted by Dudek permitted biologist Paul Lemons (Permit No. TE-051248) and Balk Biological permitted biologist Brian Lohstroh (Permit No. TE-063608). All surveys were conducted within suitable habitat located in the 300-foot buffer around the MWMP study area (see Appendix C, Southwestern Willow Flycatcher and Least Bell's Vireo 45-Day Summary Report). Prior to surveys,

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

southwestern willow flycatcher and least Bell's vireo habitat was identified, and designated survey areas were determined on the following criteria:

- (1) presence of suitable habitat (e.g., willow scrub);
- (2) habitat connectivity, both on site and directly off site;
- (3) size of suitable habitat in vicinity of the facility;
- (4) historical record of occurrence in the vicinity; and
- (5) potential for significant impacts from maintenance.

In 2017, MWMP facilities were evaluated based on the above criteria, and it was determined that 13 facility groups were suitable for southwestern willow flycatcher and least Bell's vireo, and five additional facility groups were suitable for least Bell's vireo only (Appendix C). Subsequently, two additional facility groups were added to the MWMP, with suitable habitat for both species and four additional facility groups were added with suitable habitat for least Bell's vireo only. Surveys for the six additional facilities were completed in 2019 (Appendix C).

As described in Appendix C, southwestern willow flycatcher surveys were conducted during May through July in 2017 and 2019 pursuant to the accepted protocol of the USFWS's Southwestern Willow Flycatcher Protocol Revision 2000 (USFWS 2000). The survey included five visits, with one visit between May 15 and May 31, two visits between June 1 and June 24, and two visits between June 25 and July 17, with each survey during the final period being separated by at least 5 days. In 2017, the first southwestern willow flycatcher survey period was missed for the San Diego River – Valeta facility group due to an accidental omission in the survey schedule. The results of the surveys are provided in Appendix C. Least Bell's vireo is federally and state listed as endangered, and an MSCP Covered Species. Qualified Balk biologist, Brian Lohstroh, conducted focused protocol presence/absence surveys for least Bell's vireo within suitable habitat located in the 300-foot buffer around the MWMP study area. Prior to surveys, least Bell's vireo habitat was identified, and designated survey areas were determined by the criteria listed above for southwestern willow flycatcher. As shown in Appendix C, surveys were conducted between May through July 2017 and April through July 2019 pursuant to the accepted USFWS's Least Bell's Vireo Survey Guidelines (USFWS 2001). The USFWS survey guidelines for the species requires eight site visits between April 10 and July 31; however, due to the late initiation date of least Bell's vireo surveys (May 11), only one facility was surveyed eight times. The remaining facilities were surveyed either five, six, or seven times. Surveys were conducted at least 10 days apart and the majority of surveys were conducted between dawn and 11:00 a.m.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

In correspondence with Stacey Love, USFWS Recovery Permit Coordinator, full focused protocol surveys for least Bell's vireo and southwestern willow flycatcher were not conducted at several of the MWMP facilities due to the timing of the final list of MWMP facilities and the start of the survey period for southwestern willow flycatcher and least Bell's vireo (Appendix C). Instead, following approval of the deviation from the protocol, focused surveys for these species began May 12, 2017, and followed the USFWS-approved survey protocol to the maximum extent possible given the remaining survey period available. Full protocol surveys for southwestern willow flycatcher were conducted at 12 of the 13 original facility segments identified as having potential for the species to occur. A full protocol survey for least Bell's vireo was conducted at one of the 18 original facility segments identified as having potential for the species to occur. Due to timing, partial surveys for least Bell's vireo were conducted at the other 17 facility segments. The facility segments that had been determined to have the highest potential of supporting least Bell's vireo were prioritized in this reduced protocol schedule. All other avian species detected during surveys were also recorded. The results of the surveys are provided in Appendix C.

## 2.3.2 FOCUSED SENSITIVE PLANT SURVEYS

Focused surveys for sensitive plant species were conducted in 2019 by Balk Biological Inc. (Table 2-1). Two survey passes were conducted in May/June 2019 and July/August 2019 to identify species during their respective blooming periods. Prior to field surveys, available modeled habitat data and distribution information for sensitive plant species potentially occurring within the MWMP study area were reviewed.

Field survey methods and mapping of sensitive plants generally conformed to California Native Plant Society's *Botanical Survey Guidelines* (CNPS 2001); *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* (CDFG 2000); and *General Rare Plant Survey Guidelines* (Cypher 2002). Sensitive plant observations were mapped in the field to within 1-meter (3.3 feet) accuracy using Trimble GPS units, or were mapped directly onto a digital aerial field map using ESRI's Collector for ArcGIS application to record the location of sensitive plant populations. Other survey information (e.g., survey conditions) was collected using the Kerata digital data collection mobile application. The sensitive plant observations were then digitized into the geodatabase by Dudek GIS technician Curtis Battle using ArcGIS software.

## 2.4 SURVEY LIMITATIONS

Site visits were conducted during daylight hours. Complete inventories of biological resources present on a site often require numerous focused surveys at different times of day during different seasons. Some species such as annual plants are present in only spring or summer, and nocturnal animals are difficult to detect during the day. Other species may be present in such low numbers

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

that they could be missed. Due to such timing and seasonal variations, survey results are not an absolute list of all species that the MWMP study area may support. Sensitive species with potential to occur are listed in Appendix D, Special-Status Plant Species Potential to Occur, and Appendix E, Special-Status Wildlife Species Potential to Occur. Focused avian surveys were conducted in areas of suitable habitat for least Bell's vireo and southwestern willow flycatcher, as assessed prior to surveys. The habitat conditions for these species are similar to or adjacent to habitats suitable for other sensitive wildlife species with potential to occur in areas to be directly affected by maintenance (e.g., other riparian and wetland species, including Ridgway's rail, California least tern, and yellow-breasted chat). While maintenance may result in minor loss of upland habitats and may result in indirect impacts to upland habitat, focused surveys for species such as California gnatcatcher were determined not to be necessary to assess the potential impacts of the MWMP because a habitat-based approach for these species adequately identifies required protection and mitigation measures. There were a sufficient number of surveys conducted, based on the historic occurrence data available and the urban context of the MWMP study area, to determine the potential for sensitive plant and animal species to occur within the MWMP study area.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 3 RESULTS

### 3.1 PHYSICAL CHARACTERISTICS

#### 3.1.1 SAN DIEGUITO WATERSHED

The San Dieguito Watershed is located south of State Route (SR-) 78 and north of SR-56 in the northern portion of the MWMP study area. The approximately 350-square-mile watershed is rectangular shaped and associated with the San Dieguito River Watershed. Major water bodies and tributaries include Santa Ysabel and Santa Maria creeks, and Lakes Sutherland and Hodges. The watershed ranges in elevation from approximately 385 to 1,347 feet above mean sea level (AMSL), and has an average elevation of 659 feet AMSL. The two Facility Groups within the watershed addressed in the MWMP are Green Valley Creek – Paseo del Verano, and Green Valley Creek – Pomerado (Table 1-2). The physical characteristics of the individual facility segments that make up the watershed are analyzed in the following sections.

##### 3.1.1.1 Green Valley Creek – Pomerado

The Green Valley Creek – Pomerado facility group contains two concrete-lined facility segments: Pomerado (Segments 1 and 2). The facility group extends southeast beginning north of Rancho Bernardo Road and west of Bernardo Oaks Drive. The facility group continues south parallel to Pomerado Road and bends east along Rios Road ending west of Summerfield Lane. The topography has a general southwestern slope. The facility study area elevation ranges from approximately 448 to 525 feet AMSL, and has an average elevation 481 feet AMSL.

The facility group occurs primarily within Green Valley Creek. Adjacent existing land use includes commercial development, and residential. The facility study area is not within the COZ or the MHPA boundary, and, therefore, the proposed maintenance area of this facility segment is outside of the COZ and MHPA.

The following soil types are mapped within the Pomerado (Segments 1 and 2) facility segment:

- Chino silt loam, saline, 0 to 2% slopes;
- Fallbrook sandy loam, 9% to 15% slopes, eroded; and
- Placentia sandy loam, thick surface, 2% to 9% slopes.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

## **3.1.1.2 Green Valley Creek – Paseo del Verano**

The Green Valley Creek – Paseo del Verano facility group contains one concrete-lined facility basin: Paseo del Verano (Segment 1). The facility group occurs in a relatively limited area east of Paseo del Verano, south of Cumana Terrace, and north of Caminito Balata. The topography is relatively flat. The facility study area elevation ranges from approximately 552 to 556 feet AMSL, and has an average elevation of 559 feet AMSL.

Adjacent land use includes residential development. The facility study area is not within the COZ or MHPA boundary, and, therefore, the proposed maintenance area of this facility segment is outside of the COZ and MHPA.

The following soil types are mapped within the Paseo del Verano (Segment 1) facility segment:

- Bonsall sandy loam, thick surface, 2% to 9% slopes; and
- Placentia sandy loam, thick surface, 2% to 9% slopes.

## **3.1.2 LOS PEÑASQUITOS WATERSHED**

The Los Peñasquitos Watershed is located at the northern portion of the MWMP study area, west of SR-67 and north of Interstate (I-) 8. The watershed is rectangular-shaped and approximately 170 square miles. Los Peñasquitos (Sorrento) Lagoon, Mission Bay, and Miramar Reservoir are major water bodies within the watershed. The watershed ranges in elevation from approximately -1 to 1,568 feet AMSL, and has an average elevation of 369 feet AMSL. The Facility Groups present in the watershed that are addressed in the MWMP are Carroll Canyon Creek, Chicarita Creek – Via San Marco, Los Peñasquitos Canyon Creek – Black Mountain, Peñasquitos Lagoon – Industrial, Peñasquitos Lagoon – Tripp, Soledad Canyon Creek – Sorrento, Soledad Canyon Creek – Dunhill, Soledad Canyon Creek – Flintkote, Los Peñasquitos Canyon Creek, and Los Peñasquitos Canyon Creek – 5-805 Basin (Tables 1-2 and 1-3). One structure, 10450 Sorrento Valley Road (HW04220), is present in the watershed and is addressed in the MWMP (Table 1-4). The physical characteristics of the individual facility segments that make up the watershed are analyzed in the following sections.

### **3.1.2.1 Peñasquitos Lagoon – Industrial**

The Peñasquitos Lagoon – Industrial facility group contains one concrete-lined and one earthen-bottom facility segments: Industrial (Segment 1) earthen-bottom channel is downstream of Sorrento Valley Road and a concrete-lined channel and Industrial (Segment 2) is upstream of Sorrento Valley Road and a concrete-lined channel. The facility group is located south of Carmel Mountain Road and

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

west of I-5. The topography is relatively flat. The facility study area elevation ranges from approximately 19 to 39 feet AMSL, and has an average of 26 feet AMSL.

Adjacent existing land use surrounding this facility group includes commercial development. While the facility study area of Industrial (Segments 1 and 2) intersects the MHPA boundary and the COZ, the proposed maintenance area of this facility segment is outside of the MHPA, but still within the COZ.

The following soil types are mapped within the Industrial (Segments 1 and 2) facility segments:

- Chino silt loam, saline, 0 to 2% slopes;
- Corralitos loamy sand, 0 to 5% slopes; and
- Huerhuero loam, 15% to 30% slopes, eroded.

### **3.1.2.2 Peñasquitos Lagoon – Tripp**

The Peñasquitos Lagoon – Tripp facility group contains one concrete-lined facility segment: Tripp (Segment 1). The facility group begins south of Tripp Court along Sorrento Valley Road and extends northeast toward I-5. The facility group bends southeast and runs parallel west of I-5. The topography is relatively flat. The facility study area elevation ranges from approximately 27 to 44 feet AMSL, and has an average elevation of 34 feet AMSL.

Adjacent existing land use surrounding this facility group includes commercial development. The facility study area, including the proposed maintenance area, of the Tripp (Segment 1) intersects the COZ; however, the facility segment is outside of the MHPA.

The following soil types are mapped within the Tripp (Segment 1) facility segment:

- Corralitos loamy sand, 0 to 5% slopes; and
- Huerhuero loam, 15% to 30% slopes, eroded.

### **3.1.2.3 Los Peñasquitos Canyon Creek – Black Mountain**

The Los Peñasquitos Canyon Creek – Black Mountain facility group contains two earthen-bottom facility segments: Black Mountain (Segments 1 and 2). The facility group begins on the west side of Black Mountain Road east of Canyonside Community Park, extends south crossing the road, and ends at Mercy Road. The topography is generally flat. The facility study area elevation ranges from approximately 244 to 275 feet AMSL, and has an average elevation of 257 feet AMSL.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

The facility group occurs primarily within Los Peñasquitos Canyon Creek. Adjacent existing land use includes commercial development, Canyonside Community Park, and open space. The facility study area, including the proposed maintenance area, of Black Mountain (Segments 1 and 2) intersects the MHPA boundary; however, the facility segments are outside of the COZ.

The following soil types are mapped within the Black Mountain (Segments 1 and 2) facility segment:

- Diablo-Olivenhain complex, 9% to 30% slopes;
- Huerhuero loam, 2% to 9% slopes;
- San Miguel-Exchequer rocky silt loams, 9% to 70% slopes; and
- Tujunga sand, 0 to 5% slopes.

## **3.1.2.4 Los Peñasquitos Canyon Creek – 5-805 Basin**

The Los Peñasquitos Canyon Creek facility group contains one earthen-bottom basin facility: 5-805 (Segment 1). The facility group is located north of Sorrento Valley Boulevard, east of Vista Sorrento Parkway, and extends east and west adjacent to utility roads. The topography is a concave basin with steep north and south slopes. The facility study area elevation ranges from approximately 30 to 39 feet AMSL, and has an average elevation of 32 feet AMSL.

The facility group occurs primarily within Los Peñasquitos Canyon Creek. Adjacent existing land use includes commercial development, and Los Peñasquitos Canyon. The study area of the Los Peñasquitos Basin (Segment 1) is not located within the MHPA boundary; however, it is located within the COZ.

The following soil types are mapped within the Los Peñasquitos Basin (Segment 1) facility basin:

- Altamont clay, 30% to 50% slopes; and
- Chino silt loam, saline, 0 to 2% slopes.

## **3.1.2.5 Soledad Canyon Creek – Sorrento**

The Soledad Canyon Creek – Sorrento facility group contains two facility segments, including one earthen-bottom and one concrete-lined: Roselle (Segments 1, earthen-bottom; and 2, concrete-lined). The facility group is located west of I-805 and south of Estuary Way. The facility group occurs west and parallel to Sorrento Valley Road, crosses I-5, and ends north of Tansy Street. The topography has a slight southeast slope. The facility study area elevation ranges from approximately 22 to 43 feet AMSL, and has an average of 35 feet AMSL.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

The facility group occurs primarily within Soledad Canyon Creek. Adjacent existing land use surrounding this facility group includes commercial development. The study areas of both facility segments in this facility group intersect the COZ and the MHPA boundary. However, only the proposed maintenance area for Roselle (Segment 1) is within the MHPA boundary.

The following soil types are mapped within the Roselle (Segments 1 and 2) facility segment:

- Chino silt loam, saline, 0 to 2% slopes;
- Corralitos loamy sand, 5% to 9% slopes; and
- Salinas clay loam, 2% to 9% slopes.

## **3.1.2.6 Carroll Canyon Creek – Carroll**

The Carroll Canyon Creek – Carroll facility group contains one earthen-bottom and concrete-lined facility segment: Carroll Canyon (Segment 1). The facility group is located east of Pacific Heights Boulevard and north and south of Carroll Canyon Road. The topography is generally flat. The facility study area elevation ranges from approximately 149 to 157 feet AMSL, and has an average elevation of 153 feet AMSL.

The facility group occurs primarily within Carroll Canyon Creek. Adjacent existing land use includes commercial development, and Carroll Canyon. The facility study area, including the proposed maintenance area, of the Carroll Canyon (Segment 1) intersects the MHPA boundary; however, the facility segment is outside of the COZ.

The following soil types are mapped within the Carroll Canyon (Segment 1) facility segment:

- Olivenhain cobbly loam, 9% to 30% slopes;
- Olivenhain cobbly loam, 30% to 50% slopes; and
- Riverwash.

## **3.1.2.7 Soledad Canyon Creek – Flintkote**

The Soledad Canyon Creek – Flintkote facility group contains one concrete-lined facility segment: Flintkote (Segment 1). The facility group begins south of Estuary Way at Flintkote Avenue, extends northeast toward Sorrento Valley Road, and crosses Roselle Street. The topography is relatively flat. The facility study area elevation ranges from approximately 24 to 33 feet AMSL, and has an average elevation of 28 feet AMSL.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

The facility group occurs primarily within Soledad Canyon Creek. Adjacent existing land use includes commercial development. The proposed maintenance area of this facility segment is within the COZ; the facility segment maintenance area is outside of and adjacent to the MHPA.

The following soil type is mapped within the Flintkote (Segment 1) facility segment:

- Chino silt loam, saline, 0 to 2% slopes.

## **3.1.2.8 Soledad Canyon Creek – Dunhill**

The Soledad Canyon Creek – Dunhill facility group contains one earthen-bottom facility segment: Dunhill (Segment 1). The facility group is located in a small area south of Dunhill Street and extends east ending at Roselle Street. The topography has a slight western slope. The facility study area elevation ranges from approximately 32 to 36 feet AMSL, and has an average elevation of 33 feet AMSL.

The facility group occurs primarily within Soledad Canyon Creek. Adjacent existing land use includes commercial development. The facility study area, including the proposed maintenance area, of the Dunhill (Segment 1) intersects the COZ; however, the facility segment is outside of the MHPA boundary.

The following soil type is mapped within the Dunhill (Segment 1) facility segment:

- Chino silt loam, saline, 0 to 2% slopes.

## **3.1.2.9 Chicarita Creek – Via San Marco**

The Chicarita Creek – Via San Marco facility group contains one concrete-lined facility segment: Via San Marco (Segment 1). The facility group is located west of I-15, and extends east of Carmel Mountain Road, north of Via San Marco, and ends at the north end of Caminito Quevedo. The topography has a slight eastern slope. The facility study area elevation ranges from approximately 583 to 618 feet AMSL, and has an average elevation of 600 feet AMSL.

The facility group occurs primarily within the Chicarita Creek. Adjacent existing land use includes residential development. The facility study area is not within the COZ or the MHPA boundary, and, therefore, the proposed maintenance area of this facility segment is outside of the COZ and MHPA.

The following soil types are mapped within the Via San Marco (Segment 1) facility segment:

- San Miguel-Exchequer rocky silt loams, 9% to 70% slopes;
- Escondido very fine sandy loam, 5% to 9% slopes;
- Escondido very fine sandy loam, deep, 5% to 9% slopes; and
- Wyman loam, 2% to 5% slopes.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

## **3.1.2.10 10450 Sorrento Valley Road (HW04220) Structure**

The 10450 Sorrento Valley Road (HW04220) structure is a facility that consists of a concrete inlet and is located southwest of I-805, east of I-5, and north of Sorrento Valley Road. The structure collects and conveys storm water flows under Sorrento Valley Road, west toward Soledad Canyon Creek. The facility study area elevation ranges from approximately 56 to 128 feet AMSL and has an average elevation of 85 feet AMSL.

The facility occurs just east of Soledad Canyon Creek where adjacent existing land use includes commercial development, open area, and freeways. This facility study area is within the COZ and outside of the MHPA; however, the structure proposed maintenance area is outside of the COZ.

The following soil types are mapped within the 10450 Sorrento Valley Road (HW04220) structure:

- Huerhuero loam, 9% to 15% slopes, eroded;
- Huerhuero loam, 15% to 30% slopes, eroded; and
- Salinas clay loam, 2% to 9% slopes.

## **3.1.3 MISSION BAY WATERSHED**

The Mission Bay Watershed is located along the coast south of SR-56, and north of I-8. The triangular-shaped watershed is approximately 67 square miles, and is one of the smallest watersheds in the San Diego region (City of San Diego 2013b). The watershed ranges in elevation from approximately -1 to 1,107 feet AMSL, and has an average elevation of 361 feet AMSL. Facility Groups within the watershed addressed in the MWMP include Mission Bay – Mission Bay High School (MBHS), Mission Bay – Mission Bay Drive, Tecolote Creek, Tecolote Creek – Genesee, Torrey Pines – Torrey, Alta La Jolla – Vickie, and Miramar – Engineer (Tables 1-2 and 1-3). The individual MWMP facilities are described in further detail below.

### **3.1.3.1 Torrey Pines – Torrey**

The Torrey Pines – Torrey facility group contains one earthen-bottom facility segment: Torrey Pines (Segment 1). The facility group is located east of Torrey Pines Road and north of Straight Drive. The facility group extends perpendicular from Torrey Pines Road running west to east and curves north on the eastern end. The topography has a slight north and west slope. The facility study area elevation ranges from approximately 155 to 264 feet AMSL, and has an average elevation of 208 feet AMSL.

The facility group occurs primarily within a canyon. Adjacent existing land use includes residential. While the study area of Torrey Pines (Segment 1) intersects the COZ, the proposed maintenance area of this facility segment is outside of the COZ, and the facility study area is outside of the MHPA boundary.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

The following soil types are mapped within the Torrey Pines (Segment 1) facility segment:

- Corralitos loamy sand, 5% to 9% slopes; and
- Terrace escarpments.

## **3.1.3.2 Alta La Jolla – Vickie**

The Alta La Jolla – Vickie facility group contains one earthen-bottom basin facility: Vickie (Segment 1). The facility group is located west of Soledad Road, east of Westknoll Drive, and at the north end of Vickie Drive. The topography is a concave basin with a steep east, west, and south slope. The facility study area elevation ranges from approximately 272 to 294 feet AMSL, and has an average elevation of 286 feet AMSL.

The facility group occurs primarily within a canyon. Adjacent existing land use includes residential. The study area of the Vickie (Segment 1) is not located within the MHPA boundary or COZ.

The following soil types are mapped within the Vickie (Segment 1) facility basin:

- Olivenhain cobbly loam, 2% to 9% slopes; and
- Olivenhain cobbly loam, 30% to 50% slopes.

## **3.1.3.3 Mission Bay – MBHS**

The Mission Bay facility group contains two facility segments, including one earthen-bottom and one concrete-lined: Pacific Beach (PB)-Olney (Segment 1, earthen-bottom) and MBHS (Segment 1, concrete-lined).

The PB-Olney (Segment 1) facility segment is located south of Grand Avenue, which parallels Pacific Beach Drive and extends perpendicular northwest toward the downstream end of the MBHS (Segment 1) facility segment. The MBHS (Segment 1) facility segment is located south of Grand Avenue, which parallels Pacific Beach Drive and extends perpendicular northwest toward Quincy Street. The topography has a slight east slope. The facility study area elevation ranges from approximately 14 to 21 feet AMSL, and has an average elevation of 16 feet AMSL.

The facility group occurs primarily within a Mission Bay tributary. Adjacent existing land use includes commercial development, residential, and open space areas associated with the MHPA. The study area of both facility segments in this facility group intersect the COZ and MHPA boundary. However, only the proposed maintenance area for the PB-Olney (Segment 1) is within the MHPA boundary.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

The following soil type is mapped within the PB-Olney (Segment 1) and MBHS (Segment 1) facility segments:

- Made land.

## **3.1.3.4 Mission Bay – Mission Bay Drive**

The Mission Bay – Mission Bay Drive facility group contains one earthen-bottom facility segment: Mission Bay Drive (Segment 1). The facility group occurs along Mission Bay Drive and Mission Bay Golf Course on the south side of Grand Avenue. The area topography has a slight northwest slope and storm water flows travel southeast to northwest within the channel itself. The facility study area elevation ranges from approximately 19 to 22 feet AMSL, and has an average elevation of 21 feet AMSL.

The facility segment is a section of an unnamed tributary to Mission Bay. Adjacent existing land use includes commercial development, residential development, and the Mission Bay Golf Course. The study area, including the proposed maintenance area, of Mission Bay Drive (Segment 1) intersects the COZ; however, the facility segment is outside of the MHPA.

The following soil type that is mapped within the Mission Bay Drive (Segment 1) facility segment:

- Made land.

## **3.1.3.5 Miramar – Engineer**

The Miramar – Engineer facility group contains one earthen-bottom and concrete-lined facility segment: Engineer (Segment 1). The facility group occurs west of SR-163, south of Engineer Road and west of Mercury Street. The topography is relatively flat. The facility study area elevation ranges from approximately 401 to 417 feet AMSL, and has an average elevation of 410 feet AMSL.

The facility group occurs in the upper drainage area for San Clemente Creek. Adjacent existing land use includes commercial development. The study area of Engineer (Segment 1) is outside of the COZ and MHPA boundary.

The following soil types are mapped within the Engineer (Segment 1) facility segment:

- Redding gravelly loam, 2% to 9% slopes;
- Chesterton fine sandy loam, 2% to 5% slopes; and
- Chesterton fine sandy loam, 5% to 9% slopes.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 3.1.3.6 Tecolote Creek – Chateau

The Tecolote Creek facility group contains two concrete-lined facility segments: Chateau (Segments 1 and 2). The facility group occurs parallel along Chateau Drive running southeast from Diane Avenue toward Paola Way. The facility group includes two forks perpendicular to the primary facility group extending northeast parallel to Boxwood Drive and Paola Way. The topography has a slight southern slope. The facility study area elevation ranges from approximately 280 to 344 feet AMSL, and has an average elevation of 319 feet AMSL.

The facility group occurs primarily within Tecolote Creek. Adjacent existing land use includes commercial development, and residential. The study area of Chateau (Segment 1) is outside of the COZ and MHPA boundary.

The following soil types are mapped within the Chateau (Segments 1 and 2) facility segments:

- Carlsbad-Urban land complex, 9% to 30% slopes;
- Chesterton-Urban land complex, 2% to 9% slopes; and
- Gaviota fine sandy loam, 30% to 50% slopes.

## 3.1.3.7 Tecolote Creek – Genesee

The Tecolote Creek facility group contains one earthen-bottom facility segment: Genesee (Segment 1). The facility segment is an earthen-bottom channel extends north to south on the east side of Genesee Avenue, north of Marlesta Drive. The area topography has a slight western slope and storm water flows travel north to south within the channel itself. The facility study area elevation ranges from approximately 239 to 254 feet AMSL, and has an average elevation of 245 feet AMSL.

The facility segment is a section of an unnamed tributary of Tecolote Creek. Adjacent existing land use includes residential development. The study area of the Genesee (Segment 1) is located outside of the COZ and the MHPA boundary. The City's MHPA is located approximately 40 feet to the west of the channel.

The following soil types are mapped within the Genesee (Segment 1) facility segment:

- Carlsbad-Urban land complex, 2% to 9% slopes; and
- Gaviota fine sandy loam, 30% to 50% slopes.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

## **3.1.4 SAN DIEGO RIVER WATERSHED**

The San Diego River Watershed is located in the central portion of the MWMP study area, from the coast and extending east and north toward Cuyamaca Mountains. The watershed is approximately 440 square miles and triangular-shaped. Major water bodies within the San Diego River Watershed are El Capitan, San Vicente Reservoir, Murray Reservoir, Lake Jennings, and Lake Cuyamaca. The watershed ranges in elevation from approximately -1 to 1,591 feet AMSL, and has an average elevation of 398 feet AMSL. Facility Groups within the watershed addressed by the MWMP includes Alvarado Canyon Creek – Alvarado, Alvarado Canyon Creek – Mission Gorge, Murphy Canyon Creek – Stadium, Murray Reservoir – Cowles Mountain, Norfolk Canyon Creek – Fairmount, San Diego River – Camino del Rio, San Diego River – Nimitz, and San Diego River – Valeta (Table 1-2). Structures within the watershed addressed by the MWMP includes Washington (OT03537), Camino Del Rio South (IN10399), Friars Road (OT05573), Hotel Circle North (OT03321), and Hotel Circle South (HW02440, HW02437) (Table 1-3). The physical characteristics of the individual facility segments that make up the watershed are analyzed in the following sections.

### **3.1.4.1 San Diego River – Nimitz**

The San Diego River – Nimitz facility group contains three facility segments consisting of two earthen-bottom and one concrete-lined: Nimitz (Segments 1, earthen-bottom, 2, concrete-lined, and 3; earthen-bottom). The facility group occurs east of I-8, north and parallel to Nimitz Road, and west of West Point Loma Boulevard. The topography is relatively flat. The facility study area elevation ranges from approximately 20 to 56 feet AMSL, and has an average elevation of 33 feet AMSL.

The facility group occurs primarily within the San Diego River. Adjacent existing land use includes commercial development and Bill Cleator Community Park. Although the study area of Nimitz (Segments 1, 2, and 3) intersects the COZ, the proposed maintenance area is outside of the COZ. In addition, the study area of Nimitz (Segments 1, 2, and 3) is outside of the MHPA boundary.

The following soil types are mapped within the Nimitz (Segments 1, 2, and 3) facility segment:

- Made land; and
- Marina loamy coarse sand, 2% to 9% slopes.

### **3.1.4.2 San Diego River – Valeta**

The San Diego River – Valeta facility group contains one concrete-lined facility segment: Valeta (Segment 1). The facility group occurs east of I-8, north of the intersection of Valeta Street and Famosa Boulevard, and extends into open space. The topography has a slight northern slope. The

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

facility study area elevation ranges from approximately 9 to 18 feet AMSL, and has an average elevation of 12 feet AMSL.

The facility group occurs primarily within the San Diego River. Adjacent existing land use includes commercial development, residential, and Famosa Slough State Marine Conservation Area. The study areas of both facility segments, including the proposed maintenance areas, in this facility group intersect the COZ and the MHPA boundary.

The following soil types are mapped within the Valeta (Segment 1) facility segment:

- Made land; and
- Marina loamy coarse sand, 2% to 9% slopes.

### **3.1.4.3 Murphy Canyon Creek – Stadium**

The Murphy Canyon Creek – Stadium facility group contains three facility segments, including one earthen-bottom and two concrete-lined: Murphy Canyon (Segment 1, concrete-lined) and Stadium (Segment 1, earthen-bottom; and Segment 2, concrete-lined). The facility group occurs west of I-15, parallel to Murphy Canyon Road, south of Stonecrest Boulevard, and north of I-8. The facility group is located in the Mission Valley East Community Planning within Council District 7 in San Diego, California. The area topography has a general western slope and storm water flows travel north to south within the channel itself. The facility study area elevation ranges from approximately 52 to 111 feet AMSL, and has an average of 75 feet AMSL.

The facility group is within a section of Murphy Canyon Creek. Adjacent existing land use consists of commercial development. The study area of Murphy Canyon (Segment 1) and Stadium (Segments 1 and 2) are all outside of the COZ. Although the study area of Stadium (Segment 1) intersect the MHPA boundary, the proposed maintenance area of these facility segments is outside of the MHPA and is approximately 25 feet north of the City's MHPA.

The following soil types are mapped within the Murphy Canyon (Segment 1) and Stadium (Segments 1 and 2) facility segments:

- Gravel pits;
- Made land;
- Riverwash; and
- Terrace escarpments.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

## **3.1.4.4 Alvarado Canyon Creek – Mission Gorge**

The Alvarado Canyon Creek – Mission Gorge facility group contains four concrete-lined facility segments: Mission Gorge (Segments 1, 2, 3, and 4). The facility group occurs on the north side of I-8, south of Mission Gorge Place, east of Fairmount Avenue, and west of Adobe Falls Road. The area topography has a general northern slope and the storm water flows travel east to west within the channel itself. The facility study area elevation ranges from approximately 72 to 115 feet AMSL, and has an average elevation of 96 feet AMSL.

The facility group is a part of Alvarado Canyon Creek. Adjacent existing land use consists of commercial development. The study area of the Mission Gorge (Segments 1, 2, 3, and 4) intersects the MHPA boundary and is outside of the COZ; however, the proposed maintenance area is outside of the MHPA boundary.

The following soil type is mapped within the Mission Gorge (Segments 1, 2, 3, and 4) facility segment:

- Riverwash.

## **3.1.4.5 Alvarado Canyon Creek – Alvarado**

The Alvarado Canyon Creek – Alvarado facility group contains three facility segments, including two concrete-lined, and one earthen-bottom and concrete-lined: Alvarado (Segments 1, earthen-bottom and concrete-lined; 2, concrete-lined; and 3, concrete-lined). The facility group is located south of I-8 beginning perpendicular to Alvarado Road and bends northwest ending near Brockbank Place. The facility group has a segment extending southeast from Reservoir Drive parallel to Alvarado Road. The topography has a slight southern slope. The facility study area elevation ranges from approximately 341 to 373 feet AMSL, and has an average elevation of 352 feet AMSL.

The facility group occurs primarily within Alvarado Canyon Creek. Adjacent existing land use includes commercial development, and residential. The study area, including the proposed maintenance area, of the Alvarado (Segments 1, 2, and 3) facility segments are within the COZ; however, the facility segments are outside of the MHPA boundary.

The following soil types are mapped within the Alvarado (Segments 1, 2, and 3) facility segment:

- Friant rocky fine sandy loam, 9% to 30% slopes;
- Redding-Urban land complex, 9% to 30% slopes; and
- Tujunga sand, 0 to 5% slopes.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

## **3.1.4.6 Murray Reservoir – Cowles Mountain**

The Murray Reservoir – Cowles Mountain facility group contains two concrete-lined facility segments: Cowles Mountain (Segments 1 and 2). The facility group is located west of Boulder Lake Avenue, south parallel to Beaver Lake Drive, and continues west of Cowles Mountain Boulevard. The facility group has a segment that runs southwest beginning south of Navajo Road and ends north of San Carlos Drive. The topography is relatively flat. The facility study area elevation ranges from approximately 600 to 661 feet AMSL, and has an average elevation of 644 feet AMSL.

The facility group occurs primarily within Murray Reservoir Creek. Adjacent existing land use includes commercial development, residential, open space, and San Carlos Park. The study area of Cowles Mountain (Segments 1 and 2) is outside of the COZ and MHPA boundary.

The following soil types are mapped within the Cowles Mountain (Segments 1 and 2) facility segment:

- Fallbrook rocky sandy loam, 9% to 30% slopes; and
- Tujunga sand, 0 to 5% slopes.

## **3.1.4.7 Norfolk Canyon Creek – Fairmount**

The Norfolk Canyon Creek – Fairmount facility group contains five facility segments, including one earthen-bottom, three concrete-lined, and one earthen-bottom and concrete-lined: Baja (Segment 1, earthen-bottom and concrete-lined), and Fairmount (Segments 1, concrete-lined; 2, concrete-lined; 3, earthen-bottom; and 4, concrete-lined). The facility group occurs primarily on the west side of Fairmount Avenue, south of Montezuma Road to Van Dyke Place. The Baja segment runs west from Collwood Boulevard, south of Baja Drive, and north of Maisel Way. The topography has a general western slope. The facility study area elevation ranges from approximately 123 to 325 feet AMSL, and has an average elevation of 252 feet AMSL.

The facility group occurs primarily within Norfolk Canyon Creek – Fairmount. Adjacent existing land use includes commercial development, residential, and Norfolk Canyon. The study area, including the proposed maintenance area, of all five facility segments intersect the MHPA boundary; however, the facility study area is outside of the COZ.

The following soil types are mapped within the Baja (Segment 1) and Fairmount (Segments 1, 2, 3, and 4) facility segments:

- Diablo-Urban land complex, 5% to 15% slopes;
- Made land; and
- Terrace escarpments.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

## **3.1.4.8 San Diego River – Camino del Rio**

The facility group contains two concrete-lined facility segments: Camino del Rio (Segment 1) and Camino del Arroyo (Segment 2). The facility group occurs north of I-5, parallel to Camino del Rio and Camino del Arroyo, south of Camino de la Reina, and east of SR-163. The topography is relatively flat. The facility study area elevation ranges from approximately 3 to 200 feet AMSL, and has an average elevation of 87 feet AMSL.

The facility group occurs primarily within the San Diego River. Adjacent existing land use includes commercial development and residential. The study area of Camino del Rio (Segment 1) and Camino del Arroyo (Segment 2) are outside of the COZ and MHPA boundary.

The following soil types are mapped within the Camino del Rio (Segment 1) and Camino del Arroyo (Segment 2) facility segments:

- Urban land;
- Tujunga sand, 0 to 5% slopes; and
- Reiff fine sandy loam, 5% to 9% slopes.

## **3.1.4.9 1331 Washington (OT03537) Structure**

The 1331 Washington (OT03537) structure consists of a drainage outlet facility that is located east of SR-163, south of Lincoln Avenue, and north of Washington Street. The structure is located in the eastern end of a concave canyon bottom with north- and south-facing slopes and a general western slope that carries storm water flows through a concrete-lined ditch into an urban canyon downstream. The facility study area elevation ranges from approximately 250 to 308 feet AMSL, and has an average elevation of 296 feet AMSL.

The facility occurs south of the San Diego River where adjacent existing land use includes commercial development, residential, and freeways. The drainage facility is not located within the MHPA designated lands or within the COZ; therefore, there would be no direct impacts to either of these areas from maintenance activities.

The following soil types are mapped within the 1331 Washington (OT03537) structure:

- Terrace escarpments; and
- Urban land.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

## **3.1.4.10 1277 Camino Del Rio South (IN10399) Structure**

The 1277 Camino del Rio South (IN10399) structure consists of a concrete inlet facility that is located south of I-8, north of the intersection of Valeta Street and Famosa Boulevard, and north of Franciscan Way. The structure is relatively flat as the facility receives flows from a north-sloping streambed and collects storm water flows that are conveyed under Camino del Rio South toward the San Diego River. The facility study area elevation ranges from approximately 43 to 236 feet AMSL, and has an average elevation of 114 feet AMSL.

The facility occurs south of the San Diego River where adjacent existing land uses include commercial and residential development within Mission Valley. The inlet facility is not located within the MHPA designated lands or within the COZ; therefore, there would be no direct impacts to either of these areas from maintenance activities.

The following soil types are mapped within the 1277 Camino del Rio South (IN10399) structure:

- Urban land; and
- Terrace escarpments.

## **3.1.4.11 5505 Friars Road (OT05573) Structure**

The 5505 Friars Road (OT05573) structure consists of a concrete outlet facility that is located east of I-5, just north of the San Diego River, south of the Friars Road, and west of Colusa Street. The structure is relatively flat with a slight southern slope that conveys storm water flows coming from under Friars Road, south into the San Diego River. The facility study area elevation ranges from approximately 9 to 31 feet AMSL, and has an average elevation of 20 feet AMSL.

The facility occurs just north of the San Diego River where adjacent existing land uses include commercial and residential development and open space. The study area, including the proposed maintenance area, of Friars Road (OT05573) structure is located within the MHPA boundary, and outside of the COZ.

The following soil type is mapped within the 5505 Friars Road (OT05573) structure:

- Tujunga sand, 0 to 5% slopes.

## **3.1.4.12 1660 Hotel Circle North (OT03321) Structure**

The 1660 Hotel Circle North (OT03321) structure consists of a concrete outlet facility that is located north of I-8, east of Fashion Valley Road, and north of Hotel Circle North. The structure is concave

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

with north- and south-facing earthen-bottom slopes adjacent to the facility, which slopes generally to the north and conveys storm water through a private golf course facility toward the San Diego River. The facility study area elevation ranges from approximately 19 to 42 feet AMSL, and has an average elevation of 26 feet AMSL.

The facility occurs just south of the San Diego River where adjacent existing land use includes commercial development, Riverwalk Golf Club. The outlet facility is not located within the MHPA designated lands or within the COZ; therefore, there would be no direct impacts to the either of these areas from maintenance activities.

The following soil types are mapped within the 1660 Hotel Circle North (OT03321) structure:

- Grangeville fine sandy loam, 0 to 2% slopes;
- Reiff fine sandy loam, 5% to 9% slopes; and
- Tujunga sand, 0 to 5% slopes.

### **3.1.4.13 901 Hotel Circle South (HW02440) Structure**

The 901 Hotel Circle South (HW02440) structure consists of a concrete inlet facility that is located south of I-8 and Hotel Circle South, east of Falcon Street, and north of north of West Arbor Drive. The structure collects storm water flows from the upstream urban canyon for conveyance toward the San Diego River. The facility study area elevation ranges from approximately 71 to 236 feet AMSL, and has an average elevation of 123 feet AMSL.

The facility occurs south of the San Diego River where adjacent existing land use includes commercial and residential development and open canyon in Mission Valley. The inlet facility is not located within the MHPA designated lands or within the COZ; therefore, there would be no direct impacts to the either of these areas from maintenance activities.

The following soil types are mapped within the 901 Hotel Circle South (HW02440) structure:

- Terrace escarpments;
- Grangeville fine sandy loam, 0 to 2% slopes; and
- Urban land.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

## **3.1.4.14 2087 Hotel Circle South (HW02437) Structure**

The 2087 Hotel Circle South (HW02437) structure consists of a concrete inlet facility that is located south of I-8 and Hotel Circle South and northwest of Hermosa Way. The structure collects storm water flows from the upstream urban canyon for conveyance under I-8, toward the San Diego River. The facility study area elevation ranges from approximately 69 to 257 feet AMSL, and has an average elevation of 119 feet AMSL.

The facility occurs south of the San Diego River where adjacent existing land use includes commercial and residential development and open canyon. The inlet facility is not located within the MHPA designated lands or within the COZ; therefore, there would be no direct impacts to the either of these areas from maintenance activities.

The following soil types are mapped within the 2087 Hotel Circle South (HW02437) structure:

- Terrace escarpments;
- Anderson very gravelly sandy loam, 9% to 45% slopes; and
- Reiff fine sandy loam, 5% to 9% slopes.

## **3.1.5 PUEBLO SAN DIEGO WATERSHED**

The Pueblo San Diego Watershed is located south of I-8, west of SR-125, and north of San Diego Bay. The watershed is a small rectangular of approximately 60 square miles. No major water bodies occur within the watershed. The watershed ranges in elevation from approximately -1 to 835 feet AMSL, and has an average elevation of 247 feet AMSL. Facility groups in the watershed addressed by the MWMP are Auburn Creek – Wightman, Auburn Creek – Home, Chollas Creek – National, Chollas Creek – Rolando, Mission Hill Canyon Creek – Titus, Paleta Creek – Cottonwood, Paleta Creek – Solola, Powerhouse Canyon Creek – Pershing, South Chollas Creek – Euclid, South Chollas Creek – Federal, South Chollas Creek – Southcrest, South Chollas Creek Encanto Branch – Castana, South Chollas Creek Encanto Branch – Imperial, South Chollas Creek Encanto Branch – Jamacha, Washington Canyon Creek – Washington, and Maple Canyon Creek – Maple (Tables 1-2 and 1-3). Structures in the watershed addressed by the MWMP are Roselawn (OT03694), J Street (HW04013), and Goodyear (OT04671) (Table 1-4). The physical characteristics of the individual facility segments that make up the watershed are analyzed in the following sections.

### **3.1.5.1 Washington Canyon Creek – Washington**

The Washington Canyon Creek – Washington facility group consists of two facility segments: one earthen-bottom and one concrete-lined: Washington (Segments 1, earthen-bottom; and 2, concrete-

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

lined). The facility group is located parallel north and east of West Washington Street from Ibis Court to Columbia Street. The topography has a slight western slope. The facility study area elevation ranges from 97 to 201 feet AMSL, and has an average elevation of 132 feet AMSL.

The facility group occurs primarily within Washington Canyon Creek. Adjacent existing land use includes commercial development, residential, and open space. The study area of Washington (Segments 1 and 2) is outside of the COZ and MHPA boundary.

The following soil types are mapped within the Washington (Segments 1 and 2) facility segment:

- Gaviota fine sandy loam, 9% to 30% slopes; and
- Urban land.

## **3.1.5.2 Mission Hill Canyon Creek – Titus**

The Mission Hill Canyon Creek – Titus facility group contains one earthen-bottom facility segment: Titus (Segment 1). The facility group extends east to west parallel to Mission Hills trail on the northeast side of Titus Street, northwest of Pringle Street, and southeast of Henry Street. The facility group is located in the Mission Hills Community Planning Area within Council District 3 in San Diego, California. The area topography has a slight western slope and storm water flows travel east to west within the channel itself. The facility study area elevation ranges from approximately 99 to 108 feet AMSL, and has an average elevation of 102 feet AMSL.

Adjacent existing land use includes residential development. The facility study area, including the proposed maintenance area, of Titus (Segment 1) intersects the MHPA; however, the facility segment is outside of the COZ.

The following soil type is mapped within the Titus (Segment 1) facility segment:

- Gaviota fine sandy loam, 30% to 50% slopes.

## **3.1.5.3 Maple Canyon Creek – Maple**

The Maple Canyon Creek – Maple facility group consists of one earthen-bottom basin facility: Maple (Segment 1). The facility group is located west of Albatross Street, west of West Maple Street, and at the south end of Curlew Street. The topography is a concave basin with a slight north and south slope. The facility study area elevation ranges from 97 to 201 feet AMSL, and has an average elevation of 132 feet AMSL.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

The facility group occurs primarily within Maple Canyon Creek. Adjacent existing land use includes commercial development, residential, and open space. The study area of Maple Canyon (Segment 1) is outside of the COZ and MHPA boundary.

The following soil types are mapped within the Maple Canyon (Segment 1) facility basin:

- Gaviota fine sandy loam, 30% to 50% slopes;
- Terrace escarpments; and
- Urban land.

## **3.1.5.4 Powerhouse Canyon Creek – Pershing**

The Powerhouse Canyon Creek - Pershing facility group contains two concrete-lined facility groups: Pershing (Segments 1 and 2). The facility group is located east of I-5 and south parallel to Pershing Drive. The facility group runs northeast and has one fork end at 26th Street and a second fork cross Pershing Drive and end at Florida Drive. The topography has a slight western slope. The facility study area elevation ranges from approximately 83 to 98 feet AMSL, and has an average elevation of 88 feet AMSL.

The facility group occurs primarily within Powerhouse Canyon Creek. Adjacent existing land use includes commercial development and Balboa Park. The study area of Pershing (Segments 1 and 2) is outside of the COZ and MHPA boundary.

The following soil types are mapped within the Pershing (Segments 1 and 2) facility segment:

- Huerhuero loam, 15% to 30% slopes, eroded; and
- Urban land.

## **3.1.5.5 San Diego Bay– 28th St**

The San Diego Bay– 28th St facility group contains one earthen-bottom facility segment: 28th St (Segment 1). The facility group is located south of SR-94, and parallels 28th Street on the east side, south of G Street, and north of Island Avenue. The topography has a slight western slope. The facility study area elevation ranges from approximately 116 to 129 feet AMSL, and has an average elevation of 122 feet AMSL.

The facility group occurs primarily within the San Diego Bay Tributary. Adjacent existing land use includes residential, developed roads, and open space. The study area of 28th Street (Segment 1) is outside of the COZ and MHPA boundary.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

The following soil type is mapped within the 28th St (Segment 1) facility segment:

- Urban land.

## 3.1.5.6 Chollas Creek – National

The Chollas Creek – National group contains two facility segments consisting of one earthen-bottom and one earthen-bottom and concrete-lined: National (Segments 1, earthen-bottom; and 2, earthen-bottom and concrete-lined). The facility group is located west parallel to I-15 beginning at Steel Street and continues south ending at I-5. The topography has a general western slope. The facility study area elevation ranges from approximately 11 to 25 feet AMSL, and has an average elevation of 16 feet AMSL.

The facility group occurs primarily within Chollas Creek. Adjacent existing land use includes commercial development, and residential. The study area of National (Segments 1 and 2) intersects the COZ; however, the proposed maintenance area is outside of the COZ, and the study area of the facility segments are outside of the MHPA boundary.

The following soil type is mapped within the National (Segments 1 and 2) facility segments:

- Urban land.

## 3.1.5.7 Chollas Creek – Rolando

The Chollas Creek – Rolando facility group contains three facility segments, including one earthen-bottom and two concrete-lined: Cartagena (Segment 1, concrete-lined) and Rolando (Segments 1, concrete-lined; and 2, earthen-bottom). The facility group is located south of University Avenue east of Bonillo Drive and west of Aragon Drive, and crosses Rolando Boulevard. The topography has a slight northern slope. The facility study area elevation ranges from approximately 357 to 363 feet AMSL, and has an average elevation of 362 feet AMSL.

The facility group occurs primarily within Chollas Creek. Adjacent existing land use includes commercial development, and residential. The study area of Cartagena (Segment 1) and Rolando (Segments 1 and 2) is outside of the COZ and MHPA boundary.

The following soil type is mapped within the Cartagena (Segment 1) and Rolando (Segments 1 and 2) facility segments:

- Olivenhain-Urban land complex, 2% to 9% slopes.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

## **3.1.5.8 Chollas Creek – Martin**

The Chollas Creek – Martin facility group contains one earthen-bottom and concrete-lined facility segment: Martin (Segment 1). The facility group is located west of South 36th Street, south of Ocean View Boulevard, and east of I-15. The topography has a general southwestern slope. The facility study area elevation ranges from approximately 7 to 81 feet AMSL, and has an average elevation of 42 feet AMSL.

The facility group occurs primarily within Chollas Creek. Adjacent existing land use includes residential and commercial development. The study area of Martin (Segment 1) is outside of the COZ and MHPA boundary.

The following soil type is mapped within the Martin (Segment 1) facility segment:

- Huerhuero-Urban land complex, 2% to 9% slopes.

## **3.1.5.8 Chollas Creek – J St**

The Chollas Creek – J St facility group contains one earthen-bottom facility segment: J St (Segment 1). The facility group is located south of Market Street, west of Denby Street, and north of J Street. The topography has a general southern slope. The facility study area elevation ranges from approximately 124 to 132 feet AMSL, and has an average elevation of 128 feet AMSL.

The facility group occurs primarily within Chollas Creek. Adjacent existing land use includes residential and commercial development. The study area of J St (Segment 1) is outside of the COZ and MHPA boundary.

The following soil type is mapped within the J St (Segment 1) facility segment:

- Urban land.

## **3.1.5.9 Auburn Creek – Home**

The Auburn Creek – Home facility group contains four facility segments consisting of two earthen-bottom, one concrete-lined, and one earthen-bottom and concrete-lined: Home (Segments 1, earthen-bottom; 2, earthen-bottom; 3, concrete-lined; and 5, earthen-bottom and concrete-lined). The facility group is located on the east and west side of I-805 and north of SR-94. The facility group runs parallel south of Home Avenue beginning north of Fairmount Avenue and ends north of Federal Boulevard. The topography has a slight northwestern slope. The facility study area elevation ranges from approximately 78 to 162 feet AMSL, and has an average elevation of 129 feet AMSL.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

The facility group occurs primarily within Auburn Creek. Adjacent existing land use includes commercial development, and residential. The study area of Home (Segments 1, 2, 3, and 5) are outside of the COZ. Only the study area of Home (Segment 3) and Home (Segment 5) intersect the MHPA boundary; however, the proposed maintenance areas are outside of the MHPA boundary.

The following soil type is mapped within the Home (Segments 1, 2, 3, and 5) facility segment:

- Made land.

## **3.1.5.10 Auburn Creek – Wightman**

The Auburn Creek – Wightman facility group contains two earthen-bottom and concrete-lined facility segments: Wightman (Segments 1 and 2). The facility group is located south of University Avenue and west of 52nd Street. The facility group continues southwest, crosses Wightman Street, and ends at 50th Street. The topography has a slight eastern slope. The facility study area elevation ranges from approximately 281 to 305 feet AMSL, and has an average elevation of 294 feet AMSL.

The facility group occurs primarily within Auburn Creek. Adjacent existing land use includes residential and open space. The study area of Wightman (Segments 1 and 2) are outside of the COZ and MHPA boundary.

The following soil types are mapped within the Wightman (Segments 1 and 2) facility segment:

- Huerhuero-Urban land complex, 2% to 9% slopes;
- Redding cobbly loam, 9% to 30% slopes; and
- Urban land.

## **3.1.5.11 Chollas Creek– Megan**

The Chollas Creek– Megan facility group contains two facility segments consisting of one earthen-bottom and one concrete-lined: Megan (Segments 1, concrete-lined; and 2, earthen-bottom). The facility group is located east of I-805, and extends west of Euclid Avenue, south of Megan Way, and ends at the north end of Chollas Parkway. The topography has a slight western slope. The facility study area elevation ranges from approximately 152 to 186 feet AMSL, and has an average elevation of 168 feet AMSL.

The facility group occurs primarily within the Chollas Creek. Adjacent existing land use includes residential and open space. The facility study area, including the proposed maintenance area, of

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Megan (Segment 1) intersects the MHPA boundary, and both Megan (Segments 1 and 2) facility segments are outside of the COZ.

The following soil types are mapped within the Megan (Segments 1 and 2) facility segments:

- Riverwash;
- Redding-Urban land complex, 2% to 9% slopes;
- Redding cobbly loam, 9% to 30% slopes;
- Olivenhain cobbly loam, 2% to 9% slopes;
- Made land;
- Huerhuero-Urban land complex, 2% to 9% slopes; and
- Huerhuero loam, 15% to 30% slopes, eroded.

## 3.1.5.12 Chollas Creek – 54th St

The Chollas Creek – 54th St facility group contains one concrete-lined facility segment: 54th St (Segment 1). The facility group is located north of SR-94, and extends northeast of College Grove Drive, east of 5th St, and ends south of Redwood Street. The topography has a slight northeastern slope. The facility study area elevation ranges from approximately 267 to 284 feet AMSL, and has an average elevation of 276 feet AMSL.

The facility group occurs primarily within Chollas Creek. Adjacent existing land use includes residential, commercial development, and open space. The study area of 54th St (Segment 1) is outside of the COZ and MHPA boundary.

The following soil types are mapped within the 54th St (Segment 1) facility segment:

- Olivenhain-Urban land complex, 2% to 9% slopes;
- Riverwash; and
- Huerhuero-Urban land complex, 2% to 9% slopes.

## 3.1.5.13 South Chollas Creek – Southcrest

The South Chollas Creek – Southcrest facility group contains two earthen-bottom and concrete-lined facility segments: Alpha (Segment 1, earthen-bottom) and Ocean View (Segment 1, concrete-lined). The facility group begins north of Ocean View Boulevard, continues south and bends southwest at Boston Avenue and ends north of Alpha Street. The topography has a general north and west slope.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

The facility study area elevation ranges from approximately 12 to 50 feet AMSL, and has an average elevation of 23 feet AMSL.

The facility group occurs primarily within South Chollas Creek. Adjacent existing land use includes commercial development, residential, open space, and Southcrest Park. The study area of Alpha (Segment 1) and Ocean View (Segment 1) is outside of the COZ and the MHPA boundary.

The following soil types are mapped within the Alpha (Segment 1) and Ocean View (Segment 1) facility segments:

- Grangeville fine sandy loam, 0 to 2% slopes;
- Huerhuero-Urban land complex, 2% to 9% slopes; and
- Urban land.

## **3.1.5.14 South Chollas Creek – Euclid**

The South Chollas Creek – Euclid facility group contains one concrete-lined facility segment: Euclid (Segment 2). The facility group begins north of Market Street west of Euclid Avenue, extends north and bends east, crosses Euclid Avenue, and continues north parallel to 51st Street. The topography has a slight western slope. The facility study area elevation ranges from approximately 106 to 139 feet AMSL, and has an average elevation of 121 feet AMSL.

The facility group occurs primarily within South Chollas Creek. Adjacent existing land use includes commercial development and residential. The study area of Euclid (Segment 2) is outside of the COZ and MHPA boundary.

The following soil types are mapped within the Euclid (Segment 2) facility segment:

- Huerhuero-Urban land complex, 2% to 9% slopes;
- Huerhuero-Urban land complex, 9% to 30% slopes; and
- Made land.

## **3.1.5.15 South Chollas Creek – Federal**

The Southern Chollas Creek – Federal facility group contains two facility segments consisting of one earthen-bottom and concrete-lined, and one concrete-lined: Federal (Segments 1, earthen-bottom and concrete-lined; and 2, concrete-lined). The facility group occurs south of SR-94 and north of Federal Boulevard, and ends near Winnett Street. The topography has a slight northern slope. The

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

facility study area elevation ranges from approximately 244 to 275 feet AMSL, and has an average elevation of 260 feet AMSL.

The facility group occurs primarily within South Chollas Creek. Adjacent existing land use includes commercial development. Although the study area of Federal (Segment 1) intersects the MHPA boundary, the proposed maintenance area is outside of the MHPA boundary, and both Federal (Segments 1 and 2) facility segments are outside of the COZ.

The following soil types are mapped within the Federal (Segments 1 and 2) facility segment:

- Olivenhain cobbly loam, 2% to 9% slopes; and
- Olivenhain-Urban land complex, 2% to 9% slopes.

### **3.1.5.16 South Chollas Creek Encanto Branch – Castana**

The South Chollas Creek Encanto Branch – Castana facility group consists of one earthen-bottom and concrete-lined facility segment: Castana (Segment 1). The facility group occurs east of Euclid Avenue, north of Castana Street, west of San Jacinto Drive. The topography has a general western slope. The facility study area elevation ranges from approximately 142 to 143 feet AMSL.

The facility group occurs primarily within South Chollas Creek. Adjacent existing land use includes commercial development, residential, and open space. The study area of Castana (Segment 1) is outside of the COZ and MHPA boundary.

- The following soil type is mapped within the Castana (Segment 1) facility segment: Huerhuero-Urban land complex, 9% to 30% slopes.

### **3.1.5.17 South Chollas Creek Encanto Branch – Imperial**

The South Chollas Creek Encanto Branch – Imperial facility group consists of one concrete-lined facility segment: Imperial (Segment 2). The facility group occurs north of Imperial Avenue, south of Market Street, east of 54th Street, and west of Iona Drive. The topography has a slight northern slope. The facility study area elevation ranges from approximately 125 to 168 feet AMSL, and has an average elevation of 145 feet AMSL.

The facility group occurs primarily within South Chollas Creek. Adjacent existing land use includes commercial development, residential, and open space. The study area of Imperial (Segment 2) is outside of the COZ and MHPA boundary.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

The following soil types are mapped within the Imperial (Segment 2) facility segment:

- Las Flores-Urban land complex, 2% to 9% slopes; and
- Made land.

## **3.1.5.18 South Chollas Creek Encanto Branch – Jamacha**

The South Chollas Creek Encanto Branch – Jamacha facility group consists of one earthen-bottom facility segment: Jamacha (Segment 1). The facility group begins east of Imperial Avenue and runs east, south of Jamacha Road, then bends northeast and ends near Car Street. The facility group has one segments south of Lisbon Street and west of Porter Street. The topography has a general southern slope. The facility study area elevation ranges from approximately 238 to 364 feet AMSL, and has an average elevation of 289 feet AMSL.

The facility group occurs primarily within South Chollas Creek. Adjacent existing land use includes commercial development, residential, open space, and Encanto Park. The study area of Jamacha (Segment 1) is outside of the COZ and MHPA boundary.

The following soil types are mapped within the Jamacha (Segment 1) facility segment:

- Las Flores loamy fine sand, 15% to 30% slopes, eroded; and
- Las Flores-Urban land complex, 2% to 9% slopes.

## **3.1.5.19 Paleta Creek – Cottonwood**

The Paleta Creek – Cottonwood facility group contains two concrete-lined facility segments: Cottonwood (Segments 1 and 2). The facility group is located north of East Division Street and extends east from Osborn Street toward South 43rd Street. The topography has a general western slope. The facility study area elevation ranges from approximately 37 to 42 feet AMSL, and has an average elevation of 41 feet AMSL.

The facility group occurs primarily within Paleta Creek. Adjacent existing land use includes residential. Cottonwood (Segments 1 and 2) is outside the COZ and MHPA boundary.

The following soil types are mapped within the Cottonwood (Segments 1 and 2) facility segment:

- Huerhuero-Urban land complex, 2% to 9% slopes; and
- Urban land.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 3.1.5.20 Paleta Creek – Solola

The Paleta Creek – Solola facility group contains two concrete-lined facility segments: Solola (Segments 1 and 2). The facility group is located north of East Division Street and east of I-805. The facility group begins at South 47th Street and runs east toward Bonita Drive, then extends northeast along Cervantes Avenue and ends near South Radio Drive. The topography has a general northern slope. The facility study area elevation ranges from approximately 82 to 207 feet AMSL, and has an average elevation of 143 feet AMSL.

The facility group occurs primarily within Paleta Creek. Adjacent existing land use includes residential. The study area of Solola (Segments 1 and 2) is outside of the COZ and MHPA boundary.

The following soil types are mapped within the Solola (Segments 1 and 2) facility segment:

- Huerhuero loam, 15% to 30% slopes, eroded; and
- Huerhuero-Urban land complex, 2% to 9% slopes.

## 3.1.5.21 3644 Roselawn (OT03694) Structure

The 3644 Roselawn (OT03694) structure consists of a concrete drainage facility that is located east of SR-15, west of Euclid Avenue, and south of Roselawn Avenue. The structure is a concave earthen-bottom canyon bottom that slopes south and conveys storm water flows from Roselawn Street into a vegetated swale in a residential neighborhood. The facility study area elevation ranges from 325 to 341 feet AMSL, and has an average elevation of 342 feet AMSL.

The facility occurs northwest of Fox Canyon where adjacent existing land use includes residential development. The study area of the structure is outside of the COZ and MHPA boundary.

The following soil types are mapped within the 3644 Roselawn (OT03694) structure:

- Redding cobbly loam, 9% to 30% slopes; and
- Urban land.

## 3.1.5.22 4202 J Street (HW04013) Structure

The 4202 J Street (HW04013) structure consists of a concrete outlet facility that is located west of I-805 and Toyne Street, east of I-15, and southwest of the 42nd and J Street intersection. The structure is slightly western-sloping swale that is vegetated and receives storm water flows from

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

J Street. The facility study area elevation ranges from 116 to 142 feet AMSL, and has an average elevation of 125 feet AMSL.

The facility occurs where the adjacent existing land uses include commercial and residential development. The study area of the structure is outside of the COZ and MHPA boundary.

The following soil types are mapped within the 4202 J Street (HW04013) structure:

- Huerhuero-Urban land complex, 2% to 9% slopes; and
- Huerhuero loam, 15% to 30% slopes, eroded.

### **3.1.5.23 1206 Goodyear (OT04671) Structure**

The 1206 Goodyear (OT04671) structure consists of a concrete outlet facility that is located northeast of I-5, east of I-15, west of South 37th Street, and at the south end of Goodyear Street. The structure is a concave vegetated swale that slopes south and conveys storm water flows toward South Chollas Creek. The facility study area elevation ranges from 23 to 53 feet AMSL, and has an average elevation of 32 feet AMSL.

The facility occurs just north of South Chollas Creek where adjacent existing land use includes residential development. The study area of the structure is outside of the COZ and MHPA boundary.

The following soil type is mapped within the 1206 Goodyear (OT04671) structure:

- Urban land.

## **3.1.6 SWEETWATER WATERSHED**

The Sweetwater Watershed is located in the southern portion of the MWMP study area, and extends from the coast northeast toward Laguna Mountains. The watershed is a linear area approximately 160 square miles. Major water bodies within the watershed are Sweetwater Reservoir, Loveland Reservoir, and the southern portion of San Diego Bay. The watershed ranges in elevation from approximately -1 to 1,905 feet AMSL, and has an average elevation of 346 feet AMSL. Sweetwater River – Parkside is the only MWMP facility group in this watershed (Table 1-2). The physical characteristics of the individual facility segment are analyzed in the following section.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

## **3.1.6.1 Sweetwater River – Parkside**

The Sweetwater River – Parkside facility group consists of one concrete-lined facility segment: Parkside (Segment 1). The facility group is located south and parallel to Parkside Avenue, and north of Garber Avenue. The topography has a slight northwestern slope. The facility study area elevation ranges from approximately 144 to 164 feet AMSL, and has an average elevation of 152 feet AMSL.

The facility group occurs between a road and residential slope and conveys storm water flows toward the Sweetwater River. Adjacent existing land use includes residential. The study area of Parkside (Segment 1) is outside of the COZ and MHPA boundary.

The following soil type is mapped within the Parkside (Segment 1) facility segment:

- Diablo-Urban land complex, 5% to 15% slopes.

## **3.1.7 OTAY WATERSHED**

The Otay Watershed is located south of SR-54 and west of Lower Otay Lake in the southern portion of the MWMP study area. The triangular-shaped watershed is approximately 160 square miles, including the Otay River and related tributaries such as Jamul and Dulzura creeks. The major water bodies within the watershed are Upper and Low Otay reservoirs. The watershed ranges in elevation from approximately 12 to 3,160 feet AMSL, and has an average elevation of 470 feet AMSL. Nestor Creek – Nestor and Nestor Creek – Outer are the two Facility Groups within the watershed addressed in the MWMP (Table 1-2). The physical characteristics of the individual facility segments that make up the watershed are analyzed in the following sections.

### **3.1.7.1 Nestor Creek – Nestor**

The Nestor Creek – Nestor facility group consists of six facility segments consisting of three earthen-bottom, two concrete-lined, and one earthen-bottom and concrete-lined: 30th St (Segment 1, earthen-bottom and concrete-lined), Cedar (Segments 1, earthen-bottom; and 2, concrete-lined), Cerissa (Segment 1, earthen-bottom), Dahlia (Segment 1, concrete-lined), and Grove (Segment 1, earthen-bottom). The facility group occurs beginning west of I-5 and north of Palm Avenue. The facility group continues southeast parallel to Cerissa Street toward Coronado Avenue. The third segment extends perpendicular east of I-5 along Grove Avenue and ends at 30th Street. The topography has a general northern slope. The facility study area elevation ranges from approximately 20 to 62 feet AMSL, and has an average elevation of 31 feet AMSL.

The facility group occurs primarily within Nestor Creek. Adjacent existing land use includes commercial development, residential, open space, and fallow fields. The 30th St (Segment 1), Cedar (Segments 1 and

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

2), Cerissa (Segment 1), Dahlia (Segment 1), and Grove (Segment 1) facility segments are outside of the MHPA boundary. Although the study area for the facility segments intersects the COZ, the proposed maintenance areas for only Cedar (Segments 1 and 2) intersect the COZ.

The following soil types are mapped within the 30th St (Segment 1), Cedar (Segments 1 and 2), Cerissa (Segment 1), Dahlia (Segment 1), and Grove (Segment 1) facility segments:

- Huerhuero loam, 2% to 9% slopes;
- Huerhuero loam, 5% to 9% slopes, eroded; and
- Huerhuero-Urban land complex, 2% to 9% slopes.

## 3.1.7.2 Nestor Creek – Outer

The Nestor Creek – Outer facility group consists of two facility segments consisting of one earthen-bottom and one concrete-lined: Outer (Segments 1, earthen-bottom; and 2, concrete-lined). The facility group occurs in a small area east of I-5, north of Coronado Avenue, and south of Outer Road. The topography has a slight western slope. The facility study area elevation ranges from approximately 38 to 39 feet AMSL.

The facility group occurs primarily within Nestor Creek. Adjacent existing land use includes commercial development, and residential. The study area of Outer (Segments 1 and 2) is outside of the COZ and MHPA boundary.

The following soil type is mapped within the Outer (Segments 1 and 2) facility segments:

- Huerhuero loam, 2% to 9% slopes.

## 3.1.8 TIJUANA RIVER WATERSHED

The Tijuana River Watershed is located at the southern edge of the MWMP study area, along the United States–Mexico international border, and extends from the coast northeast toward the Laguna Mountains. The approximately 470-square-mile triangular-shaped area encompasses portions of the watershed north of the international border. Major water bodies within the Tijuana River Watershed are Morena Reservoir, Barrett Lake, and Tijuana River Estuary. The watershed ranges in elevation from approximately 0 to 2,226 feet AMSL, and has an average elevation of 345 feet AMSL. Facility Groups within the watershed addressed in the MWMP include Tijuana River – Pilot and Smuggler's, Spring Canyon Creek – Cactus, Tijuana River – La Media, Tijuana River – Smythe, Tijuana River – Siempre Viva, and Tijuana River – Tocayo (Tables 1-2 and 1-3). The physical characteristics of the individual facility segments that make up the watershed are analyzed in the following sections.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 3.1.8.1 Tijuana River – Pilot & Smuggler’s

The Tijuana River – Pilot & Smuggler’s facility group consists of two earthen-bottom facility segments: Pilot Channel (Segment 1) and Smuggler’s Gulch (Segment 1). The facility group is located perpendicular to Monument Road and west of Hollister Street. The facility group extends northwest from Hollister Street, south of Sunset Avenue, and north of Monument Road. The facility segment is located in the Tijuana River Valley Community Planning area within Council District 8 in San Diego, California. The topography is relatively flat and topography has a slight depression on the eastern and western end of the facility segment and storm water flows travel east to west within the channel itself. The facility study area elevation ranges from approximately 18 to 42 feet AMSL, and has an average elevation of 27 feet AMSL.

The facility group is within a section of the Tijuana River. The facility group occurs primarily within existing dirt roads. Adjacent existing land use includes agricultural fields and open space.

The facility study area, including the proposed maintenance areas, of Pilot Channel (Segment 1) and Smuggler’s Gulch (Segment 1) intersect the COZ and MHPA boundary.

The following soil types are mapped within the Pilot Channel (Segment 1) and Smuggler’s Gulch (Segment 1) facility segments:

- Chino silt loam, saline, 0 to 2% slopes;
- Terrace escarpments;
- Tujunga sand, 0 to 5% slopes; and
- Visalia sandy loam, 0 to 2% slopes.

## 3.1.8.2 Tijuana River – Tocayo

The Tijuana River – Tocayo facility group consists of one concrete-lined facility segment: Tocayo (Segment 2). The facility group is located south and parallel to Tocayo Avenue, west of Oro Vista Road, and east of Rodear Road. The topography has a slight northern slope on the eastern end of the facility group. The facility study area elevation ranges from approximately 22 to 29 feet AMSL, and has an average elevation of 24 feet AMSL.

The facility group occurs primarily within Tijuana River. Adjacent existing land use includes commercial development and residential. The facility study area, including the proposed maintenance area, of Tocayo (Segment 2) intersects the COZ; however, the facility segment study area is outside of the MHPA boundary.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

The following soil type is mapped within the Tocayo (Segment 2) facility segment:

- Chino silt loam, saline, 0 to 2% slopes.

## 3.1.8.3 Tijuana River – Smythe

The Tijuana River – Smythe facility group is made up of five facility segments consisting of one earthen-bottom and four concrete-lined: Smythe (Segment 1, earthen-bottom), Via de la Bandola (Segment 1, concrete-lined), and Via Encantadoras (Segments 1, earthen-bottom, and 2 and 3, concrete-lined). Via Encantadoras (Segments 1, 2, and 3) facility segment occurs south of SR-905, southwest of Beyer Boulevard, west of Via del Tanido, and east of Via Encantadoras. The facility group is located in the San Ysidro Community Planning area within Council District 8 in San Diego, California. The area topography is relatively flat. The facility study area elevation ranges from approximately 42 to 160 feet AMSL, and has an average elevation of 83 feet AMSL.

The facility group is a section of an unnamed tributary to the Tijuana River. Adjacent existing land use includes commercial and residential development. The study area of Smythe (Segment 1), Via de la Bandola (Segment 1), and Via Encantadoras (Segments 1, 2, and 3) is outside of the COZ and MHPA boundary.

The following soil types are mapped within the Smythe (Segment 1), Via de la Bandola (Segment 1), and Via Encantadoras (Segments 1, 2, and 3) facility segments:

- Huerhuero loam, 2% to 9% slopes;
- Olivenhain cobbly loam, 30% to 50% slopes; and
- Tujunga sand, 0 to 5% slopes.

## 3.1.8.4 Spring Canyon Creek – Cactus

The Spring Canyon Creek – Cactus facility group consists of two earthen-bottom facility basins: Cactus (Segments 1 and 2). The facility group is located north of SR-905, south of Camino Maquiladora, and east of Pacific Rim Court. The topography is relatively flat. The facility study area elevation ranges from approximately 504 to 506 feet AMSL.

Adjacent existing land use surrounding this facility group includes commercial development. The study area of Cactus (Segments 1 and 2) is outside of the COZ and MHPA boundary.

The following soil types are mapped within the Cactus (Segments 1 and 2) facility segment:

- Stockpen gravelly clay loam, 0 to 2% slopes; and

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

- Stockpen gravelly clay loam, 2% to 5% slopes.

## 3.1.8.5 Tijuana River – Siempre Viva

The Tijuana River - Siempre Viva facility group consists of one earthen-bottom facility basin: Siempre Viva (Segment 1). The facility group is located east of SR-905, and extends east of Britannia Boulevard, parallels Siempre Viva Road, then extends south parallel to Otay Pacific Drive, and ends at the east end of Britannia Court. The topography is relatively flat. The facility study area elevation ranges from approximately 461 to 474 feet AMSL, and has an average elevation of 467 feet AMSL.

The facility group occurs primarily within the Tijuana River. Adjacent existing land use includes commercial development and open space. The study area of Siempre Viva (Segment 1) is outside of the COZ and MHPA boundary.

The following soil types are mapped within the Siempre Viva (Segment 1) facility segment:

- Stockpen gravelly clay loam, 0 to 2% slopes; and
- Huerhuero loam, 2% to 9% slopes.

## 3.1.8.6 Tijuana River – La Media

The Tijuana River - La Media facility group consists of one earthen-bottom facility segment: La Media (Segment 1). The facility group is located east and parallel to La Media Road, crosses SR-905, and ends south of Saint Andrews Avenue. The topography has a slight western slope. The facility study area elevation ranges from approximately 478 to 482 feet AMSL, and has an average elevation of 480 feet AMSL.

The facility group occurs primarily within Tijuana River. Adjacent existing land use includes open fields, and commercial development. Although the study area of La Media (Segment 1) intersects the MHPA boundary, the proposed maintenance area is outside of the MHPA boundary, and the study area of La Media (Segment 1) is outside of the COZ.

The following soil types are mapped within the La Media (Segment 1) facility segment:

- Huerhuero loam, 2% to 9% slopes; and
- Stockpen gravelly clay loam, 2% to 5% slopes.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 3.2 BIOLOGICAL RESOURCES

The following discussion describes the existing biological conditions within the MWMP study area, provided as biological resource descriptions for each of the eight watersheds in which the MWMP facilities are located: San Dieguito, Peñasquitos, Mission Bay, San Diego River, Pueblo, Otay, Sweetwater, and Tijuana River.

The biological resources data used to identify potential biological constraints within the MWMP study area are listed in Table 3-1.

**Table 3-1**  
**Sensitive Biological Resources Data Used For Constraints Analysis**

Abbreviated Code	Data	General Description
CNDDDB	California Natural Diversity Database Species Records	Known locations of sensitive habitats and species with various levels of sensitivity based on statewide database.
CRPR	California Rare Plant Rank	Inventory of Rare, Threatened, and Endangered Plants of California
MHPA	Multi-Habitat Planning Area	City of San Diego Multiple Species Conservation Program Preserve.
MSCP	Multiple Species Conservation Program	Conservation plan developed to meet requirements of the California NCCP, which includes all areas within the adopted Subregional Plans for San Diego County, City of San Diego, and the City of Chula Vista.
SANBIOS	SanBIOS Species Records	Known locations of sensitive species with various levels of sensitivity based on local database for San Diego County.
USFWS-CH	U.S. Fish and Wildlife Service Critical Habitat	Land designation that delineates areas whereby the USFWS has formally designated habitat that is critical to the survival of species listed under the Endangered Species Act (ESA).
USFWS-NWI	U.S. Fish and Wildlife Service National Wetlands Inventory	Areas where major water bodies, lakes, rivers, streams, and associated wetland and riparian habitat have been identified by the USFWS and other agencies.
USFWS-NWR	U.S. Fish and Wildlife Service National Wildlife Refuge	Areas designated as federal wildlife refuge and considered 100% conserved.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 3-1**  
**Sensitive Biological Resources Data Used For Constraints Analysis**

Abbreviated Code	Data	General Description
USFWS-TE	U.S. Fish and Wildlife Service Species Records	Known locations of sensitive plant and animal species listed under the ESA based on a national database inventory.
USGS-TOPO	U.S. Geological Survey Topographic Maps	USGS topographic map layer. This layer is scalable and therefore not at a fixed scale, nor separated into 7.5-minute quadrangles.

## 3.2.1 VEGETATION COMMUNITIES

A total of 47 vegetation communities and/or land cover types were observed in the MWMP study area (Table 3-2a and Table 3-2b; Figure 5, Overall Mapping Feature Legend; and Figures 6-1 through 6-136, Biological Resource Map with Proposed FMP Impacts). Table 3-2a includes all wetland vegetation communities within the 300-foot survey area buffer (study area) of each MWMP facility segment, grouped by watershed. Table 3-2b includes all upland vegetation communities within the 300-foot survey area buffer (study area) of each MWMP facility segment, grouped by watershed. All vegetation communities, including sensitive communities (Tier I–III and Wetlands), occurring in the study area are defined below and further described in context of their location within the specific project components. As part of the MWMP mapping, some vegetation community types were assigned additional detail on the species present in the community in parentheses following the community type. This detail is not included in the SDBG category, but is included in this table to differentiate the vegetation community from others with the same City category type and to inform the need for subsequent focused surveys, regulatory permitting, and other needs.

Vegetation communities may also occur on concrete-lined channels. In such cases, the species present in the community would not change, but “concrete-lined” has been added in parentheses after the vegetation community name to identify that this substrate is present. Additionally, vegetation communities may be described as “disturbed” if the community has been significantly impacted by previous human activities (e.g., prior vegetation removal, exotic species introduction), such that the native vegetation represents 50% or less of the community canopy cover (but not less than 20%). Areas that have 80% or more vegetative cover occupied by invasive plants species (e.g., giant reed) are classified as invasive dominant to distinguish from disturbed wetlands with more heterogeneous plant species cover.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-2a**  
**Wetland Vegetation Communities and Land Cover Types in MWMP study area**

General Vegetation Community /Land Cover Category	MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier/ Wetland <sup>1</sup>	Watershed								Acres
				<i>San Dieguito</i>	<i>Peñasquitos</i>	<i>Mission Bay</i>	<i>San Diego River</i>	<i>Pueblo San Diego</i>	<i>Sweetwater</i>	<i>Otay</i>	<i>Tijuana River</i>	
Disturbed and Developed Areas (10000)	Disturbed Wetland, (11200)	Disturbed Wetland	Wetland	-	0.08	-	2.28	0.83	-	2.32	0.66	6.17
	Developed Concrete-lined Channel (64200)	Disturbed Wetland	Wetland (Unvegetate d Concrete- Lined)	3.66	5.95	3.83	9.59	18.07	1.00	1.72	3.59	47.42
	Disturbed Wetland (Castor Bean- Dominated), (11200)	Disturbed Wetland	Wetland (Invasive)	-	-	-	-	0.49	-	-	-	0.49
	Disturbed Wetland Concrete-Lined, (11200)	Disturbed Wetland	Wetland	0.15	-	-	1.07	-	-	0.05	0.05	1.32
	Disturbed Wetland (palm- dominated), (11200)	Disturbed Wetland	Wetland (Invasive)	-	0.02	0.02	0.41	0.39	-	-	-	0.83

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-2a**  
**Wetland Vegetation Communities and Land Cover Types in MWMP study area**

General Vegetation Community /Land Cover Category	MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier/ Wetland <sup>1</sup>	Watershed								Acres
				<i>San Dieguito</i>	<i>Peñasquitos</i>	<i>Mission Bay</i>	<i>San Diego River</i>	<i>Pueblo San Diego</i>	<i>Sweetwater</i>	<i>Otay</i>	<i>Tijuana River</i>	
Disturbed and Developed Areas Total <sup>2</sup>				3.80	6.05	3.85	13.35	19.78	1.00	4.10	4.31	56.24
Bog and Marsh (50000)	Coastal Salt Marsh, (52100)	Coastal Salt Marsh	Wetland	-	2.65	-	-	-	-	-	-	2.65
	Disturbed Freshwater Marsh, (52400)	Freshwater Marsh	Wetland	-	0.37	0.56	-	0.17	-	-	0.72	1.83
	Disturbed Freshwater Marsh (concrete-lined), (52400)	Freshwater Marsh	Wetland	-	-	-	0.01	-	-	-	-	0.01
	Freshwater Marsh, (52400)	Freshwater Marsh	Wetland	-	1.07	-	0.59	1.42	-	0.66	1.18	4.92
	Freshwater Marsh (concrete-lined), (52400)	Freshwater Marsh	Wetland	0.06	0.21	-	0.26	-	-	0.02	-	0.55

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Table 3-2a  
Wetland Vegetation Communities and Land Cover Types in MWMP study area

General Vegetation Community /Land Cover Category	MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier/ Wetland <sup>1</sup>	Watershed								Acres
				San Dieguito	Peñasquitos	Mission Bay	San Diego River	Pueblo San Diego	Sweetwater	Otay	Tijuana River	
Bog and Marsh Total <sup>2</sup>				0.06	4.31	0.56	0.86	1.59	-	0.68	1.90	9.96
Riparian and Bottomland Habitat (60000)	Disturbed Riparian Forests, (61000)	Riparian Forest or Woodland	Wetland	-	0.04	-	-	-	-	-	-	0.04
	Disturbed Riparian Forest (Southern Riparian Forest), (61300)	Riparian Forest or Woodland	Wetland	-	2.13	-	-	-	-	-	-	2.13
	Disturbed Riparian Forest (Southern Willow Forest), (61320)	Riparian Forest or Woodland	Wetland	-	-	-	0.09	-	-	-	0.07	0.16
	Disturbed Riparian Forest (Southern Willow Forest, Concrete-Lined), (61320)	Riparian Forest or Woodland	Wetland	-	-	-	0.35	-	-	-	-	0.35

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-2a**  
**Wetland Vegetation Communities and Land Cover Types in MWMP study area**

General Vegetation Community /Land Cover Category	MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier/ Wetland <sup>1</sup>	Watershed								Acres
				<i>San Dieguito</i>	<i>Peñasquitos</i>	<i>Mission Bay</i>	<i>San Diego River</i>	<i>Pueblo San Diego</i>	<i>Sweetwater</i>	<i>Otay</i>	<i>Tijuana River</i>	
	Disturbed Riparian Scrub, (63000)	Riparian Scrub	Wetland	-	-	-	-	-	-	-	0.28	0.28
	Disturbed Wetland (Arundo- dominated), (65100)	Disturbed Wetland	Wetland (Invasive)	-	1.12	0.18	1.03	4.55	-	0.37	0.40	7.64
	Disturbed Wetland (Arundo- dominated, concrete-lined), (65100)	Disturbed Wetland	Wetland (Invasive)	-	-	-	0.07	0.05	-	-	-	0.12
	Natural Flood Channel, (64200)	Natural Flood Channel	Wetland	0.10	1.67	1.02	1.34	6.83	-	0.35	5.28	16.58
	Riparian Forest, (61000)	Riparian Forest or Woodland	Wetland	-	0.91	-	-	-	-	-	-	0.91

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-2a**  
**Wetland Vegetation Communities and Land Cover Types in MWMP study area**

General Vegetation Community /Land Cover Category	MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier/ Wetland <sup>1</sup>	Watershed								Acres
				<i>San Dieguito</i>	<i>Peñasquitos</i>	<i>Mission Bay</i>	<i>San Diego River</i>	<i>Pueblo San Diego</i>	<i>Sweetwater</i>	<i>Otay</i>	<i>Tijuana River</i>	
	Riparian Forest (Coast Live Oak), (61310)	Oak Riparian Forest	Wetland	-	0.13	0.98	--	0.20	-	-	-	1.32
	Riparian Forest (concrete-lined), (61000)	Riparian Forest or Woodland	Wetland	-	-	-	0.07	-	-	-	-	0.07
	Riparian Forest (Southern Riparian Forest), (61300)	Riparian Forest or Woodland	Wetland	-	0.01	0.07	1.34	-	-	-	-	1.43
	Riparian Forest (Southern Riparian Forest Concrete-Lined), (61300)	Riparian Forest or Woodland	Wetland	0.04	-	-	-	-	-	-	-	0.04
	Riparian Forest (Southern Willow Forest), (61320)	Riparian Forest or Woodland	Wetland	0.12	18.62	--	5.84	3.51	-	2.71	76.01	106.82

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-2a**  
**Wetland Vegetation Communities and Land Cover Types in MWMP study area**

General Vegetation Community /Land Cover Category	MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier/ Wetland <sup>1</sup>	Watershed								Acres
				<i>San Dieguito</i>	<i>Peñasquitos</i>	<i>Mission Bay</i>	<i>San Diego River</i>	<i>Pueblo San Diego</i>	<i>Sweetwater</i>	<i>Otay</i>	<i>Tijuana River</i>	
	Riparian Forest (Southern Willow Forest, Concrete-Lined), (61320)	Riparian Forest or Woodland	Wetland	0.12	0.04	-	-	0.24	-	0.53	0.40	1.33
	Riparian Scrub, (63000)	Riparian Scrub	Wetland	-	0.17	--	0.37	0.02	-	-	0.27	0.84
	Riparian Scrub Concrete-Lined, (63000)	Riparian Scrub	Wetland	-	-	-	0.46	0.07	-	-	0.04-	0.56
	Riparian Scrub (Mulefat Scrub), (63310)	Riparian Scrub	Wetland	-	0.47	0.74	0.09	0.02	-	-	19.07	20.40
	Riparian Scrub (Southern Willow Scrub), (63320)	Riparian Scrub	Wetland	-	0.17	--	0.28	0.30	-	-	3.11	3.87

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-2a**  
**Wetland Vegetation Communities and Land Cover Types in MWMP study area**

General Vegetation Community /Land Cover Category	MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier/ Wetland <sup>1</sup>	Watershed								Acres
				<i>San Dieguito</i>	<i>Peñasquitos</i>	<i>Mission Bay</i>	<i>San Diego River</i>	<i>Pueblo San Diego</i>	<i>Sweetwater</i>	<i>Otay</i>	<i>Tijuana River</i>	
	Riparian Scrub (Southern Willow Scrub Concrete-Lined), (63320)	Riparian Scrub	Wetland	-	0.01	-	0.07	0.08	-	-	-	0.16
	Tamarisk Scrub, (63810)	Riparian Scrub	Wetland (Invasive)	-	0.12	-			-	-	-	0.12
<i>Riparian and Bottomland Habitat Total<sup>2</sup></i>				<i>0.38</i>	<i>25.63</i>	<i>3.00</i>	<i>11.42</i>	<i>15.88</i>	<i>-</i>	<i>3.95</i>	<i>104.93</i>	<i>165.18</i>
<b>Total<sup>2</sup></b>				<b>4.24</b>	<b>35.99</b>	<b>7.40</b>	<b>25.62</b>	<b>37.24</b>	<b>1.00</b>	<b>8.73</b>	<b>111.14</b>	<b>231.36</b>

**Notes:**

<sup>1</sup> City MSCP Subarea Plan tiers and wetland identification are from SDBG (City of San Diego 2018).

<sup>2</sup> Totals may not sum due to rounding.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-2b**  
**Upland Vegetation Communities and Land Cover Types in MWMP study area**

General Vegetation Community /Land Cover Category	MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Watershed								Acres
				San Dieguito	Peñasquitos	Mission Bay	San Diego River	Pueblo San Diego	Sweetwater	Otay	Tijuana River	
Disturbed and Developed Areas (10000)	Agriculture, (18000)	Agriculture	IV	0.67	-	-	-	-	-	-	7.72	8.39
	Disturbed Land, (11300)	Disturbed Land	IV	0.78	10.40	9.98	28.64	49.14	-	30.68	36.82	166.14
	Ornamental Plantings, (11000)	Ornamental Plantings	IV	5.78	18.12	27.00	38.41	67.67	2.10	1.75	29.79	190.61
	Ornamental Plantings Concrete-Lined, (11000)	Ornamental Plantings	IV	0.01	-	-	0.03	-	-	-	-	0.04
	Urban /Developed, (12000)	Disturbed Land	IV	75.62	158.82	142.21	318.25	594.76	21.38	106.23	161.96	1,579.22
<i>Disturbed and Developed Areas Total<sup>2</sup></i>				<i>82.86</i>	<i>187.34</i>	<i>179.20</i>	<i>385.32</i>	<i>711.57</i>	<i>23.48</i>	<i>138.36</i>	<i>236.29</i>	<i>1,944.42</i>
Scrub and Chaparral (30000)	Chamise Chaparral <sup>3</sup> , (37200)	Chamise Chaparral	IIIA	-	0.16	-	28.01	-	-	-	0.01	28.19
	CSS/Chaparral <sup>3</sup> , (37G00)	CSS / Chaparral	II	-	-	-	8.69	-	-	-	-	8.69

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-2b**  
**Upland Vegetation Communities and Land Cover Types in MWMP study area**

General Vegetation Community /Land Cover Category	MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Watershed								Acres
				<i>San Dieguito</i>	<i>Peñasquitos</i>	<i>Mission Bay</i>	<i>San Diego River</i>	<i>Pueblo San Diego</i>	<i>Sweetwater</i>	<i>Otay</i>	<i>Tijuana River</i>	
	Diegan Coastal Sage Scrub <sup>3</sup> , (32500)	Coastal Sage Scrub	II	-	11.56	17.11	10.21	20.00	-	-	4.61	63.49
	Disturbed Diegan Coastal Sage Scrub <sup>3</sup> , (32500)	Coastal Sage Scrub	II	-	6.03	2.68	0.01	10.30	-	-	-	19.01
	Diegan Coastal Sage Scrub (Baccharis-dominated) <sup>3</sup> , (32530)	Coastal Sage Scrub	II	-	1.61	-	1.13	0.71	-	-	-	3.44
	Disturbed Chamise Chaparral <sup>3</sup> , (37200)	Chamise Chaparral	IIIA	-	-	-	-	0.37	-	-	-	0.37
	Disturbed Chaparral <sup>3</sup> (37200)	Mixed Chaparral	IIIA	-	0.05	-	-	-	-	-	-	0.05
	Scrub Oak Chaparral <sup>3</sup> , (37900)	Scrub Oak Chaparral	I	-	-	-	2.06	-	-	-	-	2.06
<i>Scrub and Chaparral Total<sup>2</sup></i>				-	19.41	19.78	50.11	31.38	-	-	4.62	125.30

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Table 3-2b  
Upland Vegetation Communities and Land Cover Types in MWMP study area

General Vegetation Community /Land Cover Category	MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Watershed								Acres
				San Dieguito	Peñasquitos	Mission Bay	San Diego River	Pueblo San Diego	Sweetwater	Otay	Tijuana River	
Grasslands, Vernal Pools, Meadows, and Other Herb Communities (40000)	Non-Native Grassland <sup>3</sup> , (42200)	Non-Native Grassland	IIIB	-	0.01	-	-	15.21	-	-	0.21	15.42
<i>Grasslands, Vernal Pools, Meadows, and Other Herb Communities Total<sup>2</sup></i>				-	0.01	-	-	15.21	-	-	0.21	15.42
Woodland (70000)	Eucalyptus Woodland, (79100)	Eucalyptus Woodland	IV	1.02	2.53	10.01	3.92	8.30	-	0.24	2.33	28.35
	Eucalyptus Woodland (concrete-lined), (79100)	Eucalyptus Woodland	IV	0.06	-	-	-	-	-	-	-	0.06
	Oak Woodland, (71100)	Oak Woodlands	I	-	-	-	0.09	1.13	-	-	-	1.22
<i>Woodland Total<sup>2</sup></i>				1.08	2.53	10.01	4.01	9.43	-	0.24	2.33	29.62
<b>Total<sup>2</sup></b>				<b>83.94</b>	<b>209.28</b>	<b>209.00</b>	<b>439.44</b>	<b>767.59</b>	<b>23.48</b>	<b>138.60</b>	<b>243.44</b>	<b>2,114.76</b>

**Notes:** CSS = coastal sage scrub

<sup>1</sup> City MSCP Subarea Plan tiers and wetland identification are from SDBG (City of San Diego 2018).

<sup>2</sup> Totals may not sum due to rounding.

<sup>3</sup> Sensitive vegetation community in the SDBG (City of San Diego 2018).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 3.2.1.1 Wetland Vegetation Communities and Land Cover Types

### 3.2.1.1.1 Disturbed Wetland (11200)

Disturbed wetlands are areas permanently or periodically inundated by water that have been substantially modified by human activity. Disturbed wetland is often unvegetated, but may include some scattered native or non-native vegetation. Some characteristic non-native species that may be associated with disturbed wetlands include giant reed, tamarisk (*Tamarix* spp.), eucalyptus (*Eucalyptus* spp.), palms (*Phoenix* spp., *Washingtonia* spp.), pampas grass (*Cortaderia* spp.), and Bermuda grass (*Cynodon dactylon*).

Native wetland species, such as willows (*Salix* spp.) and cattails (*Typha* spp.), also may be present at low cover. Disturbed wetlands include portions of wetlands with obvious artificial structures, such as barricades, riprap, piers, or gates. Therefore, Arizona crossings, detention basins, culverts, and ditches would be considered disturbed wetlands. Disturbed wetlands occur throughout San Diego County (Oberbauer et al. 2008). Disturbed wetland is considered a wetlands community according to the SDBG (City of San Diego 2018).

#### Disturbed Wetland (Palm-Dominated)

Disturbed wetland (palm-dominated) refers to areas permanently or periodically inundated by water that have been substantially modified by human activity that are dominated by palms (*Arecaceae* spp.). Palms commonly present include Washington fan palm (*Washingtonia robusta*) and Canary Island date palm (*Phoenix canariensis*).

### 3.2.1.1.2 Disturbed Wetland (Arundo-dominated) (65100)

Disturbed wetland (Arundo-dominated), also described as arundo-dominated riparian vegetation (Oberbauer et al. 2008), is composed of monotypic or nearly monotypic stands of giant reed that are fairly widespread in Southern California. Typically, it occurs on moist soils and in streambeds and may be related directly to soil disturbance or the introduction of propagates by grading or flooding. Mapped occurrences may include surrounding native trees. Giant reed often occupies jurisdictional wetlands. Disturbed wetland (Arundo-dominated) is considered a wetlands community according to the SDBG (City of San Diego 2018).

### 3.2.1.1.3 Coastal Salt Marsh (52100)

Coastal salt marsh is a wetland habitat that develops at regularly flooded sites within intertidal zones between land and open saltwater (Oberbauer et al. 2008). It is typically dominated by

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

*Frankenia* ssp., *Sueda* ssp., and *Heliotropium* ssp. Freshwater marsh is considered a wetlands community according to the SDBG (City of San Diego 2018).

## **3.2.1.1.4 Freshwater Marsh (52400)**

Freshwater marsh is a wetland habitat that develops at permanently flooded sites by freshwater lacking a significant current (Oberbauer et al. 2008). Because it is permanently flooded by fresh water, there is an accumulation of deep, peaty soils. It typically is dominated by species such as cattails (*Typha* spp.), sedge (*Carex* spp.), yellow nutsedge (*Cyperus esculentus*), and bulrushes (*Scirpus* spp.). Freshwater marsh is considered a wetlands community according to the SDBG (City of San Diego 2018).

## **3.2.1.1.5 Natural Flood Channel (64200)**

Natural flood channel, also described as non-vegetated channel or floodway (Oberbauer et al. 2008), is the sandy, gravelly, or rocky fringe of waterways or flood channels that are earthen-bottom, and unvegetated on a relatively permanent basis. Vegetation may be present but is usually less than 10% total cover and grows on the outer edge of the channel. Natural flood channel is considered a wetlands community according to the SDBG (City of San Diego 2018).

## **3.2.1.1.6 Southern Willow Scrub (63320)**

Riparian scrub (southern willow scrub) is a dense, broad-leafed, winter-deciduous riparian thicket dominated by several willow species, with scattered emergent Fremont cottonwood and California sycamore. This community was formerly extensive along the major rivers of coastal Southern California, but now much reduced (Oberbauer et al. 2008). Riparian scrub (southern willow scrub) is considered a wetlands community according to the SDBG (City of San Diego 2018).

## **3.2.1.1.7 Riparian Forest (61000)**

Riparian forest is a wetland habitat that develops along streams and rivers (Oberbauer et al. 2008). Riparian forests are dominated by riparian vegetation, including coast live oak (*Quercus agrifolia*), arroyo willow (*Salix lasiolepis*), California sycamore (*Platanus racemosa*), and cottonwood (*Populus* spp.), as well as a variety of other wetland plants. Riparian forest is considered a wetlands community according to the SDBG (City of San Diego 2018).

## **3.2.1.1.8 Riparian Forest (Coast Live Oak) (61310)**

Riparian forest (coast live oak), also described as southern coast live oak woodland (Oberbauer et al. 2008), is a dense riparian forest dominated by coast live oak, often with an herbaceous understory. This community occurs along the bottom or outer slopes of larger streams (Oberbauer et al. 2008).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Areas mapped as riparian forest (coast live oak) are dominated by coast live oak. Riparian forest (coast live oak) is considered a wetlands community according to the SDBG (City of San Diego 2018).

## **3.2.1.1.9 Riparian Forest (Southern Riparian Forest) (61300)**

Riparian forest (southern riparian forest), sometimes described as simply southern riparian forest (Oberbauer et al. 2008), is a dense riparian forest that is characterized by California sycamore and cottonwood (*Populus* spp.), as well as a variety of other wetland plant species. Riparian forest (southern riparian forest) occurs along streams and rivers. Riparian forest (southern riparian forest) is considered a wetland community by the SDBG (City of San Diego 2018).

Areas mapped as riparian forest (southern riparian forest) were not differentiated into more specific community types due to the varying distribution and abundance of multiple characteristic species, including willows, Fremont cottonwood, California sycamore, and coast live oak. Where additional distinctions could be made, based on the presence of a clear dominant species, the more specific riparian forest (coast live oak) or riparian forest (southern willow forest) was mapped.

## **3.2.1.1.10 Riparian Forest (Southern Willow Forest) (61320)**

Riparian forest (southern willow forest), also described as southern arroyo willow forest (Oberbauer et al. 2008), is a winter-deciduous riparian forest dominated by broad-leafed trees and arroyo willow. Typically consisting of a moderately tall, closed, or nearly closed canopy, with an understory of shrubby willows (Oberbauer et al. 2008). Riparian forest (southern willow forest) is characterized by the presence of several species besides arroyo willow, including Douglas' sagewort (*Artemisia douglasiana*), mulefat (*Baccharis salicifolia*), manroot (*Marah macrocarpus*), California sycamore, Fremont cottonwood, black cottonwood (*Populus trichocarpa*), Goodding's willow (*Salix gooddingii*), narrowleaf willow (*Salix exigua*), yellow willow (*Salix lasiandra*), and stinging nettle (*Urtica dioica* ssp. *holosericea*) (Oberbauer et al. 2008). Riparian forest (southern willow forest) occurs in sub-irrigated and frequently overflowed areas along rivers and streams that are perennially wet (Oberbauer et al. 2008). Riparian forest (southern willow forest) is considered a wetlands community according to the SDBG (City of San Diego 2018).

In the MWMP study area, riparian forest (southern willow forest) (including the disturbed variety) is a common vegetation community that is dominated by arroyo willow.

## **3.2.1.1.11 Riparian Scrub (63000)**

Riparian scrub is a wetland habitat dominated by small riparian trees and shrubs, and lacks taller riparian trees (Oberbauer et al. 2008). Riparian scrub occurs mostly in major river systems where

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

flood scour occurs (Oberbauer et al. 2008). Characteristic species include arroyo willow, desertbroom, and mulefat, as well as other wetland shrubs. Riparian scrub is considered a wetlands community according to the SDBG (City of San Diego 2018).

## **3.2.1.1.12 Riparian Scrub (Mulefat Scrub) (63310)**

Riparian scrub (mulefat scrub) is a depauperate, tall, herbaceous riparian scrub strongly dominated by mulefat. This early seral community is maintained by frequent flooding. Site factors include intermittent stream channels with fairly coarse substrate and moderate depth to the water table (Oberbauer et al. 2008). This community type is widely scattered along intermittent streams and near larger rivers. Riparian scrub (mulefat scrub) is considered a wetlands community according to the SDBG (City of San Diego 2018).

## **3.2.1.1.13 Developed Concrete-Lined Channel (64200)**

Developed concrete-lined channel refers to open sections of engineered concrete-lined channel that have been constructed and do not have vegetation present. These channels have a bed and bank that is clearly visible. This land cover is not defined by the SDBG, however it has been determined to be synonymous with disturbed wetland and is considered a wetland.

## **3.2.1.1.14 Tamarisk Scrub (63810)**

Tamarisk scrub is a weedy monoculture of any of the several *Tamarix* species (Oberbauer et al. 2008). This vegetation community occurs on sandy or gravelly braided washes or intermittent streams, and occurs in areas following major disturbance. Tamarisk scrub is considered a wetlands community according to the SDBG (City of San Diego 2018).

## **3.2.1.2 Upland Vegetation Communities and Land Cover Types**

### **3.2.1.2.1 Agriculture (18000)**

Agriculture includes lands that support an active agricultural operation (Oberbauer et al. 2008). Agriculture includes a variety of active agricultural operations, including orchards, vineyards, dairies, nurseries, and irrigated fields and pastures. Agricultural areas are maintained, open areas composed of annual and/or perennial crops that can be naturally or artificially seeded and irrigated. Agriculture is considered a Tier IV sensitive vegetation community, according to the SDBG (City of San Diego 2018).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## **3.2.1.2.2 Chamise Chaparral (37200)**

Chamise chaparral is a plant community overwhelmingly dominated by chamise (Oberbauer et al. 2008). Typically, between 1 and 3 meters (3.3 and 9.8 feet) in height, stands of chamise are adapted to repeated fires because the species is capable of stump-sprouting following wildfire. Associated species may include manzanita (*Arctostaphylos* spp.), ceanothus (*Ceanothus* spp.), California buckwheat, deerweed, California scrub oak, lemonadeberry, sages (*Salvia* spp.), ashy spike-moss (*Selaginella cinerascens*), and yucca (*Yucca* spp.). However, associated species do not comprise a significant portion of the overall cover, and mature stands contain very little herbaceous understory or litter. According to SDBG, chamise chaparral is considered a Tier IIIA sensitive vegetation community (City of San Diego 2018).

## **3.2.1.2.3 Coastal Sage Scrub (Baccharis-Dominated) (32530)**

Coastal sage scrub (*Baccharis*-dominated) is similar to Diegan coastal sage scrub but dominated by *Baccharis* species (desertbroom [*B. sarothroides*] and/or coyote brush [*B. pilularis*]) (Oberbauer et al. 2008). This community typically occurs on disturbed sites or those with nutrient-poor soils and is often found within other forms of Diegan coastal sage scrub and on upper terraces of river valleys. This community is distributed along coastal and foothills areas in San Diego County. According to the SDBG, Coastal sage scrub (*Baccharis*-dominated) is considered a Tier II sensitive vegetation community (City of San Diego 2018).

## **3.2.1.2.4 Coastal Sage Scrub/Chaparral (37G00)**

Coastal sage scrub (CSS)/chaparral, also described as coastal sage—chaparral transition (Oberbauer et al. 2008), is a mix of sclerophyllous, woody chaparral species and drought-deciduous, malacophyllous sage scrub species (Oberbauer et al. 2008). Dominant species includes chamise and coastal sagebrush. CSS/chaparral is primarily a post-fire successional community (Oberbauer et al. 2008). Generally, laurel sumac, black sage (*Salvia mellifera*), and lemonadeberry are more common in coastal sage scrub, while *Ceanothus* spp. and mission manzanita are more common in chaparrals. This vegetation community typically occurs at the edges of Diegan coastal sage scrub and chaparral, where species from each vegetation community intertwine.

According to the SDBG, CSS/chaparral is considered a Tier II sensitive vegetation community (City of San Diego 2018).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## **3.2.1.2.5    *Diegan Coastal Sage Scrub (32500)***

Diegan coastal sage scrub is a native vegetation community. According to Oberbauer et al. (2008), coastal sage scrub is composed of a variety of soft, low, aromatic shrubs, characteristically dominated by drought-deciduous species—such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and sages (*Salvia* spp.)—with scattered evergreen shrubs, including lemonade sumac (*Rhus integrifolia*) and laurel sumac (*Malosma laurina*). According to the SDBG, Diegan coastal sage scrub is considered a Tier II sensitive vegetation community (City of San Diego 2018).

## **3.2.1.2.6    *Disturbed Land (11300)***

Disturbed land, also described as disturbed habitat (Oberbauer et al. 2008), is a land cover type characterized by a predominance of non-native species, often introduced and established through human action. Oberbauer et al. (2008) describes disturbed land as areas that have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association but continues to retain a soil substrate. Typically, vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species (i.e., weeds). Disturbed land is considered a Tier IV sensitive vegetation community according to the SDBG (City of San Diego 2018).

## **3.2.1.2.7    *Eucalyptus Woodland (79100)***

According to Oberbauer et al. (2008), this “naturalized” vegetation community is fairly widespread in Southern California and is considered a woodland habitat. It typically consists of monotypic stands of introduced Australian eucalyptus trees. The understory is either depauperate or absent due to high leaf litter, which restricts growth in understory as a result of high levels of allelochemicals. Although eucalyptus woodlands are of limited value to most native plants and animals, they frequently provide nesting and perching sites for several raptor species. Eucalyptus woodland is considered a Tier IV vegetation community according to the SDBG (City of San Diego 2018).

## **3.2.1.2.8    *Mixed Chaparral (37200)***

Mixed chaparral is a community of woody shrubs from 5 to 10 feet tall that often forms dense, impenetrable stands (Oberbauer et al. 2008). It develops primarily on mesic north-facing slopes and in canyons and is characterized by crown- or stump-sprouting species that regenerate following fire. This association typically contains chamise (*Adenostoma fasciculatum*), mission manzanita (*Xylococcus bicolor*), wild lilac (*Ceanothus* spp.), California scrub oak (*Quercus berberidifolia*), and laurel sumac. Due to its high-density cover, there is little or no understory in this community, except for in openings.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## **3.2.1.2.8 Non-Native Grassland (42200)**

Non-native grassland consists of dense to sparse cover of annual grasses with flowering culms between 0.5 to 3 feet in height (Oberbauer et al. 2008). In San Diego County the presence of wild oat (*Avena fatua*), bromes (*Bromus* spp.), stork's bill (*Erodium* spp.), and mustard (*Brassica* spp.) are common indicators. In some areas, depending on past disturbance and annual rainfall, annual forbs may be the dominant species; however, it is presumed that grasses will dominate. According to the SDBG, non-native grassland is considered a Tier IIIB sensitive vegetation community (City of San Diego 2018).

## **3.2.1.2.9 Oak Woodland (71100)**

Oak woodland is open to dense woodland dominated by *Quercus* spp. (Oberbauer et al. 2008). The shrub layer is shrubby to poorly developed understory, and may include toyon (*Heteromeles arbutifolia*), gooseberry (*Ribes* spp.), or laurel sumac. The herb component is continuous, dominated by a variety of introduced species (Oberbauer et al. 2008). Oak woodland is considered a Tier I sensitive vegetation community according to the SDBG (City of San Diego 2018).

## **3.2.1.2.10 Ornamental Plantings (11000)**

Ornamental plantings, also described as non-native vegetation (Oberbauer et al. 2008), includes trees, shrubs, and annual species that are not native to California. Ornamental plantings on the project site largely consists of ornamental plantings along roadways or as part of fuel modification adjacent to homes that are not typically artificially irrigated, and receive water from precipitation or runoff. Ornamental plantings is considered Tier IV sensitive vegetation community according to the SDBG (City of San Diego 2018).

## **3.2.1.2.11 Scrub Oak Chaparral (37900)**

Scrub oak chaparral is a dense evergreen chaparral that can reach 20 feet tall and is dominated by scrub oak and is found on north-facing or otherwise mesic slopes (Oberbauer et al. 2008). On site, scrub oak chaparral is dominated by scrub oak. Other shrub species present include desertbroom, dusky willow (*Salix melanopsis*), and thicketleaf yerba santa. According to the SDBG, is considered a Tier I sensitive vegetation community (City of San Diego 2018).

## **3.2.1.2.12 Urban/Developed (12000)**

According to Oberbauer et al. 2008, urban/developed land cover represents areas that have been constructed upon or otherwise physically altered to an extent that native vegetation communities are not supported. This land cover type generally consists of semi-permanent structures, homes, parking lots, pavement or hardscape, and landscaped areas that require maintenance and irrigation

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

(e.g., ornamental greenbelts). Typically, this land cover type is unvegetated or supports a variety of ornamental plants and landscaping. Urban/developed land is not regulated by the environmental resource agencies and is often considered a disturbed category. Urban/developed is assumed to be a Tier IV, although it is not specifically listed as a community or land cover in the SDBG (City of San Diego 2018).

## **3.2.2 JURISDICTIONAL RESOURCES**

The results of the jurisdictional delineation conducted by Balk Biological and Dudek in 2017 determined that there are a total of 230.99 acres of wetlands and non-wetland waters in the MWMP study area. Jurisdictional aquatic resources mapped in the MWMP study area are shown in Figures 7-1 through 7-136, Jurisdictional Resource Map with Proposed FMP Impacts. Tables 3-3a and 3-3b provide a summary of these resources under the jurisdiction of USACE, RWQCB, CDFW, CCC, and/or the City, separated by potential non-wetland and potential wetland resources.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-3a**  
**Potential Jurisdictional Non-Wetland Aquatic Resources in the MWMP study area**

MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	Jurisdiction <sup>1</sup>	Watershed (Acres)								Total (Acres)
		San Dieguito	Peñasquitos	Mission Bay	San Diego River	Pueblo San Diego	Sweetwater	Otay	Tijuana River	
Disturbed Wetland (Unvegetated) <sup>2</sup>										
Developed Concrete-lined Channel, (64200)	A / R / C / CCC	–	4.74	0.38	–	–	–	0.25	0.01	5.39
	A / R / C	3.66	1.21	3.45	9.51	18.17	1.00	1.48	3.59	42.04
Disturbed Wetland (Unvegetated) Subtotal <sup>3</sup>		3.66	5.95	3.83	9.51	18.17	1.00	1.72	3.59	47.42
Natural Flood Channel <sup>2</sup>										
Natural Flood Channel, (64200)	A / R / C / CCC	–	0.95	0.31	–	0.07	–	0.35	4.97	6.65
	A / R / C	0.10	0.71	0.71	1.34	6.68	–	–	0.31	9.76
Natural Flood Channel Subtotal <sup>3</sup>		0.10	1.66	1.02	1.34	6.74	–	0.35	5.28	16.41
Non-Wetland Vegetation										
Ornamental Plantings, (11000)	A / R / C	–	–	–	–	0.04	–	–	0.48	0.53
Ornamental Plantings Concrete-Lined, (11000)	A / R / C / CCC	–	–	–	0.03	–	–	–	–	0.03
Eucalyptus Woodland, (79100)	A / R / C	–	–	–	–	–	–	–	0.20	0.20

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-3a**  
**Potential Jurisdictional Non-Wetland Aquatic Resources in the MWMP study area**

MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	Jurisdiction <sup>1</sup>	Watershed (Acres)								Total (Acres)
		<i>San Diegoito</i>	<i>Peñasquitos</i>	<i>Mission Bay</i>	<i>San Diego River</i>	<i>Pueblo San Diego</i>	<i>Sweetwater</i>	<i>Otay</i>	<i>Tijuana River</i>	
Non-Wetland Vegetation Subtotal <sup>3</sup>		-	-	-	0.03	0.04	-	-	0.68	0.76
<b>Non-Wetland Total<sup>3</sup></b>		<b>3.75</b>	<b>7.61</b>	<b>4.85</b>	<b>10.88</b>	<b>24.95</b>	<b>1.00</b>	<b>2.06</b>	<b>9.56</b>	<b>64.66</b>

**Notes:**

<sup>1</sup> A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CCC = CCC Jurisdictional

<sup>2</sup> Vegetation community in reference to SDBG (City of San Diego 2018).

<sup>3</sup> Acreage may not total due to rounding.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-3b**  
**Potential Jurisdictional Wetland Aquatic Resources in the MWMP study area**

MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	Jurisdiction <sup>1</sup>	Watershed (Acres)								Total (Acres)
		San Dieguito	Peñasquitos	Mission Bay	San Diego River	Pueblo San Diego	Sweetwater	Otay	Tijuana River	
Disturbed Wetland <sup>2</sup>										
Disturbed Wetland, (11200)	A / R / C / CCC	-	0.08	-	-	-	-	-	-	0.08
	A / R / C <sup>3</sup>	-	-	-	0.82	0.76	-	2.41	-	3.96
	C	-	-	-	1.47	0.07	-	0.02	0.66	2.22
Disturbed Wetland (Arundo-dominated), (65100)	A / R / C / CCC	-	1.12	0.06	-	-	-	-	0.38	1.56
	A / R / C <sup>3</sup>	-	-	0.01	0.84	2.53	-	0.12	-	3.50
	C / CCC	-	-	0.06	-	-	-	0.02	0.02	0.10
	C	-	-	0.04	0.18	2.02	-	0.23	-	2.47
Disturbed Wetland (Arundo; concrete-lined), (65100)	A / R / C	-	-	-	0.07	0.05	-	-	-	0.12
Disturbed Wetland (castor bean-dominated), (11200)	A / R / C	-	-	-	-	0.10	-	-	-	0.10
	C	-	-	-	-	0.39	-	-	-	0.39

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-3b**  
**Potential Jurisdictional Wetland Aquatic Resources in the MWMP study area**

MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	Jurisdiction <sup>1</sup>	Watershed (Acres)								Total (Acres)
		<i>San Dieguito</i>	<i>Peñasquitos</i>	<i>Mission Bay</i>	<i>San Diego River</i>	<i>Pueblo San Diego</i>	<i>Sweetwater</i>	<i>Otay</i>	<i>Tijuana River</i>	
Disturbed Wetland (concrete-lined), (11200)	A / R / C	0.15	-	-	0.51	-	-	-	0.05	0.71
Disturbed Wetland (palm-dominated), (11200)	A / R / C <sup>3</sup>	-	0.02	-	0.41	0.23	-	-	-	0.66
	C	-	-	-	-	0.13	-	-	-	0.13
Disturbed Wetland Subtotal <sup>4</sup>		0.15	1.22	0.18	4.31	6.27	-	2.80	1.12	16.04
<i>Freshwater Marsh<sup>2</sup></i>										
Coastal Salt Marsh, (52100)	A / R / C / CCC	-	0.73	-	-	-	-	-	-	0.73
	A / R / C <sup>3</sup>	-	1.00	-	-	-	-	-	-	1.00
	C / CCC	-	0.93	-	-	-	-	-	-	0.93
Disturbed Freshwater Marsh, (52400)	A / R / C / CCC	-	-	0.52	-	-	-	-	-	0.52
	A / R / C <sup>3</sup>	-	0.34	0.06	-	0.17	-	-	0.64	1.21
	C	-	-	-	-	-	-	-	0.08	0.08
Freshwater Marsh, (52400)	A / R / C / CCC	-	0.63	-	0.55	-	-	-	-	1.18
	A / R / C <sup>3</sup>	-	0.48	-	0.03	1.42	-	0.66	1.18	3.64
	A / R / C / CCC	-	0.21	-	<0.01	-	-	0.02	-	0.23

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-3b**  
**Potential Jurisdictional Wetland Aquatic Resources in the MWMP study area**

MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	Jurisdiction <sup>1</sup>	Watershed (Acres)								Total (Acres)
		<i>San Dieguito</i>	<i>Peñasquitos</i>	<i>Mission Bay</i>	<i>San Diego River</i>	<i>Pueblo San Diego</i>	<i>Sweetwater</i>	<i>Otay</i>	<i>Tijuana River</i>	
Freshwater Marsh (concrete-lined), (52400)	A / R / C <sup>3</sup>	0.06	-	-	0.26	-	-	-	-	0.31
Freshwater Marsh Subtotal <sup>4</sup>		0.06	4.31	0.58	0.85	1.59	-	0.68	1.90	9.96
<i>Oak Woodland<sup>2</sup></i>										
Oak Woodland, (71100)	A / R / C	-	-	-	-	0.05	-	-	-	0.05
	C	-	-	-	-	0.04	-	-	-	0.04
Oak Woodland Subtotal <sup>4</sup>		-	-	-	-	0.09	-	-	-	0.09
<i>Riparian Forest or Woodland<sup>2</sup></i>										
Disturbed Riparian Forests, (61000)	A / R / C / CCC <sup>3</sup>	-	0.04	-	-	-	-	-	-	0.04
Disturbed Riparian Forest (Southern Riparian Forest), (61300)	A / R / C <sup>3</sup>	-	0.07	-	0.09	-	-	-	-	0.16
	A / R / C <sup>3</sup>	-	-	-	0.09	-	-	-	-	0.09

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-3b**  
**Potential Jurisdictional Wetland Aquatic Resources in the MWMP study area**

MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	Jurisdiction <sup>1</sup>	Watershed (Acres)								Total (Acres)
		<i>San Dieguito</i>	<i>Peñasquitos</i>	<i>Mission Bay</i>	<i>San Diego River</i>	<i>Pueblo San Diego</i>	<i>Sweetwater</i>	<i>Otay</i>	<i>Tijuana River</i>	
Disturbed Riparian Forest (Southern Willow Forest), (61320)	C	-	2.06	-	-	-	-	-	0.07	0.07
Disturbed Riparian Forest (Southern Willow Forest, Concrete-Lined), (61320)	A / R / C <sup>3</sup>	-	-	-	0.35	-	-	-	-	0.35
Riparian Forests (61000)	A / R / C / CCC	-	0.91	-	-	-	-	-	-	0.91
Riparian Forest Concrete-Lined, (61000)	A / R / C <sup>3</sup>	-	-	-	0.07	-	-	-	-	0.07
Riparian Forest (Coast Live Oak), (61310)	A / R / C <sup>3</sup>	-	-	0.30	-	-	-	-	-	0.30
	C	-	0.13	0.68	-	0.20	-	-	-	1.01
	A / R / C	-	-	0.04	1.30	-	-	-	-	1.33

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-3b**  
**Potential Jurisdictional Wetland Aquatic Resources in the MWMP study area**

MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	Jurisdiction <sup>1</sup>	Watershed (Acres)								Total (Acres)
		<i>San Dieguito</i>	<i>Peñasquitos</i>	<i>Mission Bay</i>	<i>San Diego River</i>	<i>Pueblo San Diego</i>	<i>Sweetwater</i>	<i>Otay</i>	<i>Tijuana River</i>	
Riparian Forest (Southern Riparian Forest), (61300)	C	-	0.01	0.04	0.05	-	-	-	-	0.10
Riparian Forest (Southern Riparian Forest Concrete-Lined), (61300)	A / R / C	0.04	-	-	-	-	-	-	-	0.04
Riparian Forest (Southern Willow Forest), (61320)	A / R / C / CCC	-	9.22	-	0.80	-	-	-	69.40	79.42
	A / R / C	0.24	9.02	-	4.38	3.24	-	2.69	0.84	20.41
	C / CCC	-	-	-	-	-	-	-	5.37	5.37
	C	-	0.24	-	0.66	0.27	-	0.02	0.48	1.67
Riparian Forest (Southern Willow Forest, Concrete-Lined), (61320)	A / R / C / CCC	-	0.04	-	-	-	-	-	0.05	0.09
	A / R / C <sup>3</sup>	-	-	-	-	0.24	-	0.53	0.27	1.05
Riparian Forest or Woodland Subtotal <sup>4</sup>		0.28	21.75	1.06	7.70	4.04	-	3.24	76.47	114.54

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-3b**  
**Potential Jurisdictional Wetland Aquatic Resources in the MWMP study area**

MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	Jurisdiction <sup>1</sup>	Watershed (Acres)								Total (Acres)
		San Dieguito	Peñasquitos	Mission Bay	San Diego River	Pueblo San Diego	Sweetwater	Otay	Tijuana River	
Riparian Scrub <sup>2</sup>										
Riparian Scrub (63000)	A / R / C / CCC	-	0.02	-	-	-	-	-	-	0.02
	A / R / C <sup>3</sup>	-	0.05	-	0.37	0.02	-	-	0.04	0.48
	C	-	0.10	-	0.01	-	-	-	0.27	0.39
Riparian Scrub (Concrete-Lined), (63000)	A / R / C	-	-	-	0.46	0.07	-	-	-	0.52
Riparian Scrub (Mulefat Scrub), (63310)	A / R / C / CCC	-	-	-	-	-	-	-	12.13	12.13
	A / R / C <sup>3</sup>	-	0.04	-	-	0.02	-	-	-	0.06
	C / CCC	-	0.39	0.74	-	-	-	-	6.95	8.08
	C	-	0.04	-	0.09	-	-	-	-	0.13
Riparian Scrub (Southern Willow Scrub), (63320)	A / R / C / CCC	-	0.17	-	-	-	-	-	2.42	2.58
	A / R / C <sup>3</sup>	-	-	-	0.23	0.07	-	-	0.54	0.84
	C	-	-	-	0.05	0.23	-	-	0.15	0.43
	A / R / C / CCC	0.01	-	-	0.05	-	-	-	-	0.07

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-3b**  
**Potential Jurisdictional Wetland Aquatic Resources in the MWMP study area**

MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	Jurisdiction <sup>1</sup>	Watershed (Acres)								Total (Acres)
		<i>San Dieguito</i>	<i>Peñasquitos</i>	<i>Mission Bay</i>	<i>San Diego River</i>	<i>Pueblo San Diego</i>	<i>Sweetwater</i>	<i>Otay</i>	<i>Tijuana River</i>	
Riparian Forest (Southern Willow Forest, Concrete-Lined), (61320)	A / R / C <sup>3</sup>	-	-	-	0.01	0.08	-	-	-	0.09
Tamarisk Scrub, (63810)	C / CCC	-	0.12	-	-	-	-	-	-	0.12
Riparian Scrub Subtotal <sup>4</sup>		-	0.95	0.74	1.27	0.49	-	-	22.50	25.95
<b>Total<sup>4</sup></b>		<b>0.49</b>	<b>28.22</b>	<b>2.56</b>	<b>14.13</b>	<b>12.40</b>	<b>-</b>	<b>6.70</b>	<b>101.99</b>	<b>166.48</b>

<sup>1</sup> A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CCC = CCC Jurisdictional

<sup>2</sup> Vegetation community in reference to SDBG (City of San Diego 2018).

<sup>3</sup> The acreages listed in the USACE/RWQCB, CDFW, and City of San Diego Wetlands columns overlap and should not be summed together.

<sup>4</sup> Acreage may not total due to rounding.

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

Hydrology and vegetation were examined within all facilities included in the MWMP. Since all of the facilities in the MWMP are natural streams, flood control or storm water conveyance facilities, they are all located in the main flow line of a watercourse and hydric soils were assumed present; therefore, no data station pits were evaluated and no formal wetland determination data forms were recorded. The MWMP facility study areas all contain aquatic resources, which include wetland and/or non-wetland waters that are potentially subject to regulation and review by USACE, RWQCB, CDFW, CCC, and the City. Each of these regulatory agencies has the authority to determine the final boundaries of their jurisdiction for all individual MWMP facilities. The facilities are either concrete-lined or have earthen bottoms and have banks that are well-defined or engineered for storm water conveyance. As such, for purposes of the delineation in the MWMP, jurisdiction of all three agencies is determined to extend from the top of the bank on one side of the facility to the top of the bank on the other side. City-defined wetlands were determined to be synonymous with CDFW wetland boundaries in all locations within the MWMP study area. Where these resources occur within the COZ, they are considered CCC jurisdictional wetlands as well. Jurisdictional wetlands (including City and CCC-defined wetlands) in earthen-bottom channels (e.g., hydrophytic vegetation) generally occur along the bottom and sometimes partially up the banks of the facilities, depending on the hydrology of the facility. Hydrophytic vegetation can also establish outside of the hydrologic boundaries of the channel (i.e., above the banks), in which case the hydrophytic vegetation communities are considered CDFW and City jurisdictional wetlands. In concrete-lined MWMP facilities, jurisdictional wetlands (including City and CCC-defined wetlands) are typically limited to the facility bottom, as it is uncommon for vegetation and sediment to establish on concrete banks due to the hard substrate and steep aspect of the concrete slopes.

Potential jurisdictional non-wetland waters and wetlands may support multiple functions and services in addition to providing habitat for plants and wildlife species, including flood storage/attenuation, pollutant filtration, and ground water recharge.

### **3.2.3 FLORAL DIVERSITY**

A total of 127 species of vascular plants, 82 native (65%) and 45 non-native (35%), were recorded during the biological reconnaissance surveys for the MWMP. A cumulative list of all common and sensitive plant species observed in the MWMP study area is provided in Appendix A of this report.

Counts of vascular plant species observed at each watershed is included in Table 3-4.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 3-4**  
**Floral Diversity Within the MWMP study area**

<b>Watershed</b>	<b>Native Plant Species Count</b>	<b>Non-Native Plant Species Count</b>	<b>Total</b>
San Dieguito	6 (43%)	8 (57%)	14
Peñasquitos	28 (62%)	17 (38%)	45
Mission Bay	21 (60%)	14 (40%)	35
San Diego River	33 (56%)	26 (44%)	59
Pueblo San Diego	39 (60%)	26 (40%)	65
Sweetwater	3 (60%)	2 (40%)	5
Otay	12 (40%)	18 (60%)	30
Tijuana River	19 (48%)	21 (53%)	40

### 3.2.4 WILDLIFE DIVERSITY

The MWMP study area supports habitat for upland and riparian wildlife species. Chaparral, coastal sage scrub, woodland, riparian, and non-native habitats (e.g., eucalyptus and non-native grassland) within the MWMP study area provide foraging and nesting habitat for migratory and resident bird species and other wildlife species. Chaparral, coastal sage scrub, and woodlands within the MWMP study area provide cover and foraging opportunities for wildlife species, including reptiles and mammals.

As previously mentioned, wildlife species detected during the field survey by sight, calls, tracks, scat, or other signs were recorded directly onto a field notebook. Binoculars were used to aid in the identification of wildlife. In addition to species actually detected during the surveys, expected wildlife use of the site was determined by known habitat preferences of local species and knowledge of their relative distributions in the area. Species observed within the MWMP study area were recorded during focused surveys, habitat assessments, and vegetation mapping. A list of wildlife species observed in the MWMP study area is presented in Appendix B.

Of the total 82 wildlife species observed, 10 (12.2%) of these are considered sensitive or special status (6 of which are MSCP Covered Species).

A total of 82 wildlife species, including 68 birds, 4 mammals, 4 invertebrates, 3 reptiles, 2 amphibians, and 1 fish, were recorded during the biological reconnaissance surveys for the MWMP study area, described in Section 2.2. A cumulative list of all common and sensitive wildlife species observed in the MWMP study area are provided in Appendix B of this report.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Counts of wildlife species observed within each watershed is included in Table 3-5.

**Table 3-5**  
**Wildlife Diversity within the MWMP Study Area**

<b>Watershed</b>	<b>Wildlife Species Count</b>	<b>Sensitive Species Count</b>	<b>Total</b>
San Dieguito	12	0	12
Peñasquitos	38	6 (15.8%)	38
Mission Bay	13	0	13
San Diego River	29	3 (10.3%)	29
Pueblo San Diego	37	3 (8.1%)	37
Sweetwater	7	0	7
Otay	11	3 (27.3%)	11
Tijuana River	45	9 (20.0%)	45

## **Benthic Macroinvertebrates**

Benthic macroinvertebrates are present in natural drainages throughout San Diego County and provide an integrated key indicator of stream and water quality. Native benthic macroinvertebrate species spend the majority of their life cycle in larval form and live multiple years in water. They prefer complex stream habitats, such as cobble-bottomed drainages and large woody debris, which they utilize for foraging, protection from predators, and reproduction (US Department of the Interior 2008). However, flood risk reduction maintenance activities under the MWMP are focused on drainage sections where small particulate sediment and vegetation have accumulated and are generally not suitable for native BMI species (US Department of the Interior 2008).

### **3.2.5 SENSITIVE PLANT SPECIES**

Plant species are considered sensitive if they have been listed or are proposed for listing by the federal or state government as rare, endangered, or threatened (listed species); have a CRPR of 1 through 4; are listed as an MSCP Covered Species; and/or have been adopted by the City as narrow endemic. Evaluations of known records in the Del Mar, Escondido, Imperial Beach, La Jolla, La Mesa, National City, Otay Mesa, and Point Loma quadrangle, and the surrounding quadrangles, including Dulzura, El Cajon, Encinitas, Jamul Mountains, Otay Mountains, Poway, Rancho Santa Fe, Rodriguez Mountains, San Marcos, San Pasqual, San Vicente Reservoir, and Valley Center (CDFW 2016a; CNPS 2016; USFWS 2016a) was conducted. In addition, Dudek's knowledge of biological resources and regional distribution of each species, as well as elevation, habitat, and soils present within the MWMP study area were evaluated to determine the potential for various special-status species to occur.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Results of the focused sensitive plant surveys conducted within the MWMP study area are shown in Figure 6 and described in Appendix D.

The following sensitive plant species were directly observed within the MWMP study area (i.e., facility maintenance areas plus 300-foot buffer):

- San Diego sagewort (*Artemisia palmeri*; CRPR 4.2),
- southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*; CRPR 4.2),
- Nuttall's scrub oak (*Quercus dumosa*; CRPR 1B.1),
- San Diego County viguiera (*Bahiopsis laciniata*; CRPR 4.2),
- singlewhorl burrobrush (*Ambrosia monogyra*; CRPR 2B.2),
- San Diego marsh-elder (*Iva hayesiana*; CRPR 2B.2),
- California adolphia (*Adolphia californica*; CRPR 2B.1),
- seaside cistanthe (*Cistanthe maritima*; CRPR 4.2),
- San Diego sand aster (*Corethrogyne filaginifolia* var. *incana*; CRPR 1B.1)
- cliff spurge (*Euphorbia misera*; CRPR 2B.2)
- Torrey pine (*Pinus torreyana* ssp. *torreyana*; CRPR 1B.2), and
- ashy spike-moss (*Selaginella cinerascens*; CRPR 4.1).

## **San Diego Sagewort (*Artemisia palmeri*)**

San Diego sagewort is a CRPR 4.2. This species is found within chaparral and coastal sage scrub in San Diego, Orange, Los Angeles, Riverside, and San Bernardino counties (Calflora 2018). The typical blooming period is from May to September, and it occurs at elevations of 49 to 3,002 feet AMSL. San Diego sagewort was observed in four watershed study areas: Peñasquitos, Mission Bay, San Diego River, and Pueblo San Diego.

## **Southwestern Spiny Rush (*Juncus acutus* ssp. *leopoldii*)**

Southwestern spiny rush is a CRPR 4.2. This species is found within mesic coastal dunes, meadows and alkali seeps, and coastal saltwater marshes and swamps (Calflora 2018). The typical blooming period for this rhizomatous herb is from May to June and it occurs at elevations less than 3,000 feet AMSL. Southwestern spiny rush was observed in four watershed study areas: Peñasquitos, Mission Bay, San Diego River, and Pueblo San Diego.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## **Nuttall's Scrub Oak (*Quercus dumosa*)**

Nuttall's scrub oak has a CRPR 1B.1. Nuttall's scrub oak is a dicot, California native perennial evergreen shrub that occurs in San Diego, Orange, Los Angeles, Ventura, and Santa Barbara counties (Calflora 2018). This species is found in closed-cone coniferous forest, chaparral, and coastal sage scrub. The bloom period for Nuttall's scrub oak is from February to August. Nuttall's scrub oak occurs in sandy and clay loam soils at elevations of 50 to 1,310 feet AMSL. Nuttall's scrub oak was observed in four watershed study areas: Peñasquitos, Mission Bay, San Diego River, and Pueblo San Diego.

## **San Diego County Viguiera (*Bahiopsis laciniata*)**

San Diego County viguiera has a CRPR 4.2. San Diego County viguiera is a dicot, California native perennial shrub that occurs in San Diego and Orange counties (Calflora 2018). This species is found in chaparral and coastal sage scrub. The bloom period for San Diego County viguiera is from February to August. San Diego County viguiera occurs at elevations of 195 to 2,460 feet AMSL. San Diego county viguiera was observed in five watershed study areas: Peñasquitos, Mission Bay, San Diego River, Pueblo San Diego, and Tijuana River.

## **Singlewhorl Burrobrush (*Ambrosia monogyra*)**

Singlewhorl burrobrush has a CRPR 2B.2. Singlewhorl burrobrush is a dicot, California native shrub that occurs in Imperial, Inyo, Orange, Riverside, San Bernardino, and San Diego counties (Calflora 2018). This species is found in chaparral and typically blooms from August to November. Singlewhorl burrobrush occurs at elevations below 1,640 feet AMSL. Singlewhorl burrobrush was observed within three watershed study areas: San Diego River, Pueblo San Diego, and Tijuana River.

## **San Diego Marsh-Elder (*Iva hayesiana*)**

San Diego marsh-elder has a CRPR 2B.2. San Diego marsh-elder is a perennial herb that occurs in San Diego, Los Angeles, Orange, San Bernardino, and Ventura counties (Calflora 2018). This species is found in alkali sink and wetland-riparian communities, and typically blooms from April to October. San Diego marsh-elder occurs at elevations of 33 to 1,640 feet AMSL. San Diego marsh-elder was observed within five watershed study areas: Peñasquitos, Mission Bay, San Diego River, Pueblo San Diego, and Tijuana River.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## **California Adolphia (*Adolphia californica*)**

California adolphia has a CRPR 2B.1. California adolphia is a dicot, California native shrub that occurs in San Diego, Los Angeles, and Monterey counties (Calflora 2018). This species is found in chaparral, valley grassland, and coastal sage scrub, and typically blooms from December to May. California adolphia occurs at elevations of 33 to 2,428 feet AMSL. California adolphia was observed within one watershed study area: San Diego River.

## **Seaside Cistanthe (*Cistanthe maritima*)**

Seaside cistanthe has a CRPR 4.2. Seaside cistanthe is found within valley grassland and coastal sage scrub in San Diego, Los Angeles, Orange, Ventura, Santa Barbara, and Northern California counties (Calflora 2018). The typical blooming period is from March to June, and it occurs at elevations from 16 to 984 feet AMSL. Seaside cistanthe was observed within one watershed study area: Tijuana River.

## **San Diego Sand Aster (*Corethrogyne filaginifolia* var. *incana*)**

San Diego sand aster has a CRPR 1B.1. San Diego sand aster is found within coastal sage scrub throughout Southern and Central California and along the coast in Northern California (Calflora 2018). The typical blooming period is from June to September, and it occurs at elevations from 10 to 377 feet AMSL. San Diego sand aster was observed within one watershed study area: San Diego River.

## **Cliff Spurge (*Euphorbia misera*)**

Cliff spurge has a CRPR 2B.2. Cliff spurge is a dicot, California native shrub that occurs in San Diego, Los Angeles, Orange, Riverside, Santa Barbara, and El Dorado counties (Calflora 2018). This species is found in coastal sage scrub, and typically blooms from December to August. Cliff spurge occurs at elevations of 33 to 1,640 feet AMSL. Cliff spurge was observed within one watershed study area: Tijuana River.

## **Torrey Pine (*Pinus torreyana* ssp. *torreyana*)**

Torrey pine has a CRPR 1B.2. Torrey pine is a gymnosperm, evergreen tree that is endemic to California and occurs in San Diego, Santa Barbara, Santa Clara, and Marin counties (Calflora 2018). This tree is found within chaparral and closed-cone pine forest, and occurs at elevations from 98 to 525 feet AMSL. Torrey pine was observed within four watershed study areas: Peñasquitos, Mission Bay, San Diego River, and Pueblo San Diego.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## Ashy Spike-Moss (*Selaginella cinerascens*)

Ashy spike-moss has a CRPR 4.1. Ashy spike-moss is a fern that occurs in San Diego, Los Angeles, Orange, and Riverside counties (Calflora 2018). This species is found in chaparral and coastal sage scrub, and is found at elevations from 66 to 2,100 feet AMSL. Ashy spike-moss was observed within one watershed study area: Pueblo San Diego.

### 3.2.5.1 San Dieguito Watershed

No sensitive plant species were observed during focused plant surveys in 2019 within the San Dieguito Watershed study area. No sensitive plant species have high or moderate potential to occur within the San Dieguito Watershed study area, since species would have been observed during focused surveys if present (Appendix D). No USFWS Critical Habitat occurs within or immediately adjacent to the San Dieguito Watershed study area.

### 3.2.5.2 Peñasquitos Watershed

Six sensitive plant species were observed during focused surveys in 2019 within the Peñasquitos Watershed study area: San Diego sagewort (*Artemisia palmeri*), San Diego County viguiera (*Bahiopsis laciniata*), San Diego marsh-elder (*Iva hayesiana*), southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*), Torrey pine (*Pinus torreyana* ssp. *torreyana*), and Nuttall's scrub oak (*Quercus dumosa*). No other sensitive plant species have high or moderate potential to occur within the Peñasquitos Watershed study area since species would have been observed during focused surveys if present (Appendix D). No USFWS Critical Habitat occurs within or immediately adjacent to the Peñasquitos Watershed study area.

### 3.2.5.3 Mission Bay Watershed

Six sensitive plant species were observed during focused surveys in 2019 within the Mission Bay Watershed study area: San Diego sagewort, San Diego County viguiera, San Diego marsh-elder, southwestern spiny rush, Torrey pine, and Nuttall's scrub oak. No other sensitive plant species have high or moderate potential to occur within the Mission Bay Watershed since species would have been observed during focused surveys if present (Appendix D). No USFWS Critical Habitat occurs within or immediately adjacent to the Mission Bay Watershed study area.

### 3.2.5.4 San Diego River Watershed

The following sensitive plant species were directly observed during focused surveys in 2019 within the San Diego River Watershed study area: California adolphia (*Adolphia californica*), singlewhorl burrobrush (*Ambrosia monogyra*), San Diego sagewort, San Diego County viguiera, San Diego sand aster

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

(*Corethrogyne filaginifolia* var. *incana*), San Diego marsh-elder, southwestern spiny rush, Torrey pine, and Nuttall's scrub oak. No other sensitive plant species have moderate or high potential to occur within the San Diego River Watershed study area since species would have been observed during focused surveys if present (Appendix D). No USFWS Critical Habitat occurs within or immediately adjacent to the San Diego River Watershed study area.

### 3.2.5.5 Pueblo San Diego Watershed

The following sensitive plant species were observed during focused surveys in 2019 within the Pueblo San Diego Watershed study area: singlewhorl burrobrush, San Diego sagewort, San Diego County viguiera, San Diego marsh-elder, southwestern spiny rush, Torrey pine, Nuttall's scrub oak, and ashy spike-moss (*Selaginella cinerascens*). No other sensitive plant species have moderate or high potential to occur within the Pueblo San Diego Watershed study area since species would have been observed during focused surveys if present (Appendix D). No USFWS Critical Habitat occurs within or immediately adjacent to the Pueblo San Diego Watershed study area.

### 3.2.5.6 Sweetwater Watershed

No sensitive plant species were observed during focused surveys in 2019 or have high or moderate potential to occur within the Sweetwater Watershed study area. No USFWS Critical Habitat occurs within or immediately adjacent to the Sweetwater Watershed study area.

### 3.2.5.7 Otay Watershed

No sensitive plant species were observed during focused surveys in 2019 or have high or moderate potential to occur within the Otay Watershed study area. No USFWS Critical Habitat occurs within or immediately adjacent to the Otay Watershed study area.

### 3.2.5.8 Tijuana River Watershed

Five sensitive plant species were observed during focused surveys in 2019 within the Tijuana River Watershed study area: singlewhorl burrobrush, San Diego County viguiera, seaside cistanthe (*Cistanthe maritima*), cliff spurge (*Euphorbia misera*), and San Diego marsh-elder. No other sensitive plant species have moderate or high potential to occur within the Tijuana River Watershed study area since species would have been observed during focused surveys if present (Appendix D). No USFWS Critical Habitat occurs within or immediately adjacent to the Tijuana River Watershed study area.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 3.2.6 SENSITIVE WILDLIFE SPECIES

Sensitive wildlife species are those listed as federal/state endangered or threatened, proposed for listing, fully protected by CDFW, California Watch List (WL), California Species of Special Concern (SSC), or MSCP Covered Species. Protocol-level surveys were conducted for least Bell's vireo and southwestern willow flycatcher.

Sensitive wildlife species directly observed in the MWMP study area during focused surveys, or those known to occur in the surrounding region, are described in Appendix E. In Appendix E, the potential for each species to occur based on their general biology (primary habitat associations, range, and known elevation range) and known occurrences within the Del Mar, Escondido, Imperial Beach, La Jolla, La Mesa, National City, Otay Mesa, and Point Loma quadrangle, and the surrounding quadrangles including Dulzura, El Cajon, Encinitas, Jamul Mountains, Otay Mountains, Poway, Rancho Santa Fe, Rodriquez Mountains, San Marcos, San Pasqual, San Vicente Reservoir, and Valley Center (CDFW 2016a; CNPS 2016; USFWS 2016a), as well as Dudek's knowledge of biological resources in the area and regional distribution of each species, is described.

The following sensitive wildlife species were directly observed within the MWMP study area and survey buffer (i.e., within 300 feet of MWMP facility maintenance area):

- yellow warbler (*Setophaga petechia*; SSC),
- yellow-breasted chat (*Icteria virens*; SSC),
- Cooper's hawk (*Accipiter cooperii*; State WL/MSCP Covered),
- white-tailed kite (*Elanus leucurus*; FP),
- coastal California gnatcatcher (*Polioptila californica californica*; FT/SSC/MSCP Covered),
- Ridgway's rail (*Rallus obsoletus levipes*; FE/SE, FP/MSCP Covered),
- California least tern (*Sternula antillarum browni*; FE/SE, FS/MSCP Covered),
- California gull (*Larus californicus*; State WL),
- northern harrier (*Circus hudsonius*; SSC/MSCP Covered),
- least Bell's vireo (FE/SE/MSCP Covered), and
- California horned lark (*Eremophila alpestris actia*; WL).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## **Yellow Warbler (*Setophaga petechia*), SSC**

Yellow warbler is a CDFW SSC. Yellow warbler breeds in Southern California mountain ranges and throughout most of San Diego County (Zeiner et al. 1988–1990). This species breeds in coastal and desert lowland riparian woodlands, montane chaparral, and ponderosa pine and mixed conifer habitats. In summer months, the yellow warbler usually inhabits riparian deciduous habitats, including cottonwoods, willows, alders, and other small trees and shrubs of low, open-canopy riparian woodland. During migration, this species finds cover within woodlands, forests, and shrub habitats. Yellow warbler was observed in five watershed study areas: Los Peñasquitos, San Diego River, Pueblo San Diego, Otay, and Tijuana River watersheds.

## **Yellow-Breasted Chat (*Icteria virens*), SSC**

Yellow-breasted chat is a CDFW SSC. Yellow-breasted chat inhabits valley foothill riparian habitats 1,450 meters (4,757 feet) in elevation and desert riparian habitats 2,050 meters (6,726 feet) in elevation (Zeiner et al. 1988–1990). The yellow-breasted chat is a summer resident and migrant in coastal California and in the foothills of the Sierra Nevada. This species occurs along the coast of Northern California east to Cascades and locally south of Mendocino County (McCaskie et al. 1979). In Southern California, the yellow-breasted chat breeds on the coast and inland (Garrett and Dunn 1981). The yellow-breasted chat requires riparian thickets of willow and other brush near water for cover. Yellow-breasted chat was observed in two watershed study area: Los Peñasquitos, and Tijuana River Watersheds.

## **Cooper's Hawk (*Accipiter cooperii*), State WL/MSCP Covered**

Cooper's hawk is a state Watch List and an MSCP Covered Species. Cooper's hawk inhabits live oak, riparian deciduous, and other forest habitats near water. Nesting and foraging usually occur near open water or riparian vegetation. Nests are built in dense stands with moderate crown depths, usually in second-growth conifer or deciduous riparian areas. Nests in deciduous trees are typically located in crotches 20 to 50 feet above the ground; in conifers, nests are in horizontal branches or the main crotch. Cooper's hawks use patchy woodlands and edges with snags for perching and hunting small birds, small mammals, reptiles, and amphibians (Zeiner et al. 1990). Cooper's hawks are diurnally active and year-round residents. Breeding occurs from March through August, with peak activity in May through July. Males defend an area about 330 feet around potential nest sites (Zeiner et al. 1990). Cooper's hawk was observed in six watershed study areas: Los Peñasquitos, Mission Bay, San Diego River, Pueblo San Diego, Otay, and Tijuana River Watersheds.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## **White-Tailed Kite (*Elanus leucurus*), FP**

The white-tailed kite is a California fully protected (FP) species. The core of the white-tailed kite's breeding range in the United States is in California, with nearly all areas up to the western Sierra Nevada foothills and southeast deserts occupied, including documented breeding in eastern San Diego County (Dunk 1995; Unitt et al. 2004). The white-tailed kite is commonly associated with certain types of agriculture areas (Grinnell and Miller 1944). It also generally occurs in low-elevation grassland, wetland, oak woodland, low shrub, open woodlands, or savannah habitats. This species also uses fence rows and irrigation ditches (with residual vegetation). Riparian areas adjacent to open space areas are typically used for nesting (County of Riverside 2003), where kites prefer dense, broadleaved deciduous trees for nesting and night roosting (Brown and Amadon 1968). Small mammals (prey falling within the 20–70-gram [0.71–2.47 ounces] range) comprise over 95% of white-tailed kite prey. However, they occasionally take birds, insects, reptiles, and amphibians (County of Riverside 2003). White-tailed kites build a platform of sticks in the fork of a tree or tall bush to nest. Egg laying begins in February and probably peaks in March and April. Peak fledging probably occurs in May and June (Erichsen 1995). The white-tailed kite is a primarily non-migratory resident through most of its breeding range (Erichsen et al. 1996). White-tailed kite was observed in two watershed study areas: Los Peñasquitos, and Tijuana River Watersheds.

## **Coastal California Gnatcatcher (*Poliophtila californica californica*), FT/SSC/MSCP Covered**

The coastal California gnatcatcher is federally listed as threatened (FT), and is a CDFW SSC and an MSCP Covered Species. This species occurs in coastal Southern California and Baja California year round, where it depends on a variety of arid scrub habitats. The coastal California gnatcatcher occurs mainly on cismontane slopes (coastal side of the mountains) in Southern California, ranging from Ventura and northern Los Angeles counties south through the Palos Verdes Peninsula to Orange, Riverside, San Bernardino, and San Diego counties. The species' range continues south to El Rosario, Mexico.

Coastal California gnatcatcher typically occurs in or near coastal scrub vegetation that is composed of relatively low growing, dry season- deciduous and succulent plants. Characteristic plants of this community include coastal sagebrush, various species of sage, California buckwheat, lemonade sumac, California brittlebush (*Encelia californica*), and cactus (e.g., *Opuntia* spp.). Coastal California gnatcatcher was observed in four watershed study areas: Los Peñasquitos, San Diego River, Pueblo San Diego, and Tijuana River Watersheds.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## **Ridgway's Rail (*Rallus obsoletus levipes*), FE/SE, FP/MSCP Covered**

Ridgway's rail is federally and state-listed as endangered, California fully protected, and an MSCP Covered Species. Ridgway's rails are common in coastal saline emergent wetlands in Southern California from Santa Barbara County to San Diego County (Zeiner et al. 1990). This species uses higher marsh vegetation for cover that is adjacent to shallow water and mudflats for foraging. Ridgway's rail prefers emergent wetland dominated by pickleweed and cordgrass, and prays on crabs, mussels, clams, snails, insects, spiders, and worms. Ridgway's rail was observed in one watershed study area: Los Peñasquitos Watershed.

## **California Least Tern (*Sternula antillarum browni*), FE/SE, FP/MSCP Covered**

California least tern is federally and state-listed as endangered, California fully protected, and an MSCP Covered Species. California least terns breed along marine and estuarine shores and feeds in nearby shallow, estuarine waters (Wilbur 1974). This species prefers undisturbed nests sites on open, sandy, or gravelly shores (Zeiner et al. 1990). California least terns nest on hard soil and may use artificially created depressions (Swickard 1971, 1972; Rigney and Emery 1980). California least tern was observed in one watershed study area: San Diego River Watershed.

## **California Gull (*Larus californicus*), State WL**

California gull is a state Watch List species. California gulls occupy habitats along the coast that are sandy beaches, mudflats, rocky intertidal, and marine and estuarine habitats as well as fresh and saline emergent wetlands (Grinnell and Miller 1944). This species can also be found inland near riverines, cropland habitats, landfill dumps, and open lawns in cities (Grinnell and Miller 1944). California gulls need undisturbed, isolated islands in alkali or freshwater lakes and salt ponds in California for nesting where food supply is close (Bent 1921; Johnston and Foster 1954; Lederer 1976; Rigney 1983). Seasonal migrates northwest to the coast as far north after breeding. California gull was observed in two watershed study areas: San Diego River, and Otay Watersheds.

## **Northern Harrier (*Circus hudsonius*), SSC/MSCP Covered**

The northern harrier is an SSC and MSCP Covered Species. Northern harriers use a wide variety of open habitats in California including deserts, coastal sand dunes, pasturelands, croplands, dry plains, grasslands, estuaries, flood plains, and marshes (Macwhirter and Bildstein 2011). This species can also forage over coastal sage scrub or other open scrub communities. Nesting areas are associated with marshes, pastures, grasslands, prairies, croplands, desert shrub-steppe, and riparian woodland (Macwhirter and Bildstein 2011). Winter habitats similarly include a variety of open habitats dominated by herbaceous cover. Northern harrier populations are most concentrated

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

in areas with low vegetation. Northern harrier has high potential to occur in one watershed study area: Tijuana River Watershed.

## **Least Bell's Vireo (*Vireo bellii pusillus*), FE/SE/MSCP Covered**

Least Bell's vireo is federally listed as endangered (FE), state listed as endangered, and an MSCP Covered Species. The breeding range of least Bell's vireo includes coastal and inland Southern California (including the western edge of Southern California's southern deserts), a small area within California's Central Valley, and extreme northern Baja California, Mexico. Least Bell's vireo overwinters primarily along southern Baja California (Kus 2002). Least Bell's vireo primarily occupy riverine riparian habitats along water, including dry portions of intermittent streams that typically provide dense cover within 1 to 2 meters (3.3 to 6.6 feet) off the ground, often adjacent to a complex, stratified canopy. Least Bell's vireo nesting habitats in cismontane and coastal areas include southern willow scrub; mulefat scrub; arroyo willow riparian forest edge; wild blackberry thickets; and more rarely, cottonwood forest, sycamore alluvial woodland, and southern coast live oak riparian forest. Least Bell's vireo was observed in one watershed study area, Tijuana River Watershed, and has high potential to occur in one watershed study area: Los Peñasquitos.

## **California Horned Lark (*Eremophila alpestris actia*), WL**

The California horned lark is a WL species. The California horned lark is a permanent resident found throughout much of the southern half of California. This species breeds and resides in the coastal region of California from Sonoma County southeast to the U.S./Mexico border, including most of the San Joaquin Valley, and eastward to the foothills of the Sierra Nevada (Grinnell and Miller 1944; Beason 1995). It is found from grasslands along the coast and deserts near sea level to alpine dwarf-shrub habitat above tree line. This species prefers open habitats, grassland, rangeland, shortgrass prairie, montane meadows, coastal plains, and fallow grain fields, and it nests on the ground in a hollow scrape. California horned lark was observed in one watershed study area: Tijuana River Watershed.

### **3.2.6.1 San Dieguito Watershed**

No sensitive wildlife species were observed or have high potential to occur in the San Dieguito Watershed study area. Six sensitive wildlife species have moderate potential to occur: Cooper's hawk, white-tailed kite, orangethroat whiptail (*Aspidoscelis hyperythra*), San Diegan tiger whiptail (*Aspidoscelis tigris stejnegeri*), monarch (*Danaus plexippus*), and western spadefoot (*Spea hammondi*) (Appendix E). No USFWS Critical Habitat occurs within or immediately adjacent to this watershed study area.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 3.2.6.2 Peñasquitos Watershed

Seven sensitive wildlife species were observed and/or have high potential to occur in the Peñasquitos Watershed study area: yellow warbler, yellow-breasted chat, Cooper's hawk, white-tailed kite, coastal California gnatcatcher, least Bell's vireo, and Ridgway's rail. Ten sensitive wildlife species have moderate potential to occur: osprey (*Pandion haliaetus*), Belding's savannah sparrow (*Passerculus sandwichensis beldingi*), western spadefoot, two-striped gartersnake (*Thamnophis hammondi*), orangethroat whiptail, San Diegan tiger whiptail, red diamond rattlesnake (*Crotalus ruber*), Blainville's horned lizard (*Phrynosoma blainvillii*), monarch, and cougar (*Puma concolor*) (Appendix E). No USFWS Critical Habitat occurs within or immediately adjacent to this watershed study area.

## 3.2.6.3 Mission Bay Watershed

Three sensitive wildlife species was observed and/or has high potential to occur in the Mission Bay Watershed study area: Cooper's hawk, Ridgway's rail, and western bluebird (*Sialia mexicana*). Five sensitive wildlife species have moderate potential to occur: coastal California gnatcatcher, Belding's savannah sparrow, California gull, orangethroat whiptail, and monarch (Appendix E). No USFWS Critical Habitat occurs within or immediately adjacent to this watershed study area.

## 3.2.6.4 San Diego River Watershed

Nine sensitive wildlife species were observed and/or have high potential to occur in the San Diego River Watershed study area: coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, yellow-breasted chat, yellow warbler, Cooper's hawk, California least tern, Ridgway's rail, and California gull (*Larus californicus*). Eight sensitive wildlife species have moderate potential to occur: osprey, western spadefoot, orangethroat whiptail, San Diegan tiger whiptail, red diamond rattlesnake, Blainville's horned lizard, two-striped gartersnake, and monarch (Appendix E). No USFWS Critical Habitat occurs within or immediately adjacent to this watershed study area.

## 3.2.6.5 Pueblo San Diego Watershed

Seven sensitive wildlife species were observed and/or have high potential to occur within the Pueblo San Diego Watershed study area: Cooper's hawk, yellow warbler, least Bell's vireo, southwestern willow flycatcher, yellow-breasted chat, Ridgway's rail, and coastal California gnatcatcher. Two sensitive wildlife species have moderate potential to occur: orangethroat whiptail and monarch (Appendix E). No USFWS Critical Habitat occurs within or immediately adjacent to this watershed study area.

## 3.2.6.6 Sweetwater Watershed

No sensitive wildlife species were observed or have high potential to occur within the Sweetwater Watershed study area. Four sensitive wildlife species have moderate potential to occur:

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

orangethroat whiptail, two-striped gartersnake, western spadefoot, and monarch (Appendix E). No USFWS Critical Habitat occurs within or immediately adjacent to this watershed study area

## 3.2.6.7 Otay Watershed

Three sensitive wildlife species were directly observed and/or have high potential to occur within the Otay Watershed study area: least Bell's vireo, southwestern willow flycatcher, yellow-breasted chat, Ridgway's rail, yellow warbler, white-tailed kite, northern harrier, Cooper's hawk, and California gull. Two sensitive wildlife species have moderate potential to occur: osprey and monarch (Appendix E). No USFWS Critical Habitat occurs within or immediately adjacent to this watershed study area.

## 3.2.6.8 Tijuana River Watershed

Eleven sensitive wildlife species were directly observed and/or have high potential to occur within the Tijuana River Watershed study area: Cooper's hawk, coastal California gnatcatcher, northern harrier, least Bell's vireo, southwestern willow flycatcher, white-tailed kite, yellow warbler, yellow-breasted chat, Ridgway's rail, California horned lark, and monarch. Seven sensitive wildlife species have moderate potential to occur: osprey, orangethroat whiptail, two-striped gartersnake, western spadefoot, Dulzura pocket mouse (*Chaetodipus californicus femoralis*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), and mule deer (*Odocoileus hemionus*) (Appendix E). USFWS Critical Habitat for least Bell's vireo occurs within the Tijuana River Watershed study area, including the Tijuana River – Smythe facility groups, and would be intersected by the proposed maintenance area.

## 3.2.7 WILDLIFE CORRIDORS AND HABITAT LINKAGES

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the immigration and emigration of animals. Wildlife corridors contribute to population viability through the following:

1. ensuring the continual exchange of genes between populations, which helps maintain genetic diversity;
2. providing access to adjacent habitat areas, representing additional territory for foraging and mating;
3. allowing for a greater carrying capacity; and
4. providing routes for colonization of habitat lands following local population extinctions or habitat recovery from ecological catastrophes (e.g., fires).

Habitat linkages are patches of native habitat that function to join two larger patches of habitat. They serve as connections between habitat patches and help reduce the adverse effects of habitat fragmentation. Although individual animals may not move through a habitat linkage, the linkage

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

does represent a potential route for gene flow and long-term dispersal. Habitat linkages may serve as both habitat and avenues of gene flow for small animals such as reptiles and amphibians. Habitat linkages may be represented by continuous patches of habitat or by nearby habitat “islands” that function as “stepping stones” for dispersal.

The MSCP defines core and linkage areas as those maintaining ecosystem function and processes, including large animal movement. Each core area is connected to other core areas or to habitat areas outside of the MSCP either through common boundaries or through habitat linkages. Core areas have multiple connections to help ensure that the balance in the ecosystem will be maintained.

Approximately 228 acres of the MWMP study area is within the City's MHPA and, therefore, potentially provides connectivity through natural creeks and tributaries, as well as larger corridors. Several of the facility groups and structures in the MWMP also occur in or partially overlap with MSCP biological core and linkage areas (Figures 3A–3C), including the following:

- Los Peñasquitos Canyon (two channel facility segments)
- Los Peñasquitos Lagoon/Soledad Canyon Creek (several channels/ditches, one basin, and one structure facility)
- San Diego River (several channels/ditches and structure facilities)
- Tijuana River Valley (two channel facility segments)

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

THIS PAGE INTENTIONALLY LEFT BLANK FOR DDOUBLE-SIDED PRINTING

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 4 IMPACTS ANALYSIS

Direct and indirect impacts to biological resources resulting from implementation of 66 proposed facility group FMPs are described below and are organized by watershed to address effects on vegetation communities and land covers, sensitive plant species, and sensitive wildlife species. Direct impacts to wildlife corridors and habitat linkages and all indirect impacts are discussed in a combined fashion for overall MWMP projects.

### 4.1 DEFINITION OF IMPACTS AND SIGNIFICANCE

#### California Environmental Quality Act

Based on the CEQA Environmental Checklist (Appendix G of the CEQA Guidelines), direct or primary effects are those that are caused by a project and occur at the same time and place; indirect or secondary effects are those that are reasonably foreseeable and caused by a project, but occur at a different time or place; and cumulative effects refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

The following thresholds are used in this document and are adapted from Appendix G of the CEQA Guidelines and the City's adopted Thresholds of Significance (City of San Diego 2016a):

1. A substantial adverse impact, either directly or through habitat modifications or introduction of invasive species, on any species identified as a candidate, sensitive, or special status species in the MSCP or other local or regional plans, policies or regulations, or by the California Department of Fish and Game (CDFG) or U.S. Fish and Wildlife Service (USFWS)?
2. A substantial adverse impact on any Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats as identified in the Biology Guidelines of the Land Development [M]anual or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS?
3. A substantial adverse impact on wetlands (including, but not limited to, marsh, vernal pool, riparian, etc.) through direct removal, filling, hydrological interruption, or other means?
4. Interfering substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Plan, or impede the use of native wildlife nursery sites?
5. A conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan, either within the MSCP plan area or in the surrounding region?

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

6. Introducing land use within an area adjacent to the MHPA that would result in adverse edge effects?
7. A conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

## 4.1.1 DIRECT IMPACTS

A direct impact is a physical change in the environment, which is caused by and immediately related to the project and can result in either permanent loss of on-site habitat and the plant and wildlife species that it contains or temporary loss of these resources. Impacts are considered permanent when a habitat or biological resource is impacted and is not restored to the same or higher value habitat within a short time period (i.e., within a year) following maintenance, such that the functions of that habitat for plants and wildlife species are reduced in the long term (e.g., removal of willow trees as part of routine maintenance). Impacts are considered temporary if the habitat impacted is restored, either passively or actively, to a habitat type of similar or higher value in a short period of time following the impact (e.g., revegetation of a wetland or vegetation community following one-time impacts). Although environmental resources (e.g., wetlands, streambeds) will exist in-place following completion of the MWMP, maintenance, repair, and access activities associated with implementation of the MWMP are still considered permanent impacts for purposes of CEQA (i.e., other regulatory agencies may consider maintenance impacts to be temporary) and could result in direct impacts to biological resources, including the following:

- Direct removal of vegetation and habitat during maintenance activities by means of excavation, grading, vegetation clearing/grubbing/crushing;
- Grading and clearing to create or maintenance access routes in previously undisturbed areas to support maintenance activities;
- Grading and clearing for temporary staging and stockpile areas;
- Ground-disturbing activities to remove accumulated sediment;
- Fill and/or dredge activities in jurisdictional resources and encroachment into wetland buffers;
- Human incursion into sensitive habitats;
- Mortality of sensitive wildlife species from vehicular collision; and
- Destruction or abandonment of nests.

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

Lands containing Tier I, II, IIIA, and IIIB habitats (Table 3 from the SDBG) and all wetlands (Tables 2A and 2B from the SDBG) are considered sensitive and declining habitats. As such, impacts to these resources are considered significant, with two exceptions (City of San Diego 2018):

- a. Total project (i.e., facility group FMP) upland impacts less than 0.10 acre is not considered significant and do not require mitigation.
- b. Project (i.e., facility group FMP) impacts to non-native grasslands totaling less than 1.0 acres that are completely surrounded by existing urban developments are not considered significant and do not require mitigation.
- c. Total project wetland impacts (i.e., facility group FMP) less than 0.01 acre are not considered significant and do not require mitigation. This does NOT apply to vernal pools, road pools supporting listed fairy shrimp, or wetlands within the COZ.
- d. Mitigation is not required for impacts to non-native grassland habitat when impacted for the purpose of wetland or other native habitat creation.
- e. Habitat mitigation is not required for impacts to manufactured slopes or areas that have been planted with native species for the purpose of erosion control. In order to qualify for this exception, substantiation of previous permits and mitigation must be provided in the facility group FMP. This does not apply to noise or wildlife avoidance mitigation requirements, in described in Appendix I of the SDBG.
- f. Removal/control of non-native plants is not considered to constitute a significant habitat impact for which compensatory habitat acquisition, preservation, or creation for the area impacted is required. However, mitigation for indirect impacts such as erosion control or off-site infestation by non-native species may still be required.

Lands designated as Tier IV are not considered to have significant habitat value, and impacts to these areas would not be considered significant. Additionally, lands determined to be non-jurisdictional areas of storm drain infrastructure (e.g., basin or ditch constructed in historic uplands) are considered “artificially created wetlands in historically non-wetland areas” in accordance with the SDBG and, therefore, impacts to these areas would not be considered significant (City of San Diego 2018).

Project wetland impacts greater than 0.01 acre outside the COZ and all wetland impacts within the COZ are considered significant. The only exceptions to this is for wetland areas dominated by non-native, invasive plant species. Examples of the exception include disturbed wetlands dominated by invasive plant species, such as giant reed or Mexican fan palm. Maintenance of drainage facilities

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

that result in the loss of non-native, invasive species are not significant and the impacts do not require compensatory mitigation, according to Appendix I of the SDBG, which states, “(f) Removal/control of non-native plants is not considered a significant habitat impact for which compensatory habitat acquisition, preservation, or creation for the area impacted is required. Mitigation for indirect impacts such as erosion control or off-site infestation by non-native species may be needed.” EPs included as part of the MWMP would minimize potential erosion and off-site invasive infestation. In addition, while the proposed activity has some adverse effects (e.g., repeated vegetation/sediment removal within a wetland), it also provides a benefit to the aquatic resource by removing invasive species that, if not removed, would likely further degrade adjacent and downstream native habitats. For unvegetated concrete-lined channels, while this land cover does meet the technical definition of a disturbed wetland under the City’s SDBG and may be regulated as jurisdictional waters, maintenance would not result in a loss of functions or a change in wetland area, therefore, although still significant, the impact would not require mitigation. This is because maintenance of drainage facilities is distinguished from other types of “development” where permanent wetland impacts consist of filling the wetland and replacing the open drainage conveyance with a piped conveyance system (USACE 2017). Whereas typical development results in the permanent loss of the open drainage conveyance system and therefore a loss of some function (even if limited in the case of a disturbed wetland) and City wetland area, maintenance within unvegetated concrete-lined areas would not result in a loss of function or wetland area and does not require compensatory mitigation.

In addition to the thresholds described above, maintenance of storm water facilities are a particularly unique type of recurring impact where habitat conditions may change as a result of prior maintenance. While impacts from maintenance may be considered significant, if documentation of prior approvals can be provided and compensatory mitigation provided under those approvals has been implemented, no additional mitigation would be required (i.e., one-time mitigation for permanent impacts of maintenance). This is consistent with regulatory policy and permits issued for recurring maintenance. As stated in the current USACE Nationwide Permit 31 for maintenance of existing flood control facilities, “the district engineer will determine any required mitigation one-time only for impacts associated with maintenance work while the maintenance baseline is approved. Once the one-time mitigation described above has been completed, or a determination made that mitigation is not required, no further mitigation will be required for maintenance activities within the maintenance baseline” (USACE 2017). Review of prior approvals and compensatory mitigation implementation is discussed in more detail in Section 5 and Appendix F, Summary of Compensatory Mitigation Sites.

Table 4-1 provides a summary of potential direct impacts to vegetation communities and jurisdictional resources and determinations of significance in accordance with the SDBG (City of San Diego 2018).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 4-1**  
**Significance of Impacts to Vegetation Communities and Jurisdictional Resources**

Resource Type	Impact Threshold <sup>1</sup>	Significance of Impact
Native Uplands (Tier I, II, IIIA, or IIIB)	Less than 0.10 acre	Not significant
	0.10 acre or greater	Significant, requires mitigation
Non-Native Grassland (Tier IIIB)	Less than 1.0 acre in an urban setting	Not significant
	1.0 acre or greater in an urban setting	Significant, requires mitigation
Jurisdictional Waters	Less than 0.01 acre outside of the Coastal Overlay Zone	Not significant
	0.01 acre or greater outside of the Coastal Overlay Zone; or any impacts within the Coastal Overlay Zone	Significant, requires mitigation
	Concrete-lined facilities that do not support vegetation	Significant, does not require mitigation
	Earthen-bottom facilities that do not support vegetation (e.g., natural flood channel, open water)	Significant, requires mitigation (but maintenance area may be eligible for 1:1 enhancement credit)
	Non-native, invasive-species dominated communities	Not significant
Previously Permitted Maintenance Areas	See above	Impact thresholds above apply, but prior approvals/mitigation for previous impacts may be considered adequate such that no additional mitigation would be required.

**Notes:**

<sup>1</sup> Thresholds are applied per facility group to determine significance of direct impact. A separate cumulative impact analysis is also included in Section 4.12.

Impacts to individual sensitive species, aside from impacts to sensitive habitat, may also be considered significant based on the rarity and extent of impacts. In general, conformance with the MSCP Subarea Plan, including provisions to provide habitat mitigation at required ratios, would reduce impacts to sensitive species to less than significant. The exceptions to this are impacts to Narrow Endemic Covered Species and non-Covered Species that are state-listed or federally listed

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

and/or have a California Rare Plant Rank (CRPR) of 1B.1, 1B.2, 2B.1, or 2B.2. For impacts to Narrow Endemic Covered Species or state-listed or federally listed species, species-specific mitigation is required on a case-by-case basis to reduce impacts to less than significant. As stated in the SDBG, "it is expected that the majority of CEQA sensitive species not covered by the MSCP will be adequately mitigated through the habitat based mitigation." Dudek evaluated sensitive species that, prior to completion of focused surveys, would have a moderate or high potential to occur within or adjacent to proposed maintenance impacts and determined, based on life history and distribution of each species, whether habitat-based mitigation would be adequate to reduce impacts to less than significant (Tables 4-2a and 4-2b). In addition to determinations made in the SDBG for MSCP Covered Species, including Narrow Endemics, Dudek determined that non-Covered plant species with a CRPR of 1B.1 or 1B.2, or state- or federally listed would potentially require species-specific mitigation if impacts are unavoidable. Plants with a CRPR of 2B.1 or 2B.2 are defined as "fairly threatened in California, but more common elsewhere." Dudek's review of these species confirmed that habitat mitigation measures (e.g., habitat restoration or land conservation) would reduce impacts to less than significant, because habitat-based mitigation is likely to support habitat for these species.

Impacts to plant species ranked CRPR 4 would not be considered significant since any populations identified on site would not represent a significant percentage of the population in terms of the ability for the species to persist (i.e., CRPR 4 species are not considered "rare" from a statewide perspective). Similarly, impacts to wildlife species that are only Watch List status per CDFW are not considered significant because any populations identified on site would not represent a significant percentage of the population in terms of the ability for the species to persist.

**Table 4-2a**  
**Sensitive Plant Species by Mitigation Type**

Scientific Name	Common Name	Status (Federal/State/CRPR/ MSCP) <sup>1</sup>
<i>Significant, Habitat-Based Mitigation</i>		
<i>Acmispon prostratus</i>	Nuttall's acmispon	None/None/1B.1/Covered
<i>Adolphia californica</i>	California adolphia	None/None/2B.1/None
<i>Ambrosia chenopodiifolia</i>	San Diego bur-sage	None/None/2B.1/None
<i>Ambrosia monogyra</i>	singlewhorl burrobrush	None/None/2B.2/None
<i>Bergerocactus emoryi</i>	golden-spined cereus	None/None/2B.2/None
<i>Bloomeria clevelandii</i>	San Diego goldenstar	None/None/1B.1/Covered
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	FT/CE/1B.1/Covered

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-2a**  
**Sensitive Plant Species by Mitigation Type**

Scientific Name	Common Name	Status (Federal/State/CRPR/ MSCP) <sup>1</sup>
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea	None/None/1B.1/Covered
<i>Ceanothus verrucosus</i>	wart-stemmed ceanothus	None/None/2B.2/Covered
<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i>	Del Mar Mesa sand aster	None/None/1B.1/Covered
<i>Dicranostegia orcuttiana</i>	Orcutt's bird's-beak	None/None/2B.1/Covered
<i>Dudleya attenuata</i> ssp. <i>attenuate</i>	Orcutt's dudleya	None/None/2B.1/None
<i>Dudleya viscida</i>	sticky dudleya	None/None/1B.2/Covered
<i>Ericameria palmeri</i> var. <i>palmeri</i>	Palmer's goldenbush	None/None/1B.1/Covered
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button-celery	FE/CE/1B.1/Covered
<i>Euphorbia misera</i>	cliff spurge	None/None/2B.2/None
<i>Ferocactus viridescens</i>	San Diego barrel cactus	None/None/2B.1/Covered
<i>Iva hayesiana</i>	San Diego marsh-elder	None/None/2B.2/None
<i>Leptosyne maritima</i>	sea dahlia	None/None/2B.2/None
<i>Monardella viminea</i>	willowy monardella	FE/CE/1B.1/Covered
<i>Nama stenocarpa</i>	mud nama	None/None/2B.2/None
<i>Pinus torreyana</i> ssp. <i>torreyana</i>	Torrey pine	None/None/1B.2/Covered
<i>Pseudognaphalium leucocephalum</i>	white rabbit-tobacco	None/None/2B.2/None
<i>Rosa minutifolia</i>	small-leaved rose	None/CE/2B.1/Covered
<i>Salvia munzii</i>	Munz's sage	None/None/2B.2/None
<i>Senecio aphanactis</i>	chaparral ragwort	None/None/2B.2/None
<i>Significant, Species-Specific Mitigation</i>		
<i>Acanthomintha ilicifolia</i>	San Diego thorn-mint	FT/CE/1B.1/Narrow Endemic
<i>Ambrosia pumila</i>	San Diego ambrosia	FE/None/1B.1/Narrow Endemic
<i>Aphanisma blitoides</i>	aphanisma	None/None/1B.2/Narrow Endemic
<i>Atriplex coulteri</i>	Coulter's saltbush	None/None/1B.2/None
<i>Atriplex pacifica</i>	South Coast saltscale	None/None/1B.2/None
<i>California macrophylla</i>	round-leaved filaree	None/None/1B.2/None
<i>Centromadia parryi</i> ssp. <i>australis</i>	southern tarplant	None/None/1B.1/None
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	None/None/1B.1/None

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-2a**  
**Sensitive Plant Species by Mitigation Type**

Scientific Name	Common Name	Status (Federal/State/CRPR/ MSCP) <sup>1</sup>
<i>Chorizanthe orcuttiana</i>	Orcutt's spineflower	FE/CE/1B.1/None
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	long-spined spineflower	None/None/1B.2/None
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	summer holly	None/None/1B.2/None
<i>Corethrogyne filaginifolia</i> var. <i>incana</i>	San Diego sand aster	None/None/1B.1/None
<i>Cylindropuntia californica</i> var. <i>californica</i>	snake cholla	None/None/1B.1/Narrow Endemic
<i>Deinandra conjugens</i>	Otay tarplant	FT/CE/1B.1/Narrow Endemic
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	Blochman's dudleya	None/None/1B.1/None
<i>Dudleya variegata</i>	variegated dudleya	None/None/1B.2/Narrow Endemic
<i>Geothallus tuberosus</i>	Campbell's liverwort	None/None/1B.1/None
<i>Hazardia orcuttii</i>	Orcutt's hazardia	None/CT/1B.1/None
<i>Heterotheca sessiliflora</i> ssp. <i>sessiliflora</i>	beach goldenaster	None/None/1B.1/None
<i>Isocoma menziesii</i> var. <i>decumbens</i>	decumbent goldenbush	None/None/1B.2/None
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields	None/None/1B.1/None
<i>Monardella stoneana</i>	Jennifer's monardella	None/None/1B.2/None
<i>Navarretia fossalis</i>	spreading navarretia	FT/None/1B.1/Narrow Endemic
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	None/None/1B.1/None
<i>Phacelia stellaris</i>	Brand's star phacelia	None/None/1B.1/None
<i>Quercus dumosa</i>	Nuttall's scrub oak	None/None/1B.1/None
<i>Sphaerocarpos drewei</i>	bottle liverwort	None/None/1B.1/None
<i>Triquetrella californica</i>	coastal triquetrella	None/None/1B.2/None

<sup>1</sup> Status Legend:

FE: Federally listed as endangered

FT: Federally listed as threatened

CE: State listed as endangered

CT: State listed as threatened

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere

CRPR 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

.1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2 Moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat)

**Table 4-2b**  
**Sensitive Wildlife Species by Mitigation Type**

Scientific Name	Common Name	Status (Federal/State/San Diego MSCP Subarea Plan) <sup>1</sup>
<i>Significant, Species-Specific Mitigation</i>		
<i>Rallus obsoletus levipes</i>	Ridgway's rail	FE/SE, FP/Covered
<i>Sternula antillarum browni</i>	California least tern	FE/SE, FP/Covered
<i>Empidonax traillii extimus</i> (nesting)	southwestern willow flycatcher	FT/SE/Covered
<i>Vireo bellii pusillus</i> (nesting)	least Bell's vireo	FT/SE/Covered
<i>Poliophtila californica californica</i>	coastal California gnatcatcher	FT/SSC/Covered
<i>Elanus leucurus</i> (nesting)	white-tailed kite	None/FP/None
<i>Passerculus sandwichensis beldingi</i>	Belding's savannah sparrow	None/SE/Covered
<i>Significant, Habitat-Based Mitigation</i>		
<i>Phrynosoma blainvillii</i>	Blainville's horned lizard	None/SSC/Covered
<i>Aspidoscelis tigris stejnegeri</i>	San Diegan tiger whiptail	None/SSC/None
<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	None/SSC/None
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	None/SSC/None
<i>Crotalus ruber</i>	red diamond rattlesnake	None/SSC/None
<i>Icteria virens</i> (nesting)	yellow-breasted chat	None/SSC/None
<i>Setophaga petechia</i> (nesting)	yellow warbler	None/SSC/None
<i>Spea hammondi</i>	western spadefoot	None/SSC/None
<i>Thamnophis hammondi</i>	two-striped gartersnake	None/SSC/None
<i>Accipiter cooperii</i> (nesting)	Cooper's hawk	None/WL/Covered
<i>Aspidoscelis hyperythra</i>	orangethroat whiptail	None/WL/Covered
<i>Odocoileus hemionus</i>	mule deer	None/None/Covered
<i>Puma concolor</i>	cougar	None/None/Covered
<i>Sialia mexicana</i>	western bluebird	None/None/Covered

<sup>1</sup> Status Legend:

FE: Federally Endangered

FT: Federally Threatened

SSC: California Species of Special Concern

FP: California Fully Protected Species

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

WL: California Watch List Species

SE: State Endangered

## 4.1.2 INDIRECT IMPACTS

Indirect impacts are reasonably foreseeable effects caused by project implementation on remaining or adjacent biological resources outside the direct maintenance area, such as downstream effects. Indirect impacts include short-term effects immediately related to maintenance activities and long-term or chronic effects occurring after maintenance or as a result of repeat maintenance. Indirect impacts that would result in loss of area or function of wetlands, Tier I-III uplands, or sensitive species may be considered significant.

For typical development, the City applies a 100-foot-wide avoidance buffer surrounding wetland resources to ensure the value and function of the wetland is maintained (City of San Diego 2018). Since the majority of the MWMP facilities necessarily occur within wetlands, impacts to the wetland buffers would be unavoidable and are not considered significant both within and outside of the COZ. To the extent feasible, FMPs are designed to minimize the extent of maintenance activities within and adjacent to wetlands, including the number of access route, the size of staging areas, and other variables. In addition, the frequency and duration of maintenance is minimized and maintenance is conducted based on a demonstrated effectiveness to reduce flood risk to life and property. These measures ensure that impacts to wetland buffer are minimized to the maximum extent practicable and are, therefore, considered less than significant.

Significant indirect impacts to breeding birds may occur if maintenance produces noise or other types of disturbance in proximity to active nests, potentially resulting in abandonment of nests or other breeding failure. The SDBG (City of San Diego 2018) provide required active nest buffers and breeding season dates for Covered Species, including raptors. For facilities that are located adjacent to the City's MHPA, indirect impacts could occur from maintenance. Section 4.13 describes the MWMP's consistency with the City's MSCP and the MSCP Land Use Adjacency Guidelines that make it a compatible use within and adjacent to the MHPA. Compatibility with the Land Use Adjacency Guidelines would reduce indirect impacts to the MHPA from maintenance activities through implementation of conditions related to drainage, noise, toxic material, and others (Table 4-82a).

## 4.1.3 ENVIRONMENTAL PROTOCOLS AND MITIGATION MEASURES

The remainder of Section 4 identifies potential significant impacts to biological resources with consideration of Environmental Protocols (EPs) that are proposed as part of the MWMP Appendix C and listed in Section 5 of this report. Potentially significant impacts to biological resources, absent the implementation of mitigation measures or EPs, are identified and numbered: direct and indirect

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

impacts are identified as BIO-#. A summary is provided in Table 4-3 and includes a list of the threshold of significance relevant to each identified potentially significant impact.

**Table 4-3**  
**Summary of Potentially Significant Impacts and Relevant CEQA Threshold of Significance**

Potentially Significant Impact	Description	CEQA Threshold Issue No.
<i>Direct Impacts</i>		
BIO-1a	Permanent loss of wetlands	Issue # 3
BIO-1b	Permanent loss of uplands	Issue # 2
BIO-2	Unintended loss of sensitive vegetation communities	Issue # 2 and # 3
BIO-3	Direct impacts to sensitive plant species	Issue # 1
BIO-4	Direct and indirect impacts to nesting birds	Issue # 4
BIO-5	Direct and indirect impacts to least Bell's vireo, Ridgway's rail, California least tern, or southwestern willow flycatcher	Issue # 1
BIO-6	Direct and indirect impacts to raptors	Issue # 1
<i>Indirect Impacts</i>		
BIO-7	Indirect impacts (including noise) affecting California gnatcatcher	Issue # 1
BIO-8 and EP-BIO-3a-c	Indirect impacts from maintenance activities	Issue # 1 and # 6
EP-BIO-4	Indirect impacts from non-native invasive species	Issue # 1 and # 6
EP-BIO-5	Indirect impacts to sensitive plant species	Issue # 1 and # 6
EP-BIO-6	Indirect impacts from shot-hole borer	Issue # 1 and # 6
EP-LU-1; EP-LU-2; EP-WQ-1; and MM-WQ-1	Indirect impacts to the MHPA from drainage, toxic materials, lighting, noise, public access, domestic animal predation, invasives, and grading	Issues # 5, # 6, and # 7

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

These impacts are then discussed in Section 5 with mitigation measures and EPs for direct and indirect impacts identified as MM-BIO-[#]. For sake of clarity, EPs and mitigation measures are all listed in Section 5.

The tables below providing acreage of wetland/jurisdictional resource and upland impacts may include one or more of the following footnotes: (1) impacts are considered significant, absent mitigation, (2) impacts are considered significant, but would not require mitigation (3) impacts are not considered significant and no mitigation is required, (4) or impacts in the facility group are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and no mitigation is required. For sake of consistency and ease of use, the numbering of these footnotes is consistent in all tables, regardless of the number of footnotes used in any one particular table. Determinations of significance follow the thresholds described in Section 4.1.1.

## **4.2 DIRECT IMPACTS IN THE SAN DIEGUITO WATERSHED**

Direct impacts from proposed maintenance within the San Dieguito Watershed would occur at two facility groups within three individual facility segments, as described in Sections 4.2.1 through 4.2.4. None of the proposed maintenance impacts in this watershed would occur within the MHPA or COZ.

### **4.2.1 GREEN VALLEY CREEK – POMERADO FACILITY GROUP**

#### **Direct Impacts to Vegetation Communities and Jurisdictional Resources**

There are two facility segments proposed for maintenance within the Green Valley Creek – Pomerado facility group: Pomerado (Segment 1) and Pomerado (Segment 2). Proposed maintenance within the Pomerado (Segment 1) and Pomerado (Segment 2) facility segments would result in permanent direct impacts to eight vegetation communities and/or land cover types (Figures 6-1 through 6-4). Maintenance impacts would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources include freshwater marsh (concrete-lined), riparian forest (southern riparian forest; concrete-lined), disturbed wetland (concrete-lined), and developed concrete-lined channel and would be considered significant, absent mitigation (**BIO-1.1a** and **BIO-2**) (Table 4-4a; Figures 7-1 and 7-4). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV communities only (Table 4-4b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

The Green Valley Creek – Pomerado facility group is not located within the MHPA designated lands; therefore, there are no direct impacts to the MHPA designated lands as a result of maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-4a**  
**Wetland Vegetation Community and Jurisdictional Resource Impacts in the**  
**Green Valley Creek – Pomerado Facility Group**

MWMP Mapping Vegetation Community, (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			<i>Pomerado_1</i> (Acres)	<i>Pomerado_2</i> (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-lined) <sup>2</sup>	A / R / C	1.47	1.87
Disturbed Wetland (concrete-lined) (11200)	Disturbed Wetland <sup>1</sup>	A / R / C	0.09	0.06
Freshwater Marsh (concrete-lined) (52400)	Freshwater Marsh <sup>1</sup>	A / R / C	–	0.06
Riparian Forest (Southern Riparian Forest; concrete-lined) (61300)	Riparian Forest or Woodland <sup>1</sup>	A / R / C	0.04	–
<b>Total</b>			<b>1.60</b>	<b>1.99</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

1 Impacts are considered significant, absent mitigation (BIO-1.1a and BIO-2)

2 Impacts are considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-4b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Green Valley Creek – Pomerado Facility Group**

MWMP Mapping Vegetation Community, (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Pomerado_1 (Acres)	Pomerado_2 (Acres)
Non-Native Upland Vegetation Communities				
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	<0.01	<0.01
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.15	–
Land Covers				
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	–	0.07
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.01	0.75
Total			0.16	0.82

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.2.2 GREEN VALLEY CREEK – PASEO DEL VERANO FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment, Paseo del Verano (Segment 1), proposed for maintenance within the Green Valley Creek – Paseo del Verano facility group. Proposed maintenance within this facility segment would result in permanent direct impacts to seven vegetation communities and/or land cover types (Figures 6-5). Maintenance impacts in this facility segment would result from a skid-steer and loader working within the basin and a gradall/excavator stationed outside of the basin limits reaching into the basin to remove accumulated sediment and vegetation. Impacts from loading and access at this segment would be limited to developed or disturbed land and, therefore, would not result in a significant impact to vegetation communities or jurisdictional resources.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Permanent impacts to wetlands and jurisdictional resources include riparian forest (southern willow forest), riparian forest (southern willow scrub; concrete-lined), ornamental planting (concrete-lined), and eucalyptus woodland (concrete-lined) and would be considered significant absent mitigation (**BIO-1.1a** and **BIO-2**) (Table 4-5a; Figure 7-5).

Permanent direct impacts to uplands are to Tier IV communities only (Table 4-5b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Green Valley Creek – Paseo del Verano facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA designated lands from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ at this facility segment.

**Table 4-5a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Green Valley Creek – Paseo del Verano Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Paseo del Verano_1</i> (Acres)
Eucalyptus Woodland (concrete-lined) (79100)	Eucalyptus woodland <sup>3</sup>	A / R / C	0.06
Ornamental Plantings (concrete-lined) (11000)	Ornamental <sup>3</sup>	A / R / C	0.01
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland <sup>1</sup>	C	0.06
Riparian Forest (Southern Willow Forest, concrete-lined) (61320)	Riparian Forest or Woodland <sup>1</sup>	A / R / C	0.12
<b>Total</b>			<b>0.25</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional  
Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.1a and BIO-2).

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-5b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Green Valley Creek – Paseo del Verano Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			Paseo del Verano_1 (Acres)
Non-Native Upland Vegetation Communities			
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	0.03
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	<0.01
Land Covers			
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.04
Total			0.07

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.2.3 DIRECT IMPACTS TO SENSITIVE PLANT SPECIES IN THE SAN DIEGUITO WATERSHED

In the San Dieguito watershed, no sensitive plant species were observed during the 2019 focused plant surveys (or during previous biological surveys), or have moderate or high potential to occur within suitable habitat (see Appendix D). Therefore, there are no potential impacts and mitigation is not required.

## 4.2.4 DIRECT IMPACTS TO SENSITIVE WILDLIFE IN THE SAN DIEGUITO WATERSHED

In the San Dieguito watershed, there were no sensitive wildlife species that were observed during focused surveys or that had a high potential to occur in suitable habitat within the limits of MWMP facility segment maintenance areas. Six sensitive wildlife species were identified as having moderate potential to occur within the San Dieguito watershed study area (see Appendix E). All six sensitive wildlife species have moderate potential to occur within the two facility segments within the Green Valley Creek – Pomerado facility group, Pomerado (Segment 1) and Pomerado (Segment 2), and the facility segment within the Green Valley Creek – Paseo del Verano facility group, Paseo del Verano

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

(Segment 1). Impacts to these species would be considered significant absent mitigation (**BIO-1.1a**, **BIO-4**, and **BIO-6**).

## **4.3 DIRECT IMPACTS IN THE PEÑASQUITOS WATERSHED**

Direct impacts from proposed maintenance within the Peñasquitos watershed would occur at ten facility groups and within 12 individual facilities, including one basin and one structure, as described in Sections 4.3.1 through 4.3.12. A portion of these maintenance impacts would occur within the MHPA at three facility groups in five facility segments. Six facility groups in this watershed (eight segments) are within the COZ and would be impacted by maintenance activities.

### **4.3.1 PEÑASQUITOS LAGOON – INDUSTRIAL FACILITY GROUP**

#### **Direct Impacts to Vegetation Communities and Jurisdictional Resources**

Two facility segments are proposed for maintenance within the Peñasquitos Lagoon – Industrial facility group: Industrial (Segment 1) and Industrial (Segment 2). Proposed maintenance within these facility segments would result in permanent direct impacts to eight vegetation communities and/or land cover types (Figure 6-6). Maintenance impacts in these facility segments would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities. Impacts from loading and access at this segment would be limited to developed or disturbed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include freshwater marsh (concrete-lined), riparian forest (southern willow forest), riparian forest (southern willow forest; concrete-lined), and developed concrete-lined channel and would be considered significant, absent mitigation (**BIO-1.2a** and **BIO-2**) (Table 4-7a; Figure 7-6). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV communities only (Table 4-7b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Peñasquitos Lagoon – Industrial facility group is partially located within the MHPA boundary; however, there would be no direct impacts to the MHPA designated lands from maintenance activities. There would be direct impacts to wetlands within the COZ within the Industrial (Segments 1 and 2) facility segments. The portion of the Industrial (Segment 2) facility segment east of Sorrento Valley Road has been maintained under prior approvals, and all permanent impacts proposed at the

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Industrial (Segment 2) facility segment that are within the previously permitted maintenance area would not require additional mitigation under the MWMP (Appendix F).

**Table 4-7a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Peñasquitos Lagoon – Industrial Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			<i>Industrial_1</i> (Acres)	<i>Industrial_2</i> (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-lined) <sup>2</sup>	A / R / C / CC	0.01	0.08
Freshwater Marsh (concrete-lined) (52400)	Freshwater Marsh <sup>1</sup>	A / R / C / CC	<0.01	0.02
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland <sup>1</sup>	A / R / C / CC	0.02	–
Riparian Forest (Southern Willow Forest; Concrete-lined) (61320)	Riparian Forest or Woodland <sup>1</sup>	A / R / C / CC	–	0.04
<b>Total</b>			<b>0.03</b>	<b>0.14</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.2a and BIO-2).

<sup>2</sup> Impacts are considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-7b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Peñasquitos Lagoon – Industrial Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Industrial_1 (Acres)	Industrial_2 (Acres)
Non-Native Upland Vegetation Communities				
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	–	<0.01
Land Covers				
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	<0.01	–
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.01	0.20
Total			0.01	0.20

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.3.2 PEÑASQUITOS LAGOON – TRIPP FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment, Tripp (Segment 1), proposed for maintenance within the Peñasquitos Lagoon – Tripp facility group. Proposed maintenance of the Tripp facility segment would result in permanent direct impacts to seven vegetation communities and/or land cover types (Figure 6-7). Maintenance impacts would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities. Impacts from loading and access at this segment would be limited to developed or disturbed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include freshwater marsh (concrete-lined), riparian scrub (southern willow scrub; concrete-lined), and developed concrete-lined channel and would be considered significant, absent mitigation (**BIO-1.2a** and **BIO-2**) (Table 4-8a; Figure 7-7). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-8b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

The Peñasquitos Lagoon – Tripp facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA designated lands from maintenance activities. However, direct impacts to wetlands within the COZ would occur within the Tripp (Segment 1) facility segment. Any permanent impacts proposed at the Tripp (Segment 1) facility segment that are within the previously permitted maintenance area for this channel would not require additional mitigation under the MWMP (Appendix F).

**Table 4-8a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Peñasquitos Lagoon – Tripp Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Tripp_1 (Acres)</i>
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-lined) <sup>2</sup>	A / R / C / CC	0.74
Freshwater Marsh (concrete- lined) (52400)	Freshwater Marsh <sup>1</sup>	A / R / C / CC	0.17
Riparian Scrub (Southern Willow Scrub; Concrete- lined) (63320)	Riparian Scrub <sup>1</sup>	A / R / C / CC	0.01
<b>Total</b>			<b>0.92</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.2a and BIO-2).

<sup>2</sup> Impacts are considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-8b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Peñasquitos Lagoon – Tripp Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			Tripp_1 (Acres)
Non-Native Upland Vegetation Communities			
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.13
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.12
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	1.45
Total			1.70

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.3.3 LOS PEÑASQUITOS CANYON CREEK – BLACK MOUNTAIN FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are two facility segments proposed for maintenance within the Los Peñasquitos Canyon Creek – Black Mountain facility group: Black Mountain (Segment 1) and Black Mountain (Segment 2). Proposed maintenance within these facility segments would result in permanent direct impacts to 12 vegetation communities and/or land cover types (Figures 6-8 and 6-9). Maintenance impacts within these facility segments would result from a skid-steer and track-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources include freshwater marsh, riparian scrub (mulefat scrub), riparian scrub, riparian forest (southern willow forest), disturbed wetland (palm-dominated), natural flood channel, and developed concrete-lined channel and would be considered significant (except for the disturbed wetland [palm-dominated]), absent mitigation (**BIO-1.2a**, and **BIO-2**) (Table 4-9a; Figures 7-8 and 7-9). Maintenance impacts to the disturbed wetland [palm-dominated] and developed concrete-lined channel would not require mitigation.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Permanent direct impacts to sensitive vegetation communities (Tier I–IIIB) would be below the 0.10-acre threshold described in the SDBG; therefore, the impacts would not be considered significant and no mitigation would be required (Table 4-9b). Impacts to Tier IV communities would not be significant and would not require mitigation (City of San Diego 2018).

Maintenance activities would impact lands designated as part of the MHPA; however, impacts would be from short-term access activities and would be located within an existing roadway (urban/developed), and would therefore be less than significant. There would be no direct impacts to wetlands within the COZ in any of the segments in this facility group.

**Table 4-9a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Los Peñasquitos Canyon Creek – Black Mountain Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			Black Mountain_1 (Acres)	Black Mountain_2 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.02	–
Disturbed Wetland (palm-dominated) (11200)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.01	–
Freshwater Marsh (52400)	Freshwater Marsh <sup>1</sup>	A / R / C	0.18	0.25
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.10	0.12
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland <sup>1</sup>	C	0.02	–
		A / R / C	–	0.84
Riparian Scrub (63000)	Riparian Scrub <sup>1</sup>	A / R / C	0.03	–
Riparian Scrub (Mulefat Scrub) (63310)	Riparian Scrub <sup>1</sup>	C	<0.01	–
		A / R / C	–	0.03
Total			0.36	1.24

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.2a and BIO-2).

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

**Table 4-9b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Los Peñasquitos Canyon Creek – Black Mountain Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Black Mountain_1 (Acres)	Black Mountain_2 (Acres)
Sensitive Vegetation Communities				
Coastal Sage Scrub (Baccharis- dominated) (32530)	Coastal Sage Scrub <sup>4</sup>	II	-	0.02
Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub <sup>4</sup>	II	0.06	-
Sensitive Vegetation Communities Subtotal			0.06	0.02
Non-Native Upland Vegetation Communities				
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	0.04	-
Land Covers				
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.02	0.02
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.51	0.36
Total			0.63	0.40

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and no mitigation is required.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 4.3.4 LOS PEÑASQUITOS CANYON CREEK – 5-805 FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility basin, 5-805 (Segment 1), proposed for maintenance within the Los Peñasquitos Canyon Creek – 5-805 Facility Group. Proposed maintenance of this structure would result in permanent direct impacts to eight vegetation communities and/or land cover types (Figure 6-10). Maintenance impacts would result from a track-steer and bulldozer working within the channel and gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetland and jurisdictional resources include coastal salt marsh, riparian forest (southern willow forest), riparian scrub (mulefat scrub), tamarisk thickets, and developed concrete-lined channel and would be considered significant, absent mitigation (**BIO-1.2a** and **BIO-2**) (Table 4-10a; Figure 7-10). Maintenance impacts to the developed concrete-lined channel would not require mitigation.

Permanent direct impacts to sensitive vegetation communities (Tier I–IIIB) would be below the 0.10-acre threshold described in the SDBG; therefore, the impacts would not be considered significant and no mitigation would be required (Table 4-10b). Impacts to Tier IV communities would not be significant and would not require mitigation (City of San Diego 2018).

The basin facility is not located within MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. The facility basin is within the COZ and there would be direct impacts to wetlands within the COZ at this location. The 5-805 (Segment 1) facility basin was originally constructed as a self-mitigating, drainage improvement project that resulted in a net gain of wetland functions and services. Maintenance of the basin was included in the original project description and is required to maintain the functions and services of the constructed wetlands, therefore, maintenance within the original project footprint would not require additional mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-10a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Los Peñasquitos Canyon Creek – 5-805 Basin Facility Group**

General Vegetation Type (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			5-805_1 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- lined) <sup>2</sup>	A / R / C / CC	<0.01
Coastal Salt Marsh (52200)	Coastal Salt Marsh <sup>1</sup>	A / R / C / CC	0.92
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland <sup>1</sup>	A / R / C / CC	0.07
Riparian Scrub (Mulefat Scrub) (63310)	Riparian Scrub <sup>1</sup>	C / CC	0.04
Tamarisk Scrub (63810)	Riparian Scrub (Invasive) <sup>3</sup>	C / CC	0.12
<b>Total</b>			<b>1.16</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.2a and BIO-2).

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-10b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Los Peñasquitos Canyon Creek – 5-805 Basin Facility Group**

General Vegetation Type (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			Los Peñasquitos_1 (Acres)
Sensitive Vegetation Communities			
Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub <sup>4</sup>	II	0.05
Disturbed Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub <sup>4</sup>	II	<0.01
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.66
Total			0.71

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

## 4.3.5 SOLEDAD CANYON CREEK – SORRENTO FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are two facility segments proposed for maintenance within the Soledad Canyon Creek – Sorrento facility group: Roselle (Segment 1) and Roselle (Segment 2). Maintenance of the Roselle (Segment 1) and Roselle (Segment 2) facility segments would result in permanent direct impacts to eight vegetation communities and/or land cover types (Figures 6-11 through 6-13). Maintenance impacts within these facility segments would result from a gradall/excavator stationed outside of the channel limits reaching into the channel and a skid-steer, loader, gradall/excavator and dump trucks working within the channel limits to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources include riparian forest (southern willow forest), riparian scrub (southern willow scrub), disturbed wetland (Arundo-dominated), natural flood channel, and developed concrete-lined channel and would be considered significant (except for the disturbed wetland [Arundo-dominated] communities), absent mitigation (**BIO-1.2a** and **BIO-2**) (Table

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

4-11a; Figures 7-11 through 7-13). Maintenance impacts to disturbed wetland (Arundo-dominated) and developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV communities only (Table 4-11b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Soledad Canyon Creek – Sorrento facility group is partially located within the MHPA boundary; however, there would be no direct impacts to MHPA designated lands from maintenance activities. Direct impacts to wetlands would occur within the COZ in both facility segments in this facility group, Roselle (Segment 1) and Roselle (Segment 2). All permanent impacts proposed at these facility segments that are within a previously permitted maintenance area for these channels would not require additional mitigation under the MWMP (Appendix F).

**Table 4-11a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Soledad Canyon Creek – Sorrento Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			Roselle_1 (Acres)	Roselle_2 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C / CC	0.01	4.14
Disturbed Wetland (Arundo- dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C / CC	0.01	<0.01
Natural Flood Channel (64200)	Natural Flood Channel <sup>1,5</sup>	A / R / C / CC	0.05	0.01
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland <sup>1</sup>	A / R / C / CC	0.10	0.01
Riparian Scrub (Southern Willow Scrub) (63320)	Riparian Scrub <sup>1</sup>	A / R / C / CC	–	0.03
<b>Total</b>			<b>0.17</b>	<b>4.18</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.2a and BIO-2).

<sup>2</sup> Impacts are considered significant and would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

**Table 4-11b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Soledad Canyon Creek – Sorrento Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Roselle_1 (Acres)	Roselle_2 (Acres)
Non-Native Upland Vegetation Communities				
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	<0.01	–
Land Covers				
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.06	–
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.07	0.09
Total			0.13	0.09

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.3.6 CARROLL CANYON CREEK – CARROLL FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment, Carroll Canyon (Segment 1), proposed for maintenance within the Carroll Canyon Creek – Carroll facility group. Proposed maintenance of the Carroll Canyon (Segment 1) facility segment would result in permanent direct impacts to five vegetation communities and/or land cover types (Figure 6-14). Maintenance impacts would result from a Kubota tractor and loader working within the channel to perform maintenance activities.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Permanent impacts to wetlands and jurisdictional resources include disturbed riparian forest (southern riparian forest), and natural flood channel and would be considered significant absent mitigation (**BIO-1.2a** and **BIO-2**) (Table 4-12a; Figure 7-14).

Permanent direct impacts to uplands are to non-native grassland (Table 4-12b). However, impacts to non-native grassland is less than one acre in an urban area with little connectivity to other open space areas, and therefore the impact is not significant and does not require mitigation. Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

Maintenance activities would impact 0.04 acre of MHPA designated land within the Carroll Canyon Creek – Carroll facility group and are aligned to impact the minimum necessary area within the MHPA. There would be no direct impacts to jurisdictional resources within the COZ in this facility group. Any permanent impacts proposed at the Carroll Canyon (Segment 1) facility segment that are within the previously permitted maintenance area for this channel would not require additional mitigation under the MWMP (Appendix F).

**Table 4-12a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Carroll Canyon Creek – Carroll Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Carroll Canyon_1 (Acres)</i>
Disturbed Riparian Forest (Southern Riparian Forest) (61300)	Riparian Forest or Woodland <sup>1</sup>	C	<0.01
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.09
<b>Total</b>			<b>0.10</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.2a and BIO-2).

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-12b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Carroll Canyon Creek – Carroll Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			Carroll Canyon_1 (Acres)
Non-Native Upland Vegetation Communities			
Non-Native Grassland (42200)	Non-Native Grassland <sup>3</sup>	IIIB	0.01
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.04
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.24
Total			0.29

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.3.7 SOLEDAD CANYON CREEK – FLINTKOTE FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment, Flintkote (Segment 1), proposed for maintenance within the Soledad Canyon Creek – Flintkote facility group. Proposed maintenance within this facility segment would result in permanent direct impacts to three vegetation communities and/or land cover types (Figure 6-15). Maintenance impacts would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources include developed concrete-lined channel and would be considered significant (Table 4-13a; Figure 7-15). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV communities only (Table 4-13b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018). Any other direct impacts to sensitive vegetation communities from maintenance activities would be considered significant, absent mitigation (**BIO-2**).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

The Soledad Canyon Creek – Flintkote facility group is partially located within the MHPA boundary; however, there would be no direct impacts to the MHPA designated lands from maintenance activities. Direct impacts within the COZ would occur in the Flintkote (Segment 1) facility segment. Any permanent impacts proposed at the Flintkote (Segment 1) facility segment that are within the previously permitted maintenance area for this channel would not require additional mitigation under the MWMP (Appendix F).

**Table 4-13a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Soledad Canyon Creek – Flintkote Facility Group**

General Vegetation Type (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Flintkote_1</i> (Acres)
Developed Concrete-lined channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C / CC	0.53
<b>Total</b>			0.53

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>2</sup> Impacts are considered significant and would not require mitigation.

**Table 4-13b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Soledad Canyon Creek – Flintkote Facility Group**

General Vegetation Type (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			Flintkote_1 (Acres)
Non-Native Upland Vegetation Communities			
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.02

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-13b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Soledad Canyon Creek – Flintkote Facility Group**

General Vegetation Type (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			Flintkote_1 (Acres)
Land Covers			
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.73
Total			0.75

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.3.8 SOLEDAD CANYON CREEK – DUNHILL FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment, Dunhill (Segment 1), proposed for maintenance within the Soledad Canyon Creek – Dunhill facility group. Proposed maintenance within this facility segment would result in permanent direct impacts to five vegetation communities and/or land cover types (Figure 6-16). Maintenance impacts would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources include freshwater marsh, and disturbed wetland and would be considered significant absent mitigation (**BIO-1.2a** and **BIO-2**) (Table 4-14a; Figure 7-16).

Permanent impacts to uplands are to Tier IV communities only (Table 4-14b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Soledad Canyon Creek – Dunhill facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA designated lands from maintenance activities. However, direct impacts within the COZ would occur in the Dunhill (Segment 1) facility segment.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-14a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Soledad Canyon Creek – Dunhill Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Dunhill_1 (Acres)</i>
Disturbed Wetland (11200)	Disturbed Wetland <sup>1</sup>	A / R / C / CC	0.08
Freshwater Marsh (52400)	Freshwater Marsh <sup>1</sup>	A / R / C / CC	0.03
<b>Total</b>			<b>0.12</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.2a and BIO-2).

**Table 4-14b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Soledad Canyon Creek – Dunhill Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			Dunhill_1 (Acres)
Non-Native Upland Vegetation Communities			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.07
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	<0.01
Land Covers			
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.01
Total			0.08

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 4.3.9 CHICARITA CREEK – VIA SAN MARCO FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment, Via San Marco Segment (Segment 1), proposed for maintenance within the Chicarita Creek – Via San Marco facility group. Proposed maintenance within this facility segment would result in permanent direct impacts to four vegetation communities and/or land cover types (Figure 6-17). Maintenance impacts would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities. Impacts from loading and access at this segment would be limited to developed or disturbed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include developed concrete-lined channel and would be considered significant (Table 4-15a; Figure 7-17). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV communities only (Table 4-15b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018). Any other direct impacts to sensitive vegetation from maintenance activities would be considered significant, absent mitigation (**BIO-2**).

The Chicarita Creek – Via San Marco facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-15a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Chicarita Creek – Via San Marco Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Via San Marco_1</i> (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.20
<b>Total</b>			<b>0.20</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>2</sup> Impacts are considered significant and would not require mitigation.

**Table 4-15b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Chicarita Creek – Via San Marco Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			Via San Marco_1 (Acres)
Non-Native Upland Vegetation Communities			
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	<0.01 <sup>2</sup>
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.41 <sup>2</sup>
Land Covers			
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.15
Total			0.56

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.3.10 10450 SORRENTO VALLEY ROAD (HW04220) STRUCTURE

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

The 10450 Sorrento Valley Road (HW04220) structure consists of a concrete drainage inlet facility that conveys storm water flows under Sorrento Valley Road west toward Soledad Canyon Creek. Proposed maintenance of this structure would result in permanent direct impacts to three vegetation communities and/or land cover types (Figure 6-138). Maintenance impacts at this structure would result from hand crews digging and removing sediment and material that has accumulated within and above this inlet facility within the concrete ditch.

There would be no permanent impacts to wetlands or jurisdictional resources.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Permanent direct impacts to sensitive vegetation would include coastal sage scrub and would be below the 0.10-acre threshold described in the SDBG; therefore, the impacts would not be considered significant and no mitigation would be required (Table 4-16; Figure 7-134). Impacts to Tier IV communities would not be significant and would not require mitigation (City of San Diego 2018).

The facility is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. The structure is located within the COZ; however, there would be no direct impacts to wetlands at this location.

**Table 4-16**  
**Upland Vegetation Community and Land Cover Impacts at the**  
**10450 Sorrento Valley Road (HW04220) Structure**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name
			10405 Sorrento Valley Road (Acres)
Sensitive Vegetation Communities			
Coastal Sage Scrub (Baccharis- dominated) (32530)	Coastal Sage Scrub <sup>4</sup>	II	0.01
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.02
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	<0.01
Total			0.03

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

### 4.3.11 DIRECT IMPACTS TO SENSITIVE PLANT SPECIES IN THE PEÑASQUITOS WATERSHED

Six sensitive plant species were observed during the focused plant surveys in 2019 in the Peñasquitos watershed: San Diego sagewort (CRPR 4.2), San Diego County viguiera (CRPR 4.2), San Diego marsh-elder (CRPR 2B.2), southwestern spiny rush (CRPR 4.2), Torrey pine (CRPR 1B.2), and Nuttall's scrub oak (CRPR 1B.1). There are no other sensitive plant species that have moderate or high potential to occur within suitable habitat in the Peñasquitos watershed (see Appendix D).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

One sensitive plant species, southwestern spiny rush, would be directly impacted by maintenance activities within the 5-805 (Segment 1) facility basin. However, impacts to this CRPR 4 species would not be potentially significant. No other sensitive plant species would be permanently impacted as a result of the proposed maintenance within the facility segments.

### 4.3.12 DIRECT IMPACTS TO SENSITIVE WILDLIFE IN THE PEÑASQUITOS WATERSHED

In the Peñasquitos watershed, six sensitive wildlife species were either observed during the 2017 or 2019 focused surveys (or during previous biological surveys) or have a high potential to occur in suitable habitat within the limits of MWMP facility segment maintenance areas and, therefore, would be directly impacted by maintenance activities or by removal of this habitat (**BIO-1.2a, BIO-1.2b, BIO-2, BIO-4, BIO-5, and BIO-6**): least Bell's vireo, southwestern willow flycatcher, yellow-breasted chat, Ridgway's rail, yellow warbler, and coastal California gnatcatcher. Additionally, raptor species, which include MSCP Covered Species Cooper's hawk, have a high potential to occur or were observed within or adjacent to MWMP facility segments in the Peñasquitos watershed (Appendix E). There are 10 sensitive wildlife species that have moderate potential to occur within the Peñasquitos watershed study area (see Appendix E). Impacts to these species would be significant absent mitigation (**BIO-1.2a, BIO-4, and BIO-6**). Further details regarding direct and indirect impacts to sensitive wildlife species within each of the facility segments in this watershed are provided in Table 4-18. Impacts would be considered significant absent mitigation.

**Table 4-18**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the Peñasquitos Watershed**

Facility Segment	Least Bell's Vireo	Southwestern Willow Flycatcher	Yellow-Breasted Chat	Ridgway's Rail	Yellow Warbler	Coastal California Gnatcatcher	Raptors
<i>Peñasquitos Lagoon – Industrial Facility Group</i>							
Industrial (Segment 1)	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	*BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-5, EP-BIO-3a-c, EP-BIO-4	*BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	BIO-4, BIO-6, EP-BIO-3a-c, EP-BIO-6

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-18**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the Peñasquitos Watershed**

Facility Segment	Least Bell's Vireo	Southwestern Willow Flycatcher	Yellow-Breasted Chat	Ridgway's Rail	Yellow Warbler	Coastal California Gnatcatcher	Raptors
Industrial (Segment 2)	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	*BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-5, EP-BIO-3a-c, EP-BIO-4	*BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	BIO-4, BIO-6, EP-BIO-3a-c, EP-BIO-6
<i>Peñasquitos Lagoon – Tripp Facility Group</i>							
Tripp (Segment 2)	None	None	None	BIO-5, EP-BIO-3a-c, EP-BIO-4	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Los Peñasquitos Canyon Creek – Black Mountain Facility Group</i>							
Black Mountain (Segment 1)	None	None	None	None	None	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6, BIO-7	BIO-4, BIO-6, EP-BIO-3a-c
Black Mountain (Segment 2)	BIO-1.2a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-1.2a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	* BIO-1.2a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	* BIO-1.2a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6, BIO-7	* BIO-1.2a, BIO-4, BIO-6, EP-BIO-3a-c, EP-BIO-6

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-18**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the Peñasquitos Watershed**

Facility Segment	Least Bell's Vireo	Southwestern Willow Flycatcher	Yellow-Breasted Chat	Ridgway's Rail	Yellow Warbler	Coastal California Gnatcatcher	Raptors
<i>Los Peñasquitos Canyon Creek – 5-805 Basin Facility Group</i>							
5-805 Basin	*BIO-1.2a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-1.2a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-1.2a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	*BIO-5, EP-BIO-3a-c, EP-BIO-4	*BIO-1.2a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6, BIO-7	BIO-1.2a, BIO-4, BIO-6, EP-BIO-3a-c, EP-BIO-4
<i>Soledad Canyon Creek – Sorrento Facility Group</i>							
Roselle (Segment 1)	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	*BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	*BIO-5, EP-BIO-3a-c, EP-BIO-4	*BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	*BIO-4, BIO-6, EP-BIO-3a-c, EP-BIO-4
Roselle (Segment 2)	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	None	*BIO-5, EP-BIO-3a-c, EP-BIO-4	None	None	BIO-4, BIO-6, EP-BIO-3a-c, EP-BIO-6
<i>Carroll Canyon Creek – Carroll Facility Group</i>							
Carroll Canyon (Segment 1)	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	None	None	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6, BIO-7	*BIO-4, BIO-6, EP-BIO-3a-c

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-18**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the Peñasquitos Watershed**

Facility Segment	Least Bell's Vireo	Southwestern Willow Flycatcher	Yellow-Breasted Chat	Ridgway's Rail	Yellow Warbler	Coastal California Gnatcatcher	Raptors
<i>Soledad Canyon Creek – Flintkote Facility Group</i>							
Flintkote (Segment 1)	None	None	None	BIO-5, EP-BIO-3a-c, EP-BIO-4	None	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6, BIO-7	BIO-4, BIO-6, EP-BIO-3a-c
<i>Soledad Canyon Creek – Dunhill Facility Group</i>							
Dunhill (Segment 1)	None	None	None	BIO-5, EP-BIO-3a-c, EP-BIO-4	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Chicarita Creek – Via San Marco Facility Group</i>							
Via San Marco (Segment 1)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Structures</i>							
10450 Sorrento Valley Road (HW04220)	None	None	None	None	None	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6, BIO-7	BIO-4, BIO-6, EP-BIO-3a-c

**Note:**

- \* Species was observed at this facility segment during 2017 or 2019 focused surveys or during surveys conducted during previous maintenance activities within the segment.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 4.4 DIRECT IMPACTS IN THE MISSION BAY WATERSHED

Direct impacts from proposed maintenance within the Mission Bay watershed would occur at seven facility groups within nine individual facility segments, as described in Sections 4.4.1 through 4.4.9. A portion of these maintenance impacts would occur within the MHPA at one facility group in one facility segment. There are also two facility groups (three facility segments) within the COZ that would be impacted by maintenance activities.

### 4.4.1 TORREY PINES – TORREY FACILITY GROUP

#### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment, Torrey Pines (Segment 1), proposed for maintenance within the Torrey Pines – Torrey facility group. Proposed maintenance of the Torrey Pines (Segment 1) facility segment would result in permanent direct impacts to four vegetation communities and/or land cover types (Figure 6-18). Maintenance impacts would result from a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources include natural flood channel and would be considered significant absent mitigation (**BIO-1.3a**, and **BIO-2**) (Table 4-19a; Figure 7-18).

Permanent direct impacts to uplands are to Tier IV communities only (Table 4-19b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Torrey Pines – Torrey facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA designated lands from maintenance activities. Although a section of the Torrey Pines – Torrey facility group intersects the COZ boundary, there would be no direct impacts to COZ wetlands in this facility group as a result of maintenance activities.

**Table 4-19a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Torrey Pines – Torrey Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Torrey Pines_1 (Acres)</i>
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.02
<b>Total</b>			<b>0.02</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.3a, and BIO-2).

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

**Table 4-19b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Torrey Pines – Torrey Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			Torrey Pines_1 (Acres)
Non-Native Upland Vegetation Communities			
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	0.10
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.18
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	<0.01
Total			0.28

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.4.2 ALTA LA JOLLA – VICKIE FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility basin, Vickie (Segment 1), proposed for maintenance within the Alta La Jolla – Vickie facility group. Proposed maintenance of the Vickie (Segment 1) facility segment would result in permanent direct impacts to six vegetation communities and/or land cover types (Figure 6-19). Maintenance impacts would result from a track-steer and bulldozer working within the channel and gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Permanent impacts to wetlands and jurisdictional resources include natural flood channel and riparian scrub (mulefat scrub) and would be considered significant absent mitigation (**BIO-1.3a**, and **BIO-2**) (Table 4-20a; Figure 7-19).

Permanent direct impacts to sensitive vegetation communities include Diegan coastal sage scrub and disturbed coastal sage scrub and would be considered significant absent mitigation (**BIO-1.2b**, and **BIO-2**) (Table 4-20b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The basin facility is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA designated lands from maintenance activities. In addition, the Vickie (Segment 1) basin facility is not located within the COZ boundary and there would be no direct impacts to COZ wetlands in this facility group as a result of maintenance activities.

The Alta La Jolla detention basin was constructed in 2016 as a self-mitigating, drainage improvement project that resulted in a net gain of wetland functions and services. Maintenance of the basin was included in the original project description and is required to maintain the functions and services of the constructed wetlands; therefore, maintenance within the original project footprint would not require additional mitigation.

**Table 4-20a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Alta La Jolla – Vickie Facility Group**

General Vegetation Type (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Vickie_1 (Acres)</i>
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	<0.01
Riparian Scrub (Mulefat Scrub) (63310)	Riparian Scrub <sup>1</sup>	C	0.38
<b>Total</b>			<b>0.38</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.3a, and BIO-2).

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-20b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Alta La Jolla – Vickie Facility Group**

General Vegetation Type (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			Alta La Jolla_1 (Acres)
Sensitive Vegetation Communities			
Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub <sup>1</sup>	II	0.24
Disturbed Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub <sup>1</sup>	II	0.10
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.51
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.14
Total			1.00

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.3b, and BIO-2).

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.4.3 MISSION BAY – MBHS FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are two facility segments proposed for maintenance within the Mission Bay – MBHS facility group: PB-Olney (Segment 1) and MBHS (Segment 1). Proposed maintenance within these two segments would result in permanent direct impacts to five vegetation communities and/or land cover types (Figures 6-20 and 6-21). Maintenance impacts would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources include natural flood channel, and developed concrete-lined channel and would be considered significant, absent mitigation (**BIO-1.3a** and **BIO-2**) (Table 4-21a; Figures 7-20 and 7-21). Maintenance impacts to developed concrete-lined channel would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Permanent direct impacts to uplands are to Tier IV communities only (Table 4-21b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

Maintenance activities would impact 0.63 acre of MHPA designated lands. Direct impacts to wetlands would occur within the COZ in both facility segments of this facility group. All permanent impacts proposed within the PB-Olney (Segment 1) and MBHS (Segment 1) facility segments that are within the previously permitted maintenance area for this channel would not require additional mitigation under the MWMP (Appendix F).

**Table 4-21a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Mission Bay – MBHS Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			MBHS_1 (Acres)	PB-Olney_1 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C / CC	0.37	–
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C / CC	<0.01	0.19
<b>Total</b>			<b>0.37</b>	<b>0.19</b>

**Notes:** MBHS = Mission Bay High School, PB = Pacific Beach, A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.3a and BIO-2).

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

**Table 4-21b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Mission Bay – MBHS Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			MBHS_1 (Acres)	PB-Olney_1 (Acres)
Non-Native Upland Vegetation Communities				
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.03	0.44

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-21b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Mission Bay – MBHS Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			MBHS_1 (Acres)	PB-Olney_1 (Acres)
Land Covers				
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	<0.01	–
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.41	–
Total			0.44	0.44

**Notes:** SDBG = San Diego Biology Guidelines; MBHS = Mission Bay High School; PB = Pacific Beach  
Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.4.4 MISSION BAY – MISSION BAY DRIVE FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

The only facility segment within the Mission Bay – Mission Bay Drive facility group is the Mission Bay Drive (Segment 1) facility segment. Proposed maintenance of the Mission Bay Drive (Segment 1) facility segment would result in permanent direct impacts to six vegetation communities and/or land cover types (Figure 6-22). Maintenance impacts in this facility segment would include excavation and vegetation removal using a gradall/excavator stationed outside of the channel limits reaching into the channel to remove material. There is one access and staging area associated with this facility segment and activities in this area would be limited to ornamental plantings such that no mitigation would be necessary for access and staging impacts.

Permanent impacts to wetlands and jurisdictional resources include disturbed freshwater marsh, natural flood channel, disturbed wetland (palm-dominated), and disturbed wetland (Arundo-dominated) and would be considered significant (except for the disturbed wetland [palm-dominated] and disturbed wetland [Arundo-dominated] community), absent mitigation (**BIO-1.3a** and **BIO-2**) (Table 4-22a; Figure 7-22). Maintenance impacts to disturbed wetland (palm-dominated) and disturbed wetland (Arundo-dominated) would not require mitigation.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Permanent direct impacts to uplands are to Tier IV communities only (Table 4-22b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Mission Bay – Mission Bay Drive facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA designated lands from maintenance activities. However, direct impacts to wetlands would occur within the COZ in this facility segment.

**Table 4-22a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Mission Bay – Mission Bay Drive Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			Mission Bay Drive_1 (Acres)
Disturbed Freshwater Marsh (52400)	Freshwater Marsh <sup>1</sup>	A / R / C / CC	0.50
Disturbed Wetland (Arundo-Dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C / CC	0.10
		C / CC	<0.01
Disturbed Wetland (palm- dominated) (11200)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C / CC	0.02
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C / CC	<0.01
<b>Total</b>			<b>0.62</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.3a and BIO-2).

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-22b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Mission Bay – Mission Bay Drive Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			<i>Mission Bay Drive_1 (Acres)</i>
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	0.02
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.95
<b>Total</b>			<b>0.97</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.4.5 MIRAMAR – ENGINEER FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment, Engineer (Segment 1), proposed for maintenance within the Miramar – Engineer facility group. Proposed maintenance of this facility segment would result in permanent direct impacts to two vegetation communities and/or land cover types (Figure 6-23). In the western portion of the channel (v-ditch), maintenance impacts would result from a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities. In the remainder of the channel impacts would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetlands would include disturbed wetland (concrete-lined) (Table 4-23a). Engineer (Segment 1) is a ditch constructed within historic uplands and has been determined by USACE, RWQCB, CDFW, and the City to be an artificial wetland and non-jurisdictional. Therefore, no jurisdictional resources occur at this site, the wetlands are considered artificial, and impacts would not be significant and would not require mitigation (Table 4-23a; Figure 7-23).

Permanent direct impacts to uplands are to Tier IV communities only (Table 4-23b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

The Miramar – Engineer facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-23a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Miramar – Engineer Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Engineer_1</i> (Acres)
Disturbed Wetland (Concrete-lined) (11200)	Disturbed Wetland <sup>3</sup>	None	0.57
<b>Total</b>			<b>0.57</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

**Table 4-23b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Miramar – Engineer Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			<i>Engineer_1</i> (Acres)
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	2.92
<b>Total</b>			<b>2.92</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 4.4.6 TECOLOTE CREEK – CHATEAU FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are two facility segments, Chateau (Segments 1 and 2), proposed for maintenance within the Tecolote Creek – Chateau facility group. Proposed maintenance of the Chateau (Segments 1 and 2) facility segment would result in permanent direct impacts to four vegetation communities and/or land cover types (Figures 6-24 through 6-26 and 6-28). Maintenance impacts would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources include developed concrete-lined channel and would not be considered significant (Table 4-24a; Figures 7-24 through 7-26 and 7-28). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV communities only (Table 4-24b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Tecolote Creek – Chateau facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA designated lands from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-24a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Tecolote Creek – Chateau Facility Group**

General Vegetation Type (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			Chateau_1 (Acres)	Chateau_2 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	2.79	0.48
<b>Total</b>			<b>2.79</b>	<b>0.48</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-24b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Tecolote Creek – Chateau Facility Group**

General Vegetation Type (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Chateau_1 (Acres)	Chateau_2 (Acres)
Non-Native Upland Vegetation Communities				
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.03	–
Land Covers				
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	–	0.10
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.12	0.01
Total			0.15	0.11

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.4.7 TECOLOTE CREEK – GENESEE FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

The only facility segment within the Tecolote Creek – Genesee facility group is the Genesee (Segment 1) facility segment. Proposed maintenance of the Genesee (Segment 1) facility segment would result in permanent direct impacts to seven vegetation communities and/or land cover types (Figure 6-27). Maintenance impacts would result from a track-steer and bulldozer working within the channel and gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities. Maintenance in this facility segment would include excavation and sediment and vegetation removal using a track-steer and bulldozer working within the channel and gradall/excavator stationed outside of the channel limits reaching into the channel to remove material.

Permanent impacts to wetlands and jurisdictional resources include disturbed freshwater marsh, riparian forest (coast live oak), riparian forest (southern riparian forest), natural flood channel, and disturbed wetland (Arundo-dominated) and would be considered significant (except for the

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

disturbed wetland [Arundo-dominated] community) absent mitigation (**BIO-1.3a**, and **BIO-2**) (Table 4-25a; Figure 7-27). Impacts to disturbed wetland (Arundo-dominated) would not require mitigation.

Permanent direct impacts to uplands would be to Tier IV communities only (Table 4-25b). Impacts to Tier IV communities would not be significant and would not require mitigation (City of San Diego 2018).

The Tecolote Creek – Genesee facility group is not located within the COZ or MHPA designated lands; therefore, there would be no direct impacts to the MHPA from of maintenance activities.

**Table 4-25a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Tecolote Creek – Genesee Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			Genesee_1 (Acres)
Disturbed Freshwater Marsh (52400)	Freshwater Marsh <sup>1</sup>	A / R / C	0.06
Disturbed Wetland (Arundo-Dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.02
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.10
Riparian Forest (Coast Live Oak) (61310)	Riparian Forest or Woodland <sup>1</sup>	A / R / C	0.18
		C	0.11
Riparian Forest (Southern Riparian Forest) (61300)	Riparian Forest or Woodland <sup>1</sup>	A / R / C	0.04
		C	0.03
Total			0.53

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.3a, and BIO-2).

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-25b**  
**Upland Vegetation Community and Land Cover Impacts in the Tecolote Creek – Genesee Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			Genesee_1 (Acres)
Non-Native Upland Vegetation Communities			
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.01
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.54
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.17
Total			0.72

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.4.8 DIRECT IMPACTS TO SENSITIVE PLANT SPECIES IN THE MISSION BAY WATERSHED

Six sensitive plant species were observed during the focused plant surveys in 2019 in the Mission Bay watershed: San Diego sagewort (CRPR 4.2), San Diego County viguiera (CRPR 4.2), San Diego marsh-elder (CRPR 2B.2), southwestern spiny rush (CRPR 4.2), Torrey pine (CRPR 1B.2), and Nuttall's scrub oak (CRPR 1B.1). There are no other sensitive plant species with moderate or high potential to occur in suitable habitat in the Mission Bay watershed (see Appendix D).

Only San Diego County viguiera has the potential to be directly impacted by maintenance activities within the Vickie (Segment 1) facility. However, this facility was previously permitted, and impacts to this CRPR 4 species would not be significant. None of the other observed sensitive plant species would be impacted as a result of the proposed maintenance within the facility segments. There are no other sensitive plant species that have high or moderate potential to occur within suitable habitat in facilities in the Mission Bay watershed (see Appendix D).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 4.4.9 DIRECT IMPACTS TO SENSITIVE WILDLIFE IN THE MISSION BAY WATERSHED

In the Mission Bay watershed, three sensitive wildlife species were either observed during focused surveys or have a high potential to occur in suitable habitat within the limits of MWMP facility segment maintenance areas and, therefore, would be directly impacted by maintenance activities or by removal of this habitat (**BIO-1.3a, BIO-1.3b, BIO-2, BIO-5, and BIO-6**): yellow-breasted chat, Ridgway's rail and western bluebird. Additionally, raptor species, which include MSCP Covered Species Cooper's hawk, have a high potential to occur or were observed within or adjacent to MWMP facility segments in the Mission Bay watershed (Appendix E). Five sensitive wildlife species have moderate potential to occur within the Mission Bay watershed study area (see Appendix E). Impacts to these species would be considered significant absent mitigation (**BIO-1.3a, BIO-4, and BIO-6**). Further details regarding direct and indirect impacts to sensitive wildlife species within each of the facility segments in this watershed are provided in Table 4-27.

**Table 4-27**  
**Direct and Indirect Impacts to Sensitive Wildlife by**  
**Facility Group and Facility Segment within the Mission Bay Watershed**

Facility Segment	Yellow-Breasted Chat	Ridgway's Rail	Western Bluebird	Raptors
<i>Torrey Pines – Torrey Facility Group</i>				
Torrey Pines (Segment 1)	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Alta La Jolla – Vickie Facility Group</i>				
Vickie (Segment 1)	*BIO-1.3a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Mission Bay – Mission Bay High School (MBHS) Facility Group</i>				
MBHS (Segment 1)	None	BIO-5, EP-BIO-3a-c, EP-BIO-4	None	BIO-4, BIO-6, EP-BIO-3a-c
PB-Olney (Segment 1)	None	BIO-5, EP-BIO-3a-c, EP-BIO-4	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Mission Bay – Mission Bay Drive Facility Group</i>				
Mission Bay Drive (Segment 1)	None	None	*BIO-5, EP-BIO-3a-c, EP-BIO-6	None

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-27**  
**Direct and Indirect Impacts to Sensitive Wildlife by**  
**Facility Group and Facility Segment within the Mission Bay Watershed**

Facility Segment	Yellow-Breasted Chat	Ridgway's Rail	Western Bluebird	Raptors
<i>Miramar – Engineer Facility Group</i>				
Engineer (Segment 1)	None	None	None	None
<i>Tecolote Creek – Chateau Facility Group</i>				
Chateau (Segment 1)	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
Chateau (Segment 2)	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Tecolote Creek – Genesee Facility Group</i>				
Genesee (Segment 1)	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c

**Note:**

- \* Species was observed at this facility segment during 2017 or 2019 focused surveys or during surveys conducted during previous maintenance activities within the segment.

## 4.5 DIRECT IMPACTS IN THE SAN DIEGO RIVER WATERSHED

Direct impacts from proposed maintenance within the San Diego River watershed would occur at eight facility groups (23 facility segments) and six structures, as described in Sections 4.5.1 through 4.5.16. A portion of these maintenance impacts would occur within the MHPA at three facility groups in seven facility segments. There is one facility group (one facility segment) within the COZ that would be impacted by maintenance activities.

### 4.5.1 SAN DIEGO RIVER – NIMITZ FACILITY GROUP

#### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are three facility segments proposed for maintenance within the San Diego River – Nimitz facility group: Nimitz (Segments 1, 2 and 3). Proposed maintenance of these facility segments would result in permanent direct impacts to six vegetation communities and/or land cover types (Figures 6-29 and 6-31). Maintenance impacts within these facility segments would result from a skid-steer working within the channels and a gradall/excavator stationed outside of the channel limits reaching into the channels to perform maintenance activities. Impacts from loading and access at this segment would be limited to developed land such that no mitigation would be necessary for these impacts.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Permanent impacts to wetlands and jurisdictional resources include natural flood channel, and developed concrete-lined channel and would be considered significant, absent mitigation (**BIO-1.4a** and **BIO-2**) (Table 4-28a; Figures 7-29 through 7-31). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV communities only (Table 4-28b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The San Diego River – Nimitz facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in either of the segments in this facility group.

**Table 4-28a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**San Diego River – Nimitz Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number		
			<i>Nimitz_1</i> (Acres)	<i>Nimitz_2</i> (Acres)	<i>Nimitz_3</i> (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	<0.01	0.05	<0.01
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.02	–	0.07
<b>Total</b>			<b>0.02</b>	<b>0.05</b>	<b>0.07</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.4a and BIO-2).

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-28b**  
**Upland Vegetation Community and Land Cover Impacts in the San Diego River – Nimitz Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number		
			Nimitz _1 (Acres)	Nimitz_2 (Acres)	Nimitz_3 (Acres)
Non-Native Upland Vegetation Communities					
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	<0.01	<0.01	0.03
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	–	–	0.09
Land Covers					
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.08	<0.01	–
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.05	–	0.15
Total			0.13	<0.01	0.27

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.5.2 SAN DIEGO RIVER – VALETA FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment proposed for maintenance within the San Diego River – Valeta facility group: Valeta (Segment 1). Proposed maintenance of this facility segment would result in permanent direct impacts to six vegetation communities and/or land cover types (Figure 6-32). Proposed maintenance impacts within this facility segment would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources include freshwater marsh (concrete-lined), and riparian scrub (southern willow scrub; concrete-lined) and would be considered significant absent mitigation (**BIO-1.4a** and **BIO-2**) (Table 4-29a; Figure 7-32).

Permanent direct impacts to sensitive vegetation communities would occur to Diegan coastal sage scrub and would be below the 0.10-acre threshold described in the SDBG; therefore, the impacts would not be

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

considered significant and no mitigation would be required (Table 4-29b). Impacts to Tier IV communities would not be significant and would not require mitigation (City of San Diego 2018).

Maintenance activities would impact 0.19 acres of MHPA designated lands within the San Diego River – Valeta facility group and are aligned to impact the minimum necessary area within the MHPA. Direct impacts to wetlands would occur within the COZ in this facility group.

**Table 4-29a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**San Diego River – Valeta Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Valeta_1</i> (Acres)
Freshwater Marsh (concrete-lined) (52400)	Freshwater Marsh <sup>1</sup>	A / R / C / CC	<0.01
		A / R / C	0.01
Riparian Scrub (Southern Willow Scrub; concrete-lined) (63320)	Riparian Scrub <sup>1</sup>	A / R / C / CC	0.04
		A / R / C	0.01
Total			0.06

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.4a and BIO-2).

**Table 4-29b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**San Diego River – Valeta Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			<i>Valeta_1</i> (Acres)
Sensitive Vegetation Communities			
Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub <sup>4</sup>	II	<0.01

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-29b**  
**Upland Vegetation Community and Land Cover Impacts in the San Diego River – Valeta Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			Valeta_1 (Acres)
Non-Native Upland Vegetation Communities			
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	<0.01
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	<0.01
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.13
Total			0.13

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

## 4.5.3 MURPHY CANYON CREEK – STADIUM FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are three facility segments proposed for maintenance within the Murphy Canyon Creek – Stadium facility group: Murphy Canyon (Segment 1), and Stadium (Segments 1 and 2). Proposed maintenance of these three facility segments would result in permanent direct impacts to nine vegetation communities and/or land cover types (Figures 6-35 through 6-39). Maintenance impacts in all three of these facility segments would result from a skid-steer working within the channel, a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities, and from material stockpiling at a nearby location outside of channel limits (Murphy Canyon (Segment 1), and Stadium (Segment 2)). Maintenance impacts within the Stadium (Segment 1) facility segment would result from a bulldozer and loader working within the channel, a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities, and from material stockpiling at a nearby location outside of channel limits. Maintenance in this facility segment would include excavation, sediment and vegetation removal

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

using a bulldozer and loader working within the channel, and a gradall/excavator stationed both within and outside of the channel limits reaching into the channel to remove material. The material removed during maintenance would then be stockpiled within the adjacent parking lot, outside of channel limits, prior to disposal (Figures 6-35 through 6-39).

Permanent impacts to wetlands and jurisdictional resources include developed concrete-lined channel, riparian forest (southern willow forest), freshwater marsh (concrete-lined), natural flood channel, disturbed wetland, and disturbed wetland (Arundo-dominated) and would be considered significant (except for disturbed wetland [Arundo-dominated] communities), absent mitigation (**BIO-1.4a** and **BIO-2**) (Table 4-30a; Figures 7-35 through 7-39). Maintenance impacts to developed concrete-lined channel and disturbed wetland (Arundo-dominated) would not require mitigation.

Permanent direct impacts to sensitive vegetation would include coastal sage scrub and would be below the 0.10-acre threshold described in the SDBG; therefore, the impacts would not be significant and no mitigation would be required (Table 4-30b). Impacts to Tier IV communities are not considered significant and would not require mitigation (City of San Diego 2018).

The Murphy Canyon Creek – Stadium facility group is partially within the MHPA boundary; however, there would be no direct impacts to the MHPA designated lands from maintenance activities. There would be no direct impacts to wetlands within the COZ in any of the segments in this facility group. All permanent impacts proposed at either Stadium (Segments 1 and 2) facility segments that are within a previously permitted maintenance area for these channels would not require additional mitigation under the MWMP (Appendix F).

**Table 4-30a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Murphy Canyon Creek – Stadium Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number		
			Murphy Canyon_ 1 (Acres)	Stadium_1 (Acres)	Stadium_2 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	0.49	0.01	0.18
Disturbed Wetland (11200)	Disturbed Wetland <sup>1</sup>	A / R / C	–	0.67	–
		C	–	0.18	<0.01

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-30a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Murphy Canyon Creek – Stadium Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number		
			Murphy Canyon_ 1 (Acres)	Stadium_1 (Acres)	Stadium_2 (Acres)
Disturbed Wetland (Arundo-dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	–	0.05	–
		C	–	0.03	–
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	–	0.04	–
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland <sup>1</sup>	A / R / C	–	0.22	–
		CA / R / C	–	0.10	–
Total			0.49	1.30	0.18

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.4a and BIO-2).

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

**Table 4-30b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Murphy Canyon Creek – Stadium Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number		
			Murphy Canyon_1 (Acres)	Stadium_1 (Acres)	Stadium_2 (Acres)
Sensitive Vegetation Communities					
Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub <sup>4</sup>	II	<0.01	–	–

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-30b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Murphy Canyon Creek – Stadium Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number		
			Murphy Canyon_1 (Acres)	Stadium_1 (Acres)	Stadium_2 (Acres)
Land Covers					
Disturbed Land (11300)	Disturbed Land³	IV	0.04	-	-
Urban/Devel oped (12000)	Disturbed Land³	IV	0.16	3.15	-
Total			0.20	3.15	-

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

## 4.5.4 ALVARADO CANYON CREEK – MISSION GORGE FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are four facility segments proposed for maintenance within the Alvarado Canyon Creek – Mission Gorge facility group: Mission Gorge (Segments 1, 2, 3, and 4). Proposed maintenance of these four facility segments would result in permanent direct impacts to nine vegetation communities and/or land cover types (Figures 6-40 through 6-43). Maintenance impacts would result from a skid-steer, loader, and bulldozer working within the channels and gradall/excavator stationed outside of the channel limits reaching into the channels to perform maintenance activities, including excavation and sediment and vegetation removal. Impacts from access and staging would be limited to urban/developed and disturbed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include disturbed riparian forest (southern willow forest; concrete-lined), disturbed wetland (Arundo-dominated; concrete-lined),

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

freshwater marsh, natural flood channel, and developed concrete-lined channel and are considered significant (except for the disturbed wetland [Arundo-dominated; concrete-lined] communities), absent mitigation (**BIO-1.4a** and **BIO-2**) (Table 4-31a; Figures 7-40 through 7-43). Maintenance impacts to disturbed wetland (Arundo-dominated; concrete-lined) and developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-31b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Alvarado Canyon Creek – Mission Gorge facility group is partially within the MHPA boundary; however, there would be no direct impacts to MHPA designated lands from maintenance activities. There are no direct impacts to wetlands within the COZ in any of the segments of this facility group. All permanent impacts proposed at the Mission Gorge (Segments 1 and 2) facility segments that are within a previously permitted maintenance area for these channels would not require additional mitigation under the MWMP (Appendix F).

**Table 4-31a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Alvarado Canyon Creek – Mission Gorge Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number			
			Mission Gorge_1 (Acres)	Mission Gorge_2 (Acres)	Mission Gorge_3 (Acres)	Mission Gorge_4 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.65	0.62	0.59	0.57
Disturbed Riparian Forest (Southern Willow Forest, Concrete- Lined) (61320)	Riparian Forest or Woodland <sup>1</sup>	A / R / C	–	–	0.34	–

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-31a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Alvarado Canyon Creek – Mission Gorge Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number			
			Mission Gorge_1 (Acres)	Mission Gorge_2 (Acres)	Mission Gorge_3 (Acres)	Mission Gorge_4 (Acres)
Disturbed Wetland (Arundo- dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	–	–	0.02	–
Freshwater Marsh (52400)	Freshwater Marsh <sup>1</sup>	A / R / C	0.01	–	–	–
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.03	–	–	–
<b>Total</b>			<b>0.69</b>	<b>0.62</b>	<b>0.95</b>	<b>0.57</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.4a and BIO-2).

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-31b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Alvarado Canyon Creek – Mission Gorge Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number			
			Mission Gorge_1 (Acres)	Mission Gorge_2 (Acres)	Mission Gorge_3 (Acres)	Mission Gorge_4 (Acres)
Non-Native Upland Vegetation Communities						
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	<0.01	–	–	–
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	<0.01	0.12	<0.01	–
Land Covers						
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.12	–	0.03	<0.01
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.24	0.73	0.49	0.37
Total			0.36	0.85	0.52	0.37

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.5.5 ALVARADO CANYON CREEK – ALVARADO FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are three facility segments proposed for maintenance within the Alvarado Canyon Creek – Alvarado facility group: Alvarado (Segments 1, 2, and 3). Proposed maintenance of the Alvarado (Segments 1, 2, and 3) facility segments would result in permanent direct impacts to six vegetation communities and/or land cover types (Figures 6-44 and 6-46). Maintenance impacts within these facility segments would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources include natural flood channel, riparian forest, and developed concrete-lined channel and are considered significant, absent mitigation (**BIO-**

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**1.4a** and **BIO-2**) (Table 4-32a; Figures 7-44 through 7-46). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-32b). Impacts to Tier IV communities are not considered significant and would not require mitigation (City of San Diego 2018).

Maintenance activities would impact 2.41 acres of MHPA designated land within the Alvarado Canyon Creek – Alvarado facility group and are aligned to impact the minimum necessary area within the MHPA. There are no direct impacts to wetlands within the COZ in either of the segments in this facility group. All permanent impacts proposed at the Alvarado (Segment 1) facility segment that are within a previously permitted maintenance area for these channels would not require additional mitigation under the MWMP (Appendix F).

**Table 4-32a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Alvarado Canyon Creek – Alvarado Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number		
			Alvarado_1 (Acres)	Alvarado_2 (Acres)	Alvarado_3 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	–	1.05	0.13
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.68	–	–
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland <sup>1</sup>	A / R / C	<0.01	–	–
<b>Total</b>			<b>0.68</b>	<b>1.05</b>	<b>0.13</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.4a and BIO-2).

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-32b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Alvarado Canyon Creek – Alvarado Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number		
			Alvarado_1 (Acres)	Alvarado_2 (Acres)	Alvarado_3 (Acres)
Non-Native Upland Vegetation Communities					
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.11	–	<0.01
Land Covers					
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	–	<0.01	–
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.44	<0.01	<0.01
Total			0.55	<0.01	<0.01

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.5.6 MURRAY RESERVOIR – COWLES MOUNTAIN FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are two facility segments proposed for maintenance within the Murray Reservoir – Cowles Mountain facility group: Cowles Mountain (Segment 1) and Cowles Mountain (Segment 2). Proposed maintenance within these two facility segments would result in permanent direct impacts to seven vegetation communities and/or land cover types (Figures 6-47 through 6-50). Maintenance impacts would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities, and from material stockpiling at a nearby location outside of channel limits.

Permanent impacts to wetlands and jurisdictional resources include disturbed wetland, disturbed freshwater marsh, disturbed riparian scrub, and developed concrete-lined channel and would be considered significant, absent mitigation (**BIO-1.4a** and **BIO-2**) (Table 4-33a; Figures 7-47 through 7-50). Maintenance impacts to developed concrete-lined channel would not require mitigation.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Permanent direct impacts to uplands are to Tier IV only (Table 4-33b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018). Any other direct impacts to sensitive vegetation communities from maintenance activities would be considered significant, absent mitigation (**BIO-2**).

Neither facility segment within the Murray Reservoir – Cowles Mountain facility group is located within MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-33a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Murray Reservoir – Cowles Mountain Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			Cowles Mountain_1 (Acres)	Cowles Mountain_2 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.31	1.25
Disturbed Freshwater Marsh (Concrete-lined) (52400)	Freshwater Marsh <sup>1</sup>	C	0.01	–
Disturbed Riparian Scrub (Concrete-lined) (63000)	Riparian Scrub <sup>1</sup>	C	0.01	–
Disturbed Wetland (Concrete-lined) (11200)	Disturbed Wetland <sup>1</sup>	A / R / C	0.01	–
<b>Total</b>			<b>0.34</b>	<b>1.25</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.4a and BIO-2).

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-33b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Murray Reservoir – Cowles Mountain Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Cowles Mountain_1 (Acres)	Cowles Mountain_2 (Acres)
Non-Native Upland Vegetation Communities				
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.01	0.03
Land Covers				
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.53	0.14
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	<0.01	0.85
Total			0.54	1.02

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.5.7 NORFOLK CANYON CREEK – FAIRMOUNT FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are five facility segments proposed for maintenance within the Norfolk Canyon Creek – Fairmount facility group: Baja (Segment 1), Fairmount (Segment 1), Fairmount (Segment 2), Fairmount (Segment 3), and Fairmount (Segment 4). Proposed maintenance of these facility segments would result in permanent direct impacts to seven vegetation communities and/or land cover types (Figures 6-51 through 6-55). Maintenance impacts in these facility segments would result from a skid-steer or track-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources include disturbed wetland (concrete-lined), disturbed wetland (palm-dominated), and developed concrete-lined channel and are considered significant (except for the disturbed wetland [palm-dominated] communities), absent mitigation (**BIO-1.4a** and **BIO-2**) (Table 4-34a; Figures 7-51 through 7-55). Maintenance impacts to disturbed wetland (palm-dominated) and developed concrete-lined channel would not require mitigation.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Permanent direct impacts to sensitive vegetation include chamise chaparral would be below the 0.10-acre threshold described in the SDBG; therefore, the impacts would not be significant and no mitigation would be required (Table 4-34b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

Maintenance activities would impact 1.98 acres of MHPA designated lands within the Norfolk Canyon Creek – Fairmount facility group and are aligned to impact the minimum necessary area within the MHPA. There are no direct impacts to wetlands within the COZ in any of the segments in this facility group.

**Table 4-34a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Norfolk Canyon Creek – Fairmount Facility Group**

MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number				
			Baja_1 (Acres)	Fairmount_1 (Acres)	Fairmount_2 (Acres)	Fairmount_3 (Acres)	Fairmount_4 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.53	0.14	0.26	<0.01	-
Disturbed Wetland (Concrete-lined) (11200)	Disturbed Wetland <sup>1</sup>	A / R / C	-	-	-	-	0.47
Disturbed Wetland (palm- dominated) (11200)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.09	-	-	0.01	-
<b>Total</b>			<b>0.62</b>	<b>0.14</b>	<b>0.26</b>	<b>0.01</b>	<b>0.47</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO 1.4a and BIO-2).

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-34b**  
**Upland Vegetation Community and Land Cover Impacts in the Norfolk Canyon Creek – Fairmount Facility Group**

MWMP Mapping Vegetation Community, (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number				
			Baja_1 (Acres)	Fairmount_1 (Acres)	Fairmount_2 (Acres)	Fairmount_3 (Acres)	Fairmount_4 (Acres)
Sensitive Vegetation Communities							
Chamise Chaparral (37200)	Chamise Chaparral <sup>4</sup>	IIIA	-	-	<0.01	<0.01	-
Non-Native Upland Vegetation Communities							
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	0.03	-	-	-	-
Land Covers							
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.20	0.14	0.41	0.41	0.41
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.53	-	-	-	-
Total			0.76	0.14	0.41	0.41	0.41

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

## 4.5.8 SAN DIEGO RIVER – CAMINO DEL RIO FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are two facility segments proposed for maintenance within the San Diego River – Camino del Rio facility group: Camino del Arroyo (Segment 1) and Camino del Rio (Segment 1). Proposed maintenance within these facility segments would result in permanent direct impacts to six vegetation communities and/or land cover types (Figures 6-33 and 6-34). Maintenance impacts within these facility segments would result from a skid-steer working within the channels and a gradall/excavator stationed outside of the channel limits reaching into the channels to perform

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

maintenance activities. Impacts from loading and access at this segment would be limited to developed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include riparian scrub (concrete-lined), riparian forest (concrete-lined), and developed concrete-lined channel and would be considered significant, absent mitigation (**BIO-1.4a** and **BIO-2**) (Table 4-35a; Figures 7-33 and 7-34). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-35b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The San Diego River – Camino del Rio facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in either of the segments in this facility group.

**Table 4-35a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**San Diego River – Camino del Rio Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			Camino del Arroyo_1 (Acres)	Camino del Rio_1 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.29	0.26
Riparian Forest (Concrete-lined) (61000)	Riparian Forest or Woodland <sup>1</sup>	A / R / C	–	0.03
Riparian Scrub (concrete-lined) (63000)	Riparian Scrub <sup>1</sup>	A / R / C	0.07	0.33
<b>Total</b>			<b>0.36</b>	<b>0.62</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.4a and BIO-2).

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-35b**  
**Upland Vegetation Community and Land Cover Impacts in the San Diego River – Camino del Rio Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Camino del Arroyo_1 (Acres)	Camino del Rio_1 (Acres)
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	–	0.31
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	–	0.02
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	<0.01	0.08
<b>Total</b>			<b>0.03</b>	<b>0.41</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.5.9 1331 WASHINGTON (OT03537) STRUCTURE

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

The 1331 Washington (OT03537) structure consists of a drainage outlet facility that conveys storm water flows through a concrete-lined ditch west into an urban canyon. Proposed maintenance of this structure would result in permanent direct impacts to three vegetation communities and/or land cover types (Figure 6-139). Maintenance impacts at this structure would result from a hand crews removing sediment and material that has accumulated within and below this outlet facility and from an excavator stationed on Washington Street and reaching into the structure to perform maintenance. Impacts from loading and access at this segment would be limited to developed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetland and jurisdictional resources include developed concrete-lined channel and would not be considered significant (Table 4-36a; Figure 7-137). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-36b). Impacts to Tier IV communities are not considered significant and would not require mitigation (City of San Diego

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

2018). Any other direct impacts to sensitive vegetation communities that occur from maintenance activities would be considered significant, absent mitigation (**BIO-2**).

The drainage facility is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ at this location.

**Table 4-36a**  
**Wetland Vegetation Community and Land Cover Impacts at the**  
**1331 Washington (OT03537) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Structure Name
			1331 Washington (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.01
<b>Total</b>			<b>0.01</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

**Table 4-36b**  
**Upland Vegetation Community and Land Cover Impacts at the**  
**1331 Washington (OT03537) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Structure Name
			1331 Washington (Acres)
Non-Native Upland Vegetation Communities			
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.16
Land Covers			
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.01
Total			0.17

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.5.10 1277 CAMINO DEL RIO SOUTH (IN10399) STRUCTURE

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

The 1277 Camino del Rio South (IN10399) structure consists of an inlet facility that collects storm water flows that are conveyed under Camino del Rio South toward the San Diego River. Proposed maintenance of this structure would result in permanent direct impacts to three vegetation communities and/or land cover types (Figure 6-132). Maintenance impacts at this structure would result from hand crews removing material and, if necessary, an excavator stationed in the parking lot reaching into the structure to perform maintenance activities. Impacts from loading and access at this segment would be limited to developed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include developed concrete-lined channel and would not be considered significant (Table 4-37a; Figure 7-135). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-37b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018). Any other direct impacts to sensitive vegetation communities that occur from maintenance activities would be considered significant, absent mitigation (**BIO-2**).

The drainage facility is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ at this location.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-37a**  
**Wetland Vegetation Community and Land Cover Impacts at the 1277 Camino Del Rio South (IN10399) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Structure Name
			1277 Camino Del Rio South (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	<0.01
<b>Total</b>			<b>&lt;0.01</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

**Table 4-37b**  
**Upland Vegetation Community and Land Cover Impacts at the 1277 Camino Del Rio South (IN10399) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Structure Name
			1277 Camino Del Rio South (Acres)
Non-Native Upland Vegetation Communities			
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	<0.01
Land Covers			
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.10
Total			0.10

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 4.5.11 5505 FRIARS ROAD (OT05573) STRUCTURE

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

The 5505 Friars Road (OT05573) structure consists of a drainage facility that conveys storm water flows coming from under Friars Road, south into the San Diego River. Proposed maintenance of this structure would result in permanent direct impacts to four vegetation communities and/or land cover types (Figure 6-134). Maintenance impacts at the 5505 Friars Road (OT05573) structure would result from hand crews and a skid-steer working to remove sediment and vegetation from the maintenance area.

Permanent impacts to wetlands and jurisdictional resources include disturbed wetland (Arundo-dominated) and would not be considered significant (Table 4-38a; Figure 7-140). Therefore impacts to the disturbed wetland (Arundo-dominated) vegetation community would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-38b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018). Any other direct impacts to sensitive vegetation communities that occur from maintenance activities would be considered significant, absent mitigation (**BIO-2**).

Maintenance activities would impact MHPA designated lands at this structure and have been aligned to impact the minimum necessary area within the MHPA. This facility is located outside the COZ. In addition, permanent impacts proposed at the 5505 Friars Road (OT05573) structure that are within the previously permitted maintenance area for this facility would not require additional mitigation under the MWMP (Appendix F).

**Table 4-38a**  
**Wetland Vegetation Community and Land Cover Impacts at the**  
**5505 Friars Road (OT05573) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Structure Name
			5505 Friars Road (Acres)
Disturbed Wetland (Arundo-dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.03
<b>Total</b>			<b>0.03</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

**Table 4-38b**  
**Upland Vegetation Community and Land Cover Impacts at the**  
**5505 Friars Road (OT05573) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Structure Name
			5505 Friars Road (Acres)
Non-Native Upland Vegetation Communities			
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	<0.01
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.06
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.16
Total			0.22

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.5.12 1660 HOTEL CIRCLE NORTH (OT03321) STRUCTURE

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

The 1660 Hotel Circle North (OT03321) structure consists of a drainage outlet facility that conveys storm water flows from below Hotel Circle North, north through a private golf course and toward the San Diego River. Proposed maintenance of this structure would result in permanent direct impacts to four vegetation communities and/or land cover types (Figure 136). Maintenance impacts at this structure would result from an excavator stationed outside of the maintenance limits in the access area reaching in to perform maintenance activities.

Permanent impacts to wetland and jurisdictional resources include natural flood channel, and disturbed wetland and would be considered significant absent mitigation (**BIO-1.4a** and **BIO-2**) (Table 4-39a; Figure 7-136).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Permanent direct impacts to uplands are to Tier IV only (Table 4-39b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The drainage facility is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ at this location.

**Table 4-39a**  
**Wetland Vegetation Community and Land Cover Impacts at the**  
**1660 Hotel Circle North (OT03321) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Structure Name
			1660 Hotel Circle North (Acres)
Disturbed Wetland (11200)	Disturbed Wetland <sup>1</sup>	A / R / C	<0.01
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.02
<b>Total</b>			<b>0.02</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.4a and BIO-2).

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

**Table 4-39b**  
**Upland Vegetation Community and Land Cover Impacts at the**  
**1660 Hotel Circle North (OT03321) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Structure Name
			1660 Hotel Circle North (Acres)
Non-Native Upland Vegetation Communities			
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.03
Land Covers			
Urban/Developed	Disturbed Land <sup>3</sup>	IV	0.07

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-39b**  
**Upland Vegetation Community and Land Cover Impacts at the 1660 Hotel Circle North (OT03321) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Structure Name
			1660 Hotel Circle North (Acres)
(12000)			
<b>Total</b>			<b>0.10</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.5.13 901 HOTEL CIRCLE SOUTH (HW02440) STRUCTURE

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

The 901 Hotel Circle South (HW02440) structure consists of a drainage inlet facility that collects storm water flows from the upstream urban canyon for conveyance toward the San Diego River. Proposed maintenance of this structure would result in permanent direct impacts to five vegetation communities and/or land cover types (Figure 6-133). Maintenance impacts at this structure would result from hand crews removing sediment and material that has accumulated within and above this outlet facility and from an excavator stationed outside of the maintenance limits in the access area reaching in to perform maintenance activities. Impacts from loading and access at this segment would be limited to disturbed and developed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include developed concrete-lined channel and would be considered significant (Table 4-40a; Figure 7-132). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to sensitive vegetation communities (Tier I-III B) would be below the 0.10 acre-threshold described in the SDBG; therefore, the impacts would not be significant and no mitigation would be required (Table 4-40b). Impacts to Tier IV communities would not be significant and would not require mitigation (City of San Diego 2018). The drain structure facility is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ at this location.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-40a**  
**Wetland Vegetation Community and Land Cover Impacts at the 901 Hotel Circle South (HW02440) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Structure Name
			901 Hotel Circle South (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.06
<b>Total</b>			<b>0.06</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional  
Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

**Table 4-40b**  
**Upland Vegetation Community and Land Cover Impacts at the 901 Hotel Circle South (HW02440) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Structure Name
			901 Hotel Circle South (Acres)
Sensitive Vegetation Communities			
CSS/Chaparral (37G00)	CSS / Chaparral <sup>4</sup>	II	0.02
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.05
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.22
Total			0.29

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

## 4.5.14 2087 HOTEL CIRCLE SOUTH (HW02437) STRUCTURE

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

The 2087 Hotel Circle South (HW02437) structure consists of a drainage inlet facility that collects storm water flows from the upstream urban canyon for conveyance north toward the San Diego River. Proposed maintenance of this structure would result in permanent direct impacts to six vegetation communities and/or land cover types (Figure 6-135). Maintenance impacts at this structure would result from hand crews removing sediment and material that has accumulated within and upstream of this outlet facility and from an excavator stationed outside of the maintenance limits reaching in to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources include developed concrete-lined channel, and natural flood channel and would be considered significant, absent mitigation (**BIO-1.4a** and **BIO-2**) (Table 4-41a; Figure 7-131). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to sensitive vegetation communities (Tier I–IIIB) would be below the 0.10-acre threshold described in the SDBG; therefore, the impacts would not be significant and no mitigation would be required (Table 4-41b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

Maintenance activities would impact 0.12 acres of MHPA designated lands at this structure and are aligned to impact the minimum necessary area within the MHPA. In addition, there would be no direct impacts to wetlands within the COZ at this location.

**Table 4-41a**  
**Wetland Vegetation Community and Land Cover Impacts at the**  
**2087 Hotel Circle South (HW02437) Structure**

MWMP Mapping Vegetation Community, (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Structure Name
			2087 Hotel Circle South (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.01
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.03

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-41a**  
**Wetland Vegetation Community and Land Cover Impacts at the 2087 Hotel Circle South (HW02437) Structure**

MWMP Mapping Vegetation Community, (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Structure Name
			2087 Hotel Circle South (Acres)
Total			0.04

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional  
Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.4a and BIO-2).

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

**Table 4-41b**  
**Upland Vegetation Community and Land Cover Impacts at the 2087 Hotel Circle South (HW02437) Structure**

MWMP Mapping Vegetation Community, (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Structure Name
			2087 Hotel Circle South (Acres)
Sensitive Vegetation Communities			
CSS/Chaparral (37G00)	CSS / Chaparral <sup>4</sup>	II	0.02
Oak Woodland (71100)	Oak Woodlands <sup>4</sup>	I	<0.01
Non-Native Upland Vegetation Communities			
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.06
Land Covers			
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.05
Total			0.13

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

<sup>3</sup> Impacts are not considered significant.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

## 4.5.15 DIRECT IMPACTS TO SENSITIVE PLANT SPECIES IN THE SAN DIEGO RIVER WATERSHED

In the San Diego River watershed, nine sensitive plant species were observed during focused plant surveys in 2019: California adolphia (CRPR 2B.1), singlewhorl burrobrush (CRPR 2B.2), San Diego sagewort (CRPR 4.2), San Diego County viguiera (CRPR 4.2), San Diego sand aster (CRPR 1B.1), San Diego marsh-elder (CRPR 2B.2), southwestern spiny rush (CRPR 4.2), Torrey pine (CRPR 1B.2), and Nuttall's scrub oak (CRPR 1B.1).

Five sensitive plant species would be directly impacted by maintenance activities:

- singlewhorl burrobrush (CRPR 2B.2) within Mission Gorge (Segment 1), Murphy Canyon (Segment 1), and Baja (Segment 1) facilities;
- southwestern spiny rush (CRPR 4.2) within Murphy Canyon (Segment 1) facility;
- San Diego sagewort (CRPR 4.2) within Baja (Segment 1) facility;
- San Diego County viguiera (CRPR 4.2) within Baja (Segment 1) facility; and
- Nuttall's scrub oak (CRPR 1B.1) within Fairmount (Segment 1) and Fairmount (Segment 3) facilities.

Impacts to CRPR 4 species would not be considered significant. Impacts to singlewhorl burrobrush are considered significant, and, if unavoidable, would require habitat-based mitigation measures (**BIO-1a** and **BIO-1b**). Impacts to Nuttall's scrub oak would be considered significant, and, if unavoidable, would require species-specific mitigation (**BIO-3**).

There are no other sensitive plant species that have high or moderate potential to occur within suitable habitat in facilities in the San Diego River watershed (see Appendix D).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

### 4.5.16 DIRECT IMPACTS TO SENSITIVE WILDLIFE IN THE SAN DIEGO RIVER WATERSHED

In the San Diego River watershed, seven sensitive wildlife species were either observed during focused surveys or have a high potential to occur in suitable habitat within the limits of MWMP facility segment maintenance areas and, therefore, would be directly impacted by maintenance activities or by removal of this habitat (**BIO-1.4a**, **BIO-1.4b**, **BIO-2**, **BIO-4**, **BIO-5**, and **BIO-6**): coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, California least tern, yellow-breasted chat, Ridgway's rail, and yellow warbler. Additionally, raptor species, including MSCP Covered Species Cooper's hawk and California gull, have a high potential to occur or were observed within or adjacent to MWMP facility segments in the San Diego River watershed (Appendix E). Six sensitive wildlife species have moderate potential to occur within the San Diego River watershed study area (see Appendix E). Impacts to these species would be significant absent mitigation (**BIO-1.4a**, **BIO-4**, and **BIO-6**). Further details regarding direct and indirect impacts to sensitive wildlife species within each of the facility segments in this watershed are provided in Table 4-43. Impacts would be considered significant absent mitigation.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-43**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the San Diego River Watershed**

Facility Segment	Least Bell's Vireo	Southwestern Willow Flycatcher	Yellow-Breasted Chat	Ridgway's Rail	Yellow Warbler	Coastal California Gnatcatcher	California Least Tern	Raptors & California Gull
<i>San Diego River – Nimitz Facility Group</i>								
Nimitz (Segment 1)	None	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
Nimitz (Segment 2)	None	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
Nimitz (Segment 3)	None	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>San Diego River – Valeta Facility Group</i>								
Valeta (Segment 1)	BIO-1.4a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-1.4a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-1.4a, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-1.4a, BIO-5, EP-BIO-3a-c, EP-BIO-4	BIO-1.4a, EP-BIO-3a-c, EP-BIO-6	BIO 1.4b, BIO-2, EP-BIO-3a-c, EP-BIO-4, BIO-7	*BIO-5, EP-BIO-3a-c, EP-BIO-4	BIO-1.4a, BIO-4, BIO-6, EP-BIO-3a-c, EP-BIO-6
<i>San Diego River – Camino del Rio Facility Group</i>								
Camino del Arroyo (Segment 1)	BIO-1.4a, BIO-5, EP-BIO-3a-c,	None	None	None	*BIO-1.4a, EP-BIO-3a-c, EP-BIO-	None	None	None

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-43**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the San Diego River Watershed**

Facility Segment	Least Bell's Vireo	Southwestern Willow Flycatcher	Yellow-Breasted Chat	Ridgway's Rail	Yellow Warbler	Coastal California Gnatcatcher	California Least Tern	Raptors & California Gull
	EP-BIO-4, EP-BIO-6				4, EP-BIO-6			
Camino del Rio (Segment 1)	BIO-1.4a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	None	None	*BIO-1.4a, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	None	BIO-1.4a, BIO-4, BIO-6, EP-BIO-3a-c, EP-BIO-6
<i>Murphy Canyon Creek – Stadium Facility Group</i>								
Murphy Canyon (Segment 1)	None	None	None	None	None	*BIO 1.4b, BIO-2, EP-BIO-3a-c, EP-BIO-4, BIO-7	None	None
Stadium (Segment 1)	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	None	*BIO-4, BIO-6, EP-BIO-3a-c
Stadium (Segment 2)	None	None	None	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	None	None	None

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-43**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the San Diego River Watershed**

Facility Segment	Least Bell's Vireo	Southwestern Willow Flycatcher	Yellow-Breasted Chat	Ridgway's Rail	Yellow Warbler	Coastal California Gnatcatcher	California Least Tern	Raptors & California Gull
<i>Alvarado Canyon Creek – Mission Gorge Facility Group</i>								
Mission Gorge (Segment 1)	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	None	BIO-4, BIO-6, EP-BIO-3a-c
Mission Gorge (Segment 2)	None	None	None	None	None	None	None	None
Mission Gorge (Segment 3)	BIO-1.4a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	BIO-1.4a, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	BIO-1.4a, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	None	BIO-1.4a, BIO-4, BIO-6, EP-BIO-3a-c
Mission Gorge (Segment 4)	None	None	None	None	None	None	None	None
<i>Alvarado Canyon Creek – Alvarado Facility Group</i>								
Alvarado (Segment 1)	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	None	BIO-4, BIO-6, EP-BIO-3a-c

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 4-43**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the San Diego River Watershed**

<b>Facility Segment</b>	<b>Least Bell's Vireo</b>	<b>Southwestern Willow Flycatcher</b>	<b>Yellow-Breasted Chat</b>	<b>Ridgway's Rail</b>	<b>Yellow Warbler</b>	<b>Coastal California Gnatcatcher</b>	<b>California Least Tern</b>	<b>Raptors &amp; California Gull</b>
Alvarado (Segment 2)	None	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
Alvarado (Segment 3)	None	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Murray Reservoir – Cowles Mountain Facility Group</i>								
Cowles Mountain (Segment 1)	None	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
Cowles Mountain (Segment 2)	None	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Norfolk Canyon Creek – Fairmount Facility Group</i>								
Baja (Segment 1)	None	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
Fairmount (Segment 1)	None	None	None	None	None	None	None	None

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-43**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the San Diego River Watershed**

<b>Facility Segment</b>	<b>Least Bell's Vireo</b>	<b>Southwestern Willow Flycatcher</b>	<b>Yellow-Breasted Chat</b>	<b>Ridgway's Rail</b>	<b>Yellow Warbler</b>	<b>Coastal California Gnatcatcher</b>	<b>California Least Tern</b>	<b>Raptors &amp; California Gull</b>
Fairmount (Segment 2)	None	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
Fairmount (Segment 3)	None	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
Fairmount (Segment 4)	None	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Structures</i>								
1331 Washington (OT03537)	None	None	None	None	None	None	None	None
1277 Camino Del Rio South (IN10399)	None	None	None	None	None	BIO-2, EP-BIO-3a-c, EP-BIO-4, BIO-7	None	BIO-4, BIO-6, EP-BIO-3a-c
5505 Friars Road (OT05573)	None	None	*BIO-1.4a, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-5, EP-BIO-3a-c, EP-BIO-4	*EP-BIO-3a-c, EP-BIO-4	None	None	BIO-4, BIO-6, EP-BIO-3a-c

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 4-43**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the San Diego River Watershed**

Facility Segment	Least Bell's Vireo	Southwestern Willow Flycatcher	Yellow-Breasted Chat	Ridgway's Rail	Yellow Warbler	Coastal California Gnatcatcher	California Least Tern	Raptors & California Gull
1660 Hotel Circle North (OT03321)	BIO-5, EP-BIO-3a-c, EP-BIO-4	None	None	None	*EP-BIO-3a-c, EP-BIO-4	None	None	BIO-4, BIO-6, EP-BIO-3a-c
901 Hotel Circle South (HW02440)	None	None	None	None	None	BIO-2, EP-BIO-3a-c, EP-BIO-4, BIO-7	None	BIO-4, BIO-6, EP-BIO-3a-c
2087 Hotel Circle South (HW02437)	None	None	None	None	None	BIO-2, EP-BIO-3a-c, EP-BIO-4, BIO-7	None	BIO-4, BIO-6, EP-BIO-3a-c

**Note:**

- \* Species was observed at this facility segment during 2017 or 2019 focused surveys or during surveys conducted during previous maintenance activities within the segment.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## **4.6 DIRECT IMPACTS IN THE PUEBLO SAN DIEGO WATERSHED**

Direct impacts from proposed maintenance within the Pueblo San Diego watershed would occur at 21 facility groups within 35 individual facility segments and three structures, as described in Sections 4.6.1 through 4.6.26. A portion of these maintenance impacts would occur within the MHPA at two facility groups in three facility segments. There would be no maintenance impacts within the COZ in this watershed.

### **4.6.1 WASHINGTON CANYON CREEK – WASHINGTON FACILITY GROUP**

#### **Direct Impacts to Vegetation Communities and Jurisdictional Resources**

There are two facility segments proposed for maintenance within the Washington Canyon Creek – Washington facility group: Washington (Segments 1 and 2). Proposed maintenance of these facility segments would result in permanent direct impacts to six vegetation communities and/or land cover types (Figures 6-57 through 6-59). Maintenance impacts within these facility segments would result from a skid-steer, loader, and gradall/excavator working within the channel to perform maintenance activities. Impacts from loading and access at this segment would be limited to developed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include natural flood channel, and developed concrete-lined channel and would be considered significant, absent mitigation (**BIO-1.5a** and **BIO-2**) (Table 4-44a; Figures 7-57 through 7-59). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-44b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Washington Canyon Creek – Washington facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group. All permanent impacts proposed at the Washington (Segments 1 and 2) facility segments that are within a previously permitted maintenance area for these channels would not require additional mitigation under the MWMP (Appendix F).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-44a**  
**Wetland Vegetation Community and Land Cover Impacts in the Washington Canyon Creek – Washington Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			Washington_1 (Acres)	Washington_2 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.01	0.55
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.23	0.01
<b>Total</b>			<b>0.24</b>	<b>0.56</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.5a and BIO-2).

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

**Table 4-44b**  
**Upland Vegetation Community and Land Cover Impacts in the Washington Canyon Creek – Washington Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Washington_1 (Acres)	Washington_2 (Acres)
Non-Native Upland Vegetation Communities				
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	–	<0.01
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.05	<0.01
Land Covers				
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.07	<0.01

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-44b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Washington Canyon Creek – Washington Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Washington_1 (Acres)	Washington_2 (Acres)
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.21	–
<b>Total</b>			<b>0.23</b>	<b>&lt;0.01</b>

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.2 MISSION HILL CANYON CREEK – TITUS FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment, Titus (Segment 1), within the Mission Hill Canyon Creek – Titus facility group. Proposed maintenance of the facility would result in permanent direct impacts to four vegetation communities and/or land cover types (Figure 6-60). Maintenance impacts would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities. There is one access area associated with this segment, and impacts for this area would be limited to developed and disturbed land such that no mitigation would be necessary.

Permanent impacts to wetlands and jurisdictional resources include natural flood channel and would be considered significant absent mitigation (**BIO-1.5a** and **BIO-2**) (Table 4-45a; Figure 7-60).

Permanent direct impacts to uplands are to Tier IV only (Table 4-45b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

Maintenance activities would impact 0.07 acre of MHPA designated lands within the Mission Hill Canyon Creek – Titus facility group and are aligned to impact the minimum necessary area within the MHPA. There would be no direct impacts to jurisdictional resources within the COZ in this facility group. Any permanent impacts proposed at the Titus (Segment 1) facility segment that are within the previously permitted maintenance area for this channel would not require additional mitigation under the MWMP (Appendix F).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-45a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Mission Hill Canyon Creek – Titus Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			Titus_1 (Acres)
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.01
<b>Total</b>			<b>0.01</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.5a and BIO-2).

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

**Table 4-45b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Mission Hill Canyon Creek – Titus Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			Titus_1 (Acres)
Non-Native Upland Vegetation Communities			
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.01
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.04
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.02
Total			0.07

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 4.6.3 MAPLE CANYON CREEK – MAPLE FACILITY GROUP

There is one facility basin, Maple (Segment 1), proposed for maintenance within the Maple Canyon Creek – Maple facility group. Proposed maintenance of this structure would result in permanent direct impacts to four vegetation communities and/or land cover types (Figure 6-56). Maintenance impacts at this structure would result from a skid-steer working within the basin and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetland and jurisdictional resources include natural flood channel and disturbed wetland (palm-dominated). Impacts to natural flood channel would be considered significant, absent mitigation (Table 4-46a; Figure 7-56). Impacts to disturbed wetland (palm-dominated) would not require mitigation.

Permanent direct impacts to uplands are to Tier IV communities only (Table 4-46b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The basin facility is not located within the MHPA designated lands; therefore there would be no direct impacts to the MHPA from maintenance activities. In addition, this facility basin is not located within the COZ.

**Table 4-46a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Maple Canyon Creek – Maple Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Maple_1 (Acres)</i>
Disturbed Wetland (palm-dominated)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.01
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.08
<b>Total</b>			<b>0.09</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.5a and BIO-2).

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-46b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Maple Canyon Creek – Maple Facility Group**

General Vegetation Type (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			Maple Canyon_1 (Acres)
Non-Native Upland Vegetation Communities			
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	0.02
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.09
Total			0.11

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.4 POWERHOUSE CANYON CREEK – PERSHING FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are two facility segments, Pershing (Segments 1 and 2), proposed for maintenance within the Powerhouse Canyon Creek – Pershing facility group. Proposed maintenance of the Pershing (Segments 1 and 2) facility segment would result in permanent direct impacts to six vegetation communities and/or land cover types (Figures 6-61 and 6-62). Maintenance impacts within this facility segment would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities. Impacts from loading and access at this segment would be limited to Tier IV vegetation communities or disturbed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include riparian scrub (concrete-lined), riparian scrub (southern willow scrub; concrete-lined), and developed concrete-lined channel and would be considered significant, absent mitigation (**BIO-1.5a** and **BIO-2**) (Table 4-47a; Figures 7-61 and 7-62). Maintenance impacts to developed concrete-lined channel would not require mitigation.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Permanent direct impacts to uplands are to Tier IV only (Table 4-47b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Powerhouse Canyon Creek – Pershing facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-47a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Powerhouse Canyon Creek – Pershing Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			<i>Pershing_1</i> (Acres)	<i>Pershing_2</i> (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	1.12	0.12
Riparian Scrub (Concrete- lined) (63000)	Riparian Scrub <sup>1</sup>	A / R / C	0.06	0.01
Riparian Scrub (Southern Willow Scrub; Concrete- lined) (63320)	Riparian Scrub <sup>1</sup>	A / R / C	–	0.05
<b>Total</b>			<b>1.18</b>	<b>0.17</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.5b, and BIO-2).

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-47b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Powerhouse Canyon Creek – Pershing Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Pershing_1 (Acres)	Pershing_2 (Acres)
Non-Native Upland Vegetation Communities				
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	0.05	–
Land Covers				
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	<0.01	<0.01
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	1.47	0.06
Total			1.52	0.06

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.5 SAN DIEGO BAY – 28TH ST FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment, 28th St (Segment 1), proposed for maintenance within the San Diego Bay– 28th St facility group. Proposed maintenance of the 28th St (Segment 1) facility segment would result in permanent direct impacts to four vegetation communities and/or land cover types (Figure 6-63). Maintenance impacts would result from a track-steer working within the channel and gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources would include disturbed wetland and natural flood channel. These impacts would be less than 0.01 acre and would therefore not be significant and would not require mitigation (Table 4-48a; Figure 7-63).

Permanent direct impact to uplands would be to Tier IV only (Table 4-48b). Impacts to Tier IV communities would not be significant and would not require mitigation (City of San Diego 2018).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

The San Diego Bay – 28th St facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-48a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**San Diego Bay – 28th St Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			28th St_1 (Acres)
Disturbed Wetland (11200)	Disturbed Wetland <sup>4</sup>	A / R / C	<0.01
Natural Flood Channel (64200)	Natural Flood Channel <sup>4</sup>	A / R / C	<0.01
<b>Total</b>			<b>&lt;0.01</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

**Table 4-48b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**San Diego Bay – 28th St Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			28th St_1 (Acres)
Non-Native Upland Vegetation Communities			
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	0.01
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.04

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-48b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**San Diego Bay – 28th St Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			28th St_1 (Acres)
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.01
<b>Total</b>			<b>0.06</b>

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.6 CHOLLAS CREEK – NATIONAL FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are two facility segments proposed for maintenance within the Chollas Creek – National facility group: National (Segment 1) and National (Segment 2). Proposed maintenance of these two facility segments would result in permanent direct impacts to six vegetation communities and/or land cover types (Figures 6-64 through 6-66). Maintenance impacts within these facility segments would result from a track-steer, bulldozer, loader, and dump trucks working within the channel to perform maintenance activities, a gradall/excavator stationed outside of the channel limits reaching into the channels to perform maintenance activities, and from material stockpiling at a nearby location outside of channel limits. Impacts from loading and access at this segment would be limited to developed or disturbed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include disturbed wetland (Arundo-dominated), natural flood channel, and developed concrete-lined channel and would be considered significant (except for the disturbed wetland [Arundo-dominated]), absent mitigation (**BIO-1.5a** and **BIO-2**) (Table 4-49a; Figures 7-64 through 7-66). Maintenance impacts to disturbed wetland (Arundo-dominated) and developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-49b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

The Chollas Creek – National facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group. All permanent impacts proposed at the National (Segment 1) or National (Segment 2) facility segments that are within a previously permitted maintenance area for these channels would not require additional mitigation under the MWMP (Appendix F).

**Table 4-49a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Chollas Creek – National Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			National_1 (Acres)	National_2 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	–	3.59
Disturbed Wetland (Arundo-dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.05	<0.01
		C	–	<0.01
Natural Flood Channel, (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.62	0.01
<b>Total</b>			<b>0.67</b>	<b>3.60</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.5a and BIO-2).

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-49b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Chollas Creek – National Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			National_1 (Acres)	National_2 (Acres)
Non-Native Upland Vegetation Communities				
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	–	0.03
Land Covers				
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.31	–
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.03	0.18
Total			0.34	0.21

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.7 CHOLLAS CREEK – ROLANDO FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are three facility segments proposed for maintenance within the Chollas Creek - Rolando facility group: Cartagena (Segment 1), Rolando (Segment 1), and Rolando (Segment 2). Proposed maintenance of these three facility segments would result in permanent direct impacts to eight vegetation communities and/or land cover types (Figures 6-67 through 6-69). Maintenance impacts within these facility segments would result from a skid-steer working within the channels and a gradall/excavator stationed outside of the channel limits reaching into the channels to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources include riparian scrub (southern willow scrub), natural flood channel, and developed concrete-lined channel and would be considered significant, absent mitigation (**BIO-1.5a** and **BIO-2**) (Table 4-50a; Figure 7-67 through 7-69). Maintenance impacts to developed concrete-lined channel would not require mitigation.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Permanent direct impacts to sensitive vegetation would occur to coastal sage scrub and would be below the 0.10-acre threshold described in the SDBG; therefore, the impacts would not be significant and no mitigation would be required (Table 4-50b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Chollas Creek – Rolando facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in any of the segments in this facility group.

All permanent impacts proposed at the Rolando (Segment 2) facility segment that are within the previously permitted maintenance area for this channel would not require additional mitigation under the MWMP (Appendix F).

**Table 4-50a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Chollas Creek – Rolando Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number		
			<i>Cartagena_1</i> (Acres)	<i>Rolando_1</i> (Acres)	<i>Rolando_2</i> (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.56	0.18	0.05
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	–	–	0.21
Riparian Scrub (Southern Willow Scrub) (63320)	Riparian Scrub <sup>1</sup>	A / R / C	–	–	0.01
<b>Total</b>			<b>0.56</b>	<b>0.18</b>	<b>0.27</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.5a and BIO-2).

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-50b**  
**Upland Vegetation Community and Land Cover Impacts in the Chollas Creek – Rolando Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number		
			Cartagena_1 (Acres)	Rolando_1 (Acres)	Rolando_2 (Acres)
Sensitive Vegetation Communities					
Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub <sup>4</sup>	II	<0.01	–	–
Non-Native Upland Vegetation Communities					
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	–	0.06	0.09
Land Covers					
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	–	0.32	–
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.42	0.01	0.20
Total			0.42	0.39	0.29

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

## 4.6.8 CHOLLAS CREEK – MARTIN FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

One facility segment proposed for maintenance occurs within the Chollas Creek – Martin facility group: Martin (Segment 1). Proposed maintenance of this facility segment would result in permanent direct impacts to four vegetation communities and/or land cover types (Figure 6-70). Maintenance impacts within this facility segment would result from a track-steer working within the channel and gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Permanent impacts to wetland and jurisdictional resources include natural flood channel and riparian scrub (southern willow scrub; concrete-lined) and would be considered significant absent mitigation (**BIO-1.5a** and **BIO-2**) (Table 4-51a; Figure 7-70).

Permanent direct impacts to uplands are to Tier IV only (Table 4-51b). Impacts to Tier IV are not significant and would not require mitigation.

The Chollas Creek – Martin facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-51a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Chollas Creek – Martin Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Martin_1</i> (Acres)
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.01
Riparian Scrub (Southern Willow Scrub; Concrete-lined) (63320)	Riparian Scrub <sup>1</sup>	A / R / C	0.01
<b>Total</b>			<b>0.02</b>

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.5a and BIO-2).

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

**Table 4-51b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Chollas Creek – Martin Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			<i>Martin_1</i> (Acres)
Disturbed Land	Disturbed Land <sup>3</sup>	IV	0.01

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-51b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Chollas Creek – Martin Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			<i>Martin_1</i> (Acres)
(11300)			
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.10
<b>Total</b>			<b>0.11</b>

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.9 CHOLLAS CREEK – J ST FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment, J St (Segment 1), proposed for maintenance within the Chollas Creek - J St facility group. Proposed maintenance of the J St (Segment 1) facility segment would result in permanent direct impacts to four vegetation communities and/or land cover types (Figure 6-71). Maintenance impacts would result from a track-steer working within the channel and gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources only include disturbed wetland (Arundo-dominated) and ornamental plantings and are not considered significant (**BIO-1.5a** and **BIO-2**) (Table 4-52a; Figure 7-71).

Permanent direct impact to uplands are to Tier IV only (Table 4-52b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Chollas Creek - J St facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-52a**  
**Wetland Vegetation Community and Land Cover Impacts in the Chollas Creek – J St Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			J St_1 (Acres)
Disturbed Wetland (Arundo-dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.05
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	A / R / C	0.01
<b>Total</b>			<b>0.06</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

**Table 4-52b**  
**Upland Vegetation Community and Land Cover Impacts in the Chollas Creek – J St Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			J St_1 (Acres)
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	<0.01
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	<0.01
Total			<0.01

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 4.6.10 AUBURN CREEK – HOME FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are four facility segments proposed for maintenance within the Auburn Creek – Home facility group: Home (Segment 1), Home (Segment 2), Home (Segment 3), and Home (Segment 5). Proposed maintenance of these four facility segments would result in permanent direct impacts to seven vegetation communities and/or land cover types (Figures 6-72 through 6-75). Maintenance impacts within these facility segments would result from a track-steer, skid-steer, loader, and bulldozer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities. Impacts from loading and access at this segment would be limited to Tier IV vegetation communities or disturbed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetland and jurisdictional resources include riparian forest (southern willow forest), disturbed wetland (Arundo-dominated), natural flood channel and developed concrete-lined channel and would be considered significant (except for the disturbed wetland [Arundo-dominated] communities), absent mitigation (**BIO-1.5a** and **BIO-2**) (Table 4-53a; Figures 7-72 through 7-75). Maintenance impacts to disturbed wetland (Arundo-dominated) and developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-53b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Auburn Creek – Home facility group is partially within the MHPA boundary; however, there would be no direct impacts to MHPA designated lands from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

All permanent impacts proposed at the Home (Segments 1, 2, and 5) facility segments that are within a previously permitted maintenance area for these channels would not require additional mitigation under the MWMP (Appendix F).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-53a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Auburn Creek – Home Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number			
			Home_1 (Acres)	Home_2 (Acres)	Home_3 (Acres)	Home_5 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	–	–	0.25	0.04
Disturbed Wetland (Arundo- dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	–	<0.01	<0.01	–
		C	–	0.01	–	<0.01
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.19	0.06	–	0.19
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland <sup>1</sup>	C	<0.01	–	–	–
<b>Total</b>			<b>0.19</b>	<b>0.07</b>	<b>0.25</b>	<b>0.23</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.5a and BIO-2).

<sup>2</sup> Impacts are considered significant and would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-53b**  
**Upland Vegetation Community and Land Cover Impacts in the Auburn Creek – Home Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number			
			Home_1 (Acres)	Home_2 (Acres)	Home_3 (Acres)	Home_5 (Acres)
Non-Native Upland Vegetation Communities						
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.06	0.01	0.03	<0.01
Land Covers						
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.02	0.26	–	–
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.06	0.02	0.28	0.27
Total			0.14	0.29	0.31	0.27

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.11 AUBURN CREEK – WIGHTMAN FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are two facility segments proposed for maintenance within the Auburn Creek – Wightman facility group: Wightman (Segments 1 and 2). Proposed maintenance of these facility segments would result in permanent direct impacts to six vegetation communities and/or land cover types (Figures 6-76 and 6-77). Maintenance impacts within these facility segments would result from a track-steer and/or bulldozer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources include disturbed wetland (Arundo-dominated), natural flood channel, and developed concrete-lined channel and would be considered significant (except for the disturbed wetland [Arundo-dominated] communities) absent mitigation (**BIO-1.5a** and **BIO-2**) (Table 4-54a; Figures 7-76 and 7-77). Maintenance impacts to disturbed wetland (Arundo-dominated) and developed concrete-lined channel would not require mitigation.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Permanent direct impacts to uplands are to Tier IV only (Table 4-54b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Auburn Creek – Wightman facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. There would be no direct impacts to wetlands within the COZ in any of the segments in this facility group.

**Table 4-54a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Auburn Creek – Wightman Facility Group**

General Vegetation Type (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			Wightman_1 (Acres)	Wightman_2 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.04	-
Disturbed Wetland (Arundo-dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	<0.01	0.01
		C	<0.01	-
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.07	0.08
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland <sup>1</sup>	A / R / C	<0.01	0.13
		C	-	0.01
Total			0.12	0.23

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional  
Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.5a and BIO-2).

<sup>2</sup> Impacts are considered significant and would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-54b**  
**Vegetation Community and Land Cover Impacts in the**  
**Auburn Creek – Wightman Facility Group**

General Vegetation Type (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Wightman_1 (Acres)	Wightman_2 (Acres)
Non-Native Upland Vegetation Communities				
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	–	0.06
Land Covers				
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.02	0.14
Total			0.02	0.20

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.12 CHOLLAS CREEK – MEGAN FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are two facility segments proposed for maintenance within the Chollas Creek – Megan facility group: Megan (Segment 1) and Megan (Segment 2). Proposed maintenance of the Megan (Segment 1) and Megan (Segment 2) facility segments would result in permanent direct impacts to nine vegetation communities and/or land cover types (Figures 6-78 and 6-79). Maintenance impacts within these facility segments would result from a skid-steer and track-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources include disturbed riparian scrub (southern willow scrub; concrete-lined), natural flood channel, and developed concrete-lined channel and would be considered significant, absent mitigation (**BIO-1.5a**, and **BIO-2**) (Table 4-55a; Figures 7-78 and 7-79). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to sensitive vegetation communities (Tier I–IIIB) would be below the 0.10-acre threshold described in the SDBG; therefore, impacts would not be significant and no mitigation

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

would be required (Table 4-55b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

Maintenance activities would impact 0.62 acre of MHPA designated lands within the Chollas Creek – Megan and are aligned to impact the minimum necessary area within the MHPA. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-55a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Chollas Creek – Megan Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			Megan_1 (Acres)	Megan_2 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.28	–
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	<0.01	0.09
Riparian Scrub (Southern Willow Scrub; Concrete-lined) (63320)	Riparian Scrub <sup>1</sup>	A / R / C	0.01	–
<b>Total</b>			<b>0.29</b>	<b>0.09</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.5a and BIO-2).

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-55b**  
**Upland Vegetation Community and Land Cover Impacts in the Chollas Creek – Megan Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Megan_1 (Acres)	Megan_2 (Acres)
Sensitive Vegetation Communities				
Coastal Sage Scrub (Baccharis- dominated) (32530)	Coastal Sage Scrub <sup>4</sup>	II	0.01	–
Disturbed Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub <sup>4</sup>	II	<0.01	–
Sensitive Vegetation Communities Subtotal			0.01	–
Non-Native Upland Vegetation Communities				
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	<0.01	0.01
Land Covers				
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.07	0.05
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.11	<0.01
Total			0.19	0.06

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

## 4.6.13 CHOLLAS CREEK – 54TH ST FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment, 54th St (Segment 1), proposed for maintenance within the Chollas Creek – 54th St facility group. Proposed maintenance of the 54th St (Segment 1) facility segment would result in permanent direct impacts to four vegetation communities and/or land cover types (Figure 6-80). Maintenance impacts within 54th St (Segment 1) would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

into the channel to perform maintenance activities. Impacts from loading and access at this segment would be limited to developed or disturbed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include riparian scrub (southern willow scrub; concrete-lined), and developed concrete-lined channel and would be considered significant, absent mitigation (**BIO-1.5a** and **BIO-2**) (Table 4-56a; Figure 7-80). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-56b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Chollas Creek – 54th St facility group is not located within MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-56a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Chollas Creek – 54th St Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			54th St_1 (Acres)
Developed Concrete- lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	0.08
Riparian Scrub (Southern Willow Scrub; Concrete-lined) (63320)	Riparian Scrub <sup>1</sup>	A / R / C	0.01
<b>Total</b>			<b>0.09</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.5a and BIO-2).

<sup>2</sup> Impacts are considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-56b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Chollas Creek – 54th St Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			54th St_1 (Acres)
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.03
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.13
<b>Total</b>			<b>0.16</b>

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.14 SOUTH CHOLLAS CREEK – SOUTHCREST FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are two facility segments proposed for maintenance within the South Chollas Creek – Southcrest facility group: Alpha (Segment 1) and Ocean View (Segment 1). Proposed maintenance of these facility segments would result in permanent direct impacts to nine vegetation communities and/or land cover types (Figures 6-81 through 6-85). Maintenance impacts within these facility segments would result from a loader, bulldozer, and gradall/excavator working within the channel to perform maintenance activities. Impacts from loading and access at this segment would be limited to Tier IV vegetation communities or disturbed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include riparian forest (southern willow forest), disturbed wetland (Arundo-dominated), disturbed wetland, natural flood channel, and developed concrete-lined channel and would be considered significant (except for the disturbed wetland [Arundo-dominated] communities), absent mitigation (**BIO-1.5a** and **BIO-2**) (Table 4-57a; Figures 7-81 through 7-85). Maintenance impacts to disturbed wetland (Arundo-dominated) and developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-57b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

The South Chollas Creek – Southcrest facility group is partially within the MHPA boundary; however, there would be no direct impacts to MHPA designated lands from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-57a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**South Chollas Creek – Southcrest Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			Alpha_1 (Acres)	Ocean View_1 (Acres)
Developed Concrete- lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	0.20	1.54
Disturbed Wetland (11200)	Disturbed Wetland <sup>1</sup>	A / R / C	0.28	–
Disturbed Wetland (Arundo-dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.50	–
Disturbed Wetland (Arundo-dominated; concrete-lined) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	–	0.05
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.66	0.01
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland <sup>1</sup>	A / R / C	0.06	–
Riparian Forest (Southern Willow Forest; concrete-lined) (61320)	Riparian Forest or Woodland <sup>1</sup>	A / R / C	–	0.09
<b>Total</b>			<b>1.69</b>	<b>1.68</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

- <sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.5a and BIO-2).  
<sup>2</sup> Impacts are considered significant and would not require mitigation.  
<sup>3</sup> Impacts are not considered significant and would not require mitigation.  
<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

**Table 4-57b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**South Chollas Creek – Southcrest Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Alpha_1 (Acres)	Ocean View_1 (Acres)
Non-Native Upland Vegetation Communities				
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	0.01	–
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.64	<0.01
Land Covers				
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.34	0.09
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.37	0.10
Total			1.36	0.20

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.15 SOUTH CHOLLAS CREEK – EUCLID FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment, Euclid (Segment 2), proposed for maintenance within the South Chollas Creek – Euclid facility group. Proposed maintenance of the Euclid (Segment 2) facility segment would result in permanent direct impacts four vegetation communities and/or land cover types (Figure 6-86). Maintenance impacts within this facility segment would result from a skid-steer working within the channel and a loader working within the access area to perform maintenance

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

activities. Impacts from loading and access at this segment would be limited to developed or disturbed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include disturbed wetland (Arundo-dominated), and developed concrete-lined channel and would be considered significant (except for disturbed wetland [Arundo-dominated]) (Table 4-58a; Figure 7-86). Maintenance impacts to disturbed wetland (Arundo-dominated) and developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV (Table 4-58b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018). Any other direct impacts to sensitive vegetation communities that occur from maintenance activities would be considered significant, absent mitigation (**BIO-2**).

The South Chollas Creek – Euclid facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-58a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**South Chollas Creek – Euclid Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Euclid_2</i> (Acres)
Developed Concrete- lined Channel, (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.78
Disturbed Wetland (Arundo-dominated), (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	C	<0.01
<b>Total</b>			<b>0.78</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>2</sup> Impacts are considered significant and would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-58b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**South Chollas Creek – Euclid Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			<i>Euclid_2 (Acres)</i>
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.02
<b>Total</b>			<b>0.02</b>

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.16 SOUTH CHOLLAS CREEK – FEDERAL FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are two facility segments proposed for maintenance within the South Chollas Creek – Federal facility group: Federal (Segment 1) and Federal (Segment 2). Proposed maintenance of these facility segments would result in permanent direct impact to nine vegetation communities and/or land cover types (Figures 6-87 and 6-88). Maintenance impacts within these facility segments would result from a track-steer and bulldozer working within the channels and a gradall/excavator stationed outside of the channel limits reaching into the channels to perform maintenance activities. Impacts from loading and access at this segment would be limited to disturbed or developed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include natural flood channel, riparian forest, and developed concrete-lined channel and would be considered significant, absent mitigation (**BIO-1.5a** and **BIO-2**) (Table 4-59a; Figures 7-87 and 7-88). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to sensitive vegetation communities include disturbed Diegan coastal sage scrub, and coastal sage scrub (*Baccharis*-dominated) and would be considered significant absent mitigation (**BIO-1.5b** and **BIO-2**) (Table 4-59b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

The South Chollas Creek – Federal facility group is partially located within the MHPA boundary; however, there would be no direct impacts to MHPA designated land as a result of maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-59a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**South Chollas Creek – Federal Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			<i>Federal_1</i> (Acres)	<i>Federal_2</i> (Acres)
Developed Concrete-lined Channel (11200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	<0.01	0.45
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.03	–
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland <sup>1</sup>	A / R / C	0.02	–
<b>Total</b>			<b>0.05</b>	<b>0.45</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.5a and BIO-2).

<sup>2</sup> Impacts are considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-59b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**South Chollas Creek – Federal Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Federal_1 (Acres)	Federal_2 (Acres)
Sensitive Vegetation Communities				
Coastal Sage Scrub (Baccharis-dominated) (32530)	Coastal Sage Scrub <sup>1</sup>	II	<0.01	–
Disturbed Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub <sup>1</sup>	II	–	0.15
Sensitive Vegetation Communities Subtotal			<0.01	0.15
Non-Native Upland Vegetation Communities				
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	<0.01	0.01
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	<0.01	–
Land Covers				
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	–	0.18
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.31	0.76
Total			0.34	1.10

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.5b and BIO-2).

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.17 SOUTH CHOLLAS CREEK ENCANTO BRANCH – CASTANA FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

One facility segment, Castana (Segment 1), is proposed for maintenance within the South Chollas Creek Encanto Branch – Castana facility group. Proposed maintenance of the Castana (Segment 1)

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

facility segment would result in permanent direct impacts to four vegetation communities and/or land cover types (Figure 6-89). Maintenance impacts would result from a track-steer and bulldozer working within the channels and a gradall/excavator stationed outside of the channel limits reaching into the channels to perform maintenance activities. Impacts from loading and access at this segment would be limited to disturbed or developed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources would include natural flood channel and would be considered significant absent mitigation (**BIO-1.5a**, and **BIO-2**) (Table 4-60a; Figure 7-89).

Permanent direct impacts to uplands would be to Tier IV only (Table 4-60b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The South Chollas Creek Encanto Branch – Castana facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-60a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**South Chollas Creek Encanto Branch – Castana Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Castana_1</i> (Acres)
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.03
<b>Total</b>			<b>0.03</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional  
Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.5a and BIO-2).

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-60b**  
**Upland Vegetation Community and Land Cover Impacts in the South Chollas Creek Encanto Branch – Castana Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			Castana_1 (Acres)
Non-Native Upland Vegetation Communities			
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.02
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.05
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.19
Total			0.26

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.18 SOUTH CHOLLAS CREEK ENCANTO BRANCH – IMPERIAL FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment, Imperial (Segment 2), proposed for maintenance within the South Chollas Creek Encanto Branch – Imperial facility group. Proposed maintenance of the Imperial (Segment 2) facility segment would result in permanent direct impacts to four vegetation communities and/or land cover types (Figure 6-90). Maintenance impacts would result from a skid-steer, bulldozer, loader, and gradall/excavator working within the channel to perform maintenance activities. Impacts from loading and access at this segment would be limited to developed or disturbed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include disturbed wetland (Arundo-dominated) and developed concrete-lined channel and would be considered significant (except for disturbed wetland [Arundo-dominated]) (Table 4-61a; Figure 7-90). Maintenance impacts to the

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

invasive disturbed wetland (Arundo-dominated) community and developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-61b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018). Any other direct impacts to sensitive vegetation communities that occur from maintenance activities would be considered significant, absent mitigation **(BIO-2)**.

The South Chollas Creek Encanto Branch – Imperial facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-61a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**South Chollas Creek Encanto Branch – Imperial Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Imperial_2</i> (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	0.67
Disturbed Wetland (Arundo- dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	<0.01
<b>Total</b>			<b>0.67</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>2</sup> Impacts are considered significant and would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-61b**  
**Upland Vegetation Community and Land Cover Impacts in the South Chollas Creek Encanto Branch – Imperial Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			<i>Imperial_2</i> (Acres)
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	<0.01
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.06
<b>Total</b>			<b>0.06</b>

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.19 SOUTH CHOLLAS CREEK ENCANTO BRANCH – JAMACHA FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment proposed for maintenance within the South Chollas Creek Encanto Branch – Jamacha facility group: Jamacha (Segment 1). Proposed maintenance of this facility segment would result in permanent direct impacts to seven vegetation communities and/or land cover types (Figures 6-91 through 6-94). Maintenance impacts within these facility segments would result from a loader and gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities. If needed, a bulldozer will work within the channel.

Permanent impacts to wetlands and jurisdictional resources include disturbed wetland (Arundo-dominated), disturbed wetland, and natural flood channel and would be considered significant (except for the disturbed wetland [Arundo-dominated] community) absent mitigation (**BIO-1.5a**, and **BIO-2**) (Table 4-62a; Figures 7-91 through 7-94). Impacts to disturbed wetland (Arundo-dominated) would not require mitigation.

Permanent direct impacts to sensitive vegetation communities (Tier I–IIIB) would occur and would be below the 1.0-acre threshold described in the SDBG for non-native grassland habitats that are surrounded by urban development; therefore, impacts would not be significant and would not

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

require mitigation (Table 4-62b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The South Chollas Creek Encanto Branch – Jamacha facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in any of the segments in this facility group.

All permanent impacts proposed at the Jamacha (Segment 1) facility segment that are within the previously permitted maintenance area for this channel would not require additional mitigation under the MWMP (Appendix F).

**Table 4-62a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**South Chollas Creek Encanto Branch – Jamacha Facility Group**

MWMP Mapping Vegetation Community, (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Jamacha_1</i> (Acres)
Disturbed Wetland (11200)	Disturbed Wetland <sup>1</sup>	C	0.02
Disturbed Wetland (Arundo-Dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	C	0.12
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.12
<b>Total</b>			<b>0.26</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.5a and BIO-2).

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-62b**  
**Upland Vegetation Community and Land Cover Impacts in the South Chollas Creek Encanto Branch – Jamacha Facility Group**

MWMP Mapping Vegetation Community, (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			Jamacha_1 (Acres)
Non-Native Upland Vegetation Communities			
Non-Native Grassland (42200)	Non-Native Grassland <sup>4</sup>	IIIB	0.27
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.07
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.69
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.01
Total			1.06

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

## 4.6.20 PALETA CREEK – COTTONWOOD FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are two facility segments proposed for maintenance within the Paleta Creek – Cottonwood facility group: Cottonwood (Segment 1) and Cottonwood (Segment 2). Proposed maintenance of these facility segments would result in permanent direct impacts to four vegetation communities and/or land cover types (Figures 6-95 through 6-97). Maintenance impacts within these facility segments would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Impacts from loading and access at this segment would be limited to developed or disturbed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include developed concrete-lined channel and would be considered significant (Table 4-63a; Figures 7-95 through 7-97). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-63b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018). Any other direct impacts to sensitive vegetation communities that occur from maintenance activities would be considered significant, absent mitigation (**BIO-2**).

The Paleta Creek – Cottonwood facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group. Further, all permanent impacts proposed at the Cottonwood (Segments 1 and 2) facility segments that are within a previously permitted maintenance area for these channels would not require additional mitigation under the MWMP (Appendix F).

**Table 4-63a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Paleta Creek – Cottonwood Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			<i>Cottonwood_1 (Acres)</i>	<i>Cottonwood_2 (Acres)</i>
Developed Concrete- lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	0.31	1.21
<b>Total</b>			<b>0.31</b>	<b>1.21</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional  
Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>2</sup> Impacts are considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-63b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Paleta Creek – Cottonwood Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Cottonwood_1 (Acres)	Cottonwood_2 (Acres)
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	–	0.09
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.05	0.02
<b>Total</b>			<b>0.05</b>	<b>0.11</b>

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.21 PALETA CREEK – SOLOLA FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are two facility segments proposed for maintenance within the Paleta Creek – Solola facility group: Solola (Segment 1), and Solola (Segment 2). Proposed maintenance of these facility segments would result in permanent direct impacts to four vegetation communities and/or land cover types (Figures 6-98 through 6-102). Maintenance impacts within these segments would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities. Impacts from loading and access at this segment will be limited to developed or disturbed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include developed concrete-lined channel and would be considered significant (Table 4-64a; Figures 7-98 through 7-102). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-64b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018). Any other direct impacts to sensitive communities that occur from maintenance activities would be considered significant, absent mitigation (**BIO-2**).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

The Paleta Creek – Solola facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-64a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Paleta Creek – Solola Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			Solola_1 (Acres)	Solola_2 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	1.35	0.63
<b>Total</b>			<b>1.35</b>	<b>0.63</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>2</sup> Impacts are considered significant and would not require mitigation.

**Table 4-64b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Paleta Creek – Solola Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Solola_1 (Acres)	Solola_2 (Acres)
Non-Native Upland Vegetation Communities				
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.01	0.13
Land Covers				
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.08	-
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.11	0.03
Total			0.20	0.16

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.22 3644 ROSELAWN (OT03694) STRUCTURE

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

The 3644 Roselawn (OT03694) structure consists of a drainage facility that conveys storm water flows from Roselawn Street south into a vegetated swale in a residential neighborhood. Proposed maintenance of this structure would result in permanent direct impacts to two vegetation communities and/or land cover types (Figure 6-137). Maintenance impacts at this structure would result from a hand crews digging and removing sediment that has accumulated within and below this drainage facility within the urban canyon. Impacts from loading and access at this drainage facility would be limited to developed or disturbed land such that no mitigation would be necessary for these impacts.

There would be no permanent impacts to wetlands and jurisdictional resources (Figure 7-138).

Permanent direct impacts to uplands are to Tier IV only (Table 4-65). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018). Any other direct impacts to sensitive vegetation communities that occur from maintenance activities would be considered significant, absent mitigation (**BIO-2**).

The drainage facility is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ at this location.

**Table 4-65**  
**Upland Vegetation Community and Land Cover Impacts at the**  
**3644 Roselawn (OT03694) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Structure Name
			3644 Roselawn (Acres)
Non-Native Upland Vegetation Communities			
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.01
Land Covers			
Urban/Developed	Disturbed Land <sup>3</sup>	IV	0.01

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-65**  
**Upland Vegetation Community and Land Cover Impacts at the**  
**3644 Roselawn (OT03694) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Structure Name
			3644 Roselawn (Acres)
(12000)			
<b>Total</b>			<b>0.02</b>

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.23 4202 J STREET (HW04013) STRUCTURE

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

The 4202 J Street (HW04013) structure consists of a drainage facility that receives storm water flows from J Street and conveys them into a vegetated swale. Proposed maintenance of this structure would result in permanent direct impacts to five vegetation communities and/or land cover types (Figure 6-140). Maintenance impacts at the 4202 J Street (HW04013) structure would result from hand crews and a skid-steer working to remove sediment and vegetation from the maintenance area. Impacts from loading and access at this drainage facility would be limited to developed or disturbed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include riparian scrub (southern willow scrub), and disturbed wetland (Arundo-dominated) and would be considered significant (except for the disturbed wetland [Arundo-dominated] community), absent mitigation (**BIO-1.5a** and **BIO-2**) (Table 4-66a; Figure 7-133). Impacts to disturbed wetland (Arundo-dominated) would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-66b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The drainage facility is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ at this location.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-66a**  
**Wetland Vegetation Community and Land Cover Impacts at the 4202 J Street (HW04013) Structure**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name
			4202 J Street (Acres)
Disturbed Wetland (Arundo-Dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.03
Riparian Scrub (Southern Willow Scrub) (63320)	Riparian Scrub <sup>1</sup>	A / R / C	0.01
<b>Total</b>			<b>0.04</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.5a and BIO-2)

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

**Table 4-66b**  
**Upland Vegetation Community and Land Cover Impacts at the 4202 J Street (HW04013) Structure**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name
			4202 J Street (Acres)
Non-Native Upland Vegetation Communities			
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	<0.01
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.01
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	<0.01
Total			0.01

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 4.6.24 1206 GOODYEAR (OT04671) STRUCTURE

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

The 1206 Goodyear (OT04671) structure consists of a drainage facility that conveys storm water flows from Goodyear Street south into a vegetated swale in a residential neighborhood. Proposed maintenance of this structure would result in permanent direct impacts to three vegetation communities and/or land cover types (Figure 6-131). Maintenance impacts at the 1206 Goodyear (OT04671) structure would result from hand crews and a skid-steer working to remove sediment and vegetation from the maintenance area. Impacts from loading and access at this drainage facility would be limited to developed or disturbed land such that no mitigation would be necessary for these impacts.

There would be no impacts to wetlands and jurisdictional resources (Figure 7-139).

Permanent direct impacts to uplands are to Tier IV only (Table 4-67). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018). Any other direct impacts to sensitive vegetation communities that occur from maintenance activities would be considered significant, absent mitigation (**BIO-2**).

The drainage facility is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ at this location.

**Table 4-67**  
**Upland Vegetation Community and Land Cover Impacts at the**  
**1206 Goodyear (OT04671) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name
			1206 Goodyear (Acres)
Non-Native Upland Vegetation Communities			
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	<0.01
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.01
Urban/Developed	Disturbed Land <sup>3</sup>	IV	0.11

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-67**  
**Upland Vegetation Community and Land Cover Impacts at the**  
**1206 Goodyear (OT04671) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name
			1206 Goodyear (Acres)
(12000)			
<b>Total</b>			<b>0.12</b>

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.6.25 DIRECT IMPACTS TO SENSITIVE PLANT SPECIES IN THE PUEBLO SAN DIEGO WATERSHED

Eight sensitive plant species were observed during the focused plant surveys in 2019 in the Pueblo San Diego watershed: singlewhorl burrobrush (CRPR 2B.2), San Diego sagewort (CRPR 4.2), San Diego County viguiera (CRPR 4.2), San Diego marsh-elder (CRPR 2B.2), southwestern spiny rush (CRPR 4.2), Torrey pine (CRPR 1B.2), Nuttall's scrub oak (CRPR 1B.1), and ashy spike-moss (CRPR 4.1). There are no other sensitive plant species that have a high or moderate potential to occur in suitable habitat in the Pueblo San Diego watershed (see Appendix D).

Four sensitive plant species would be directly impacted by maintenance activities:

- singlewhorl burrobrush (CRPR 2B.2) within Home (Segment 2), Alpha (Segment 1), and Ocean View (Segment 1) facilities;
- southwestern spiny rush (CRPR 4.2) within Federal (Segment 2) facility;
- San Diego marsh-elder (CRPR 2B.2) within Alpha (Segment 1) facility; and
- San Diego County viguiera (CRPR 4.2) within Ocean View (Segment 1) facility.

Impacts to the CRPR 4 species would not be considered significant. Impacts to singlewhorl burrobrush and San Diego marsh-elder are considered significant, and, if unavoidable, would require habitat-based mitigation measures (**BIO-1a** and **BIO-1b**).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

### 4.6.26 DIRECT IMPACTS TO SENSITIVE WILDLIFE IN THE PUEBLO SAN DIEGO WATERSHED

In the Pueblo San Diego watershed, there are six sensitive wildlife species that were either observed during focused surveys or have a high potential to occur in suitable habitat within the limits of MWMP facility segment maintenance areas and, therefore, would be directly impacted by maintenance activities or by removal of this habitat (**BIO-1.5a, BIO-1.5b, BIO-2, BIO-4, BIO-5, and BIO-6**). These species include coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, yellow-breasted chat, Ridgway's rail, and yellow warbler. Additionally, raptor species, which include MSCP Covered Species Cooper's hawk, have a high potential to occur or were observed within or adjacent to MWMP facility segments in the Pueblo San Diego watershed (Appendix E). Two sensitive wildlife species have moderate potential to occur within the Pueblo San Diego watershed study area (see Appendix E). Impacts to these species would be considered significant absent mitigation (**BIO-1.5a, BIO-4, and BIO-6**). Further details regarding direct and indirect impacts to sensitive wildlife species within each of the facility segments in this watershed are provided in Table 4-69. Impacts would be considered significant absent mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-69**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the Pueblo San Diego Watershed**

Facility Segment	Least Bell's Vireo	Southwestern Willow Flycatcher	Yellow-Breasted Chat	Ridgway's Rail	Yellow Warbler	Coastal California Gnatcatcher	Raptors
<i>Maple Canyon Creek – Maple Facility Group</i>							
Maple (Segment 1)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Washington Canyon Creek – Washington Facility Group</i>							
Washington (Segment 1)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
Washington (Segment 2)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Mission Hill Canyon Creek – Titus Facility Group</i>							
Titus (Segment 1)	None	None	None	None	None	*BIO 1.4b, BIO-2, EP-BIO-3a-c, EP-BIO-4, BIO-7	*BIO-4, BIO-6, EP-BIO-3a-c
<i>Powerhouse Canyon Creek – Pershing Facility Group</i>							
Pershing (Segment 1)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
Pershing (Segment 2)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-69**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the Pueblo San Diego Watershed**

Facility Segment	Least Bell's Vireo	Southwestern Willow Flycatcher	Yellow-Breasted Chat	Ridgway's Rail	Yellow Warbler	Coastal California Gnatcatcher	Raptors
<i>San Diego Bay – 28th St. Facility Group</i>							
28th St (Segment 1)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Chollas Creek – National Facility Group</i>							
National (Segment 1)	None	None	None	BIO-5, EP-BIO-3a-c, EP-BIO-4	None	None	BIO-4, BIO-6, EP-BIO-3a-c
National (Segment 2)	None	None	None	BIO-5, EP-BIO-3a-c, EP-BIO-4	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Chollas Creek – Rolando Facility Group</i>							
Cartagena (Segment 1)	None	None	None	None	None	None	None
Rolando (Segment 1)	None	None	None	None	None	None	None
Rolando (Segment 2)	None	None	None	None	None	None	*BIO-4, BIO-6, EP-BIO-3a-c

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-69**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the Pueblo San Diego Watershed**

Facility Segment	Least Bell's Vireo	Southwestern Willow Flycatcher	Yellow-Breasted Chat	Ridgway's Rail	Yellow Warbler	Coastal California Gnatcatcher	Raptors
<i>Chollas Creek – Martin Facility Group</i>							
Martin (Segment 1)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Chollas Creek – J St Facility Group</i>							
J St (Segment 1)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Auburn Creek – Home Facility Group</i>							
Home (Segment 1)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
Home (Segment 2)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
Home (Segment 3)	None	None	None	None	None	BIO 1.4b, BIO-2, EP-BIO-3a-c, EP-BIO-4, BIO-7	BIO-4, BIO-6, EP-BIO-3a-c
Home (Segment 5)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Auburn Creek – Wightman Facility Group</i>							
Wightman (Segment 1)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-69**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the Pueblo San Diego Watershed**

<b>Facility Segment</b>	<b>Least Bell's Vireo</b>	<b>Southwestern Willow Flycatcher</b>	<b>Yellow-Breasted Chat</b>	<b>Ridgway's Rail</b>	<b>Yellow Warbler</b>	<b>Coastal California Gnatcatcher</b>	<b>Raptors</b>
Wightman (Segment 2)	BIO-1.5a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	None	None	BIO-1.5a, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Chollas Creek – Megan Facility Group</i>							
Megan (Segment 1)	None	None	None	None	None	BIO 1.4b, BIO-2, EP-BIO-3a-c, EP-BIO-4, BIO-7	BIO-4, BIO-6, EP-BIO-3a-c
Megan (Segment 2)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Chollas Creek – 54th St Facility Group</i>							
54th St (Segment 1)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>South Chollas Creek – Southcrest Facility Group</i>							
Alpha (Segment 1)	BIO-1.5a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-1.5a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-1.5a, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	*BIO-1.5a, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	BIO-4, BIO-6, EP-BIO-3a-c

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 4-69**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the Pueblo San Diego Watershed**

<b>Facility Segment</b>	<b>Least Bell's Vireo</b>	<b>Southwestern Willow Flycatcher</b>	<b>Yellow-Breasted Chat</b>	<b>Ridgway's Rail</b>	<b>Yellow Warbler</b>	<b>Coastal California Gnatcatcher</b>	<b>Raptors</b>
Ocean View (Segment 1)	None	None	None	None	*BIO-1.5a, EP-BIO-3a-c	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>South Chollas Creek – Euclid Facility Group</i>							
Euclid (Segment 2)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>South Chollas Creek – Federal Facility Group</i>							
Federal (Segment 1)	None	None	None	None	None	BIO 1.4b, BIO-2, EP-BIO-3a-c, EP-BIO-4, BIO-7	BIO-4, BIO-6, EP-BIO-3a-c
Federal (Segment 2)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>South Chollas Creek Encanto Branch – Castana Facility Group</i>							
Castana (Segment 1)	None	None	None	None	None	None	None

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-69**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the Pueblo San Diego Watershed**

Facility Segment	Least Bell's Vireo	Southwestern Willow Flycatcher	Yellow-Breasted Chat	Ridgway's Rail	Yellow Warbler	Coastal California Gnatcatcher	Raptors
<i>South Chollas Creek Encanto Branch – Imperial Facility Group</i>							
Imperial (Segment 2)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>South Chollas Creek Encanto Branch – Jamacha Facility Group</i>							
Jamacha (Segment 1)	None	None	None	None	None	None	*BIO-4, BIO-6, EP-BIO-3a-c
<i>Paleta Creek – Cottonwood Facility Group</i>							
Cottonwood (Segment 1)	None	None	None	None	None	None	None
Cottonwood (Segment 2)	None	None	None	None	None	None	None
<i>Paleta Creek – Solola Facility Group</i>							
Solola (Segment 1)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
Solola (Segment 2)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Structures</i>							
3644 Roselawn (OT03694)	None	None	None	None	None	None	BIO-4, EP-BIO-3a-c

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-69**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the Pueblo San Diego Watershed**

<b>Facility Segment</b>	<b>Least Bell's Vireo</b>	<b>Southwestern Willow Flycatcher</b>	<b>Yellow-Breasted Chat</b>	<b>Ridgway's Rail</b>	<b>Yellow Warbler</b>	<b>Coastal California Gnatcatcher</b>	<b>Raptors</b>
4204 J Street (HW04013)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
1206 Goodyear (OT04671)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c

**Notes:**

- \* Species was observed at this facility segment during 2017 focused surveys or during surveys conducted during previous maintenance activities within the segment.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## **4.7 DIRECT IMPACTS IN THE SWEETWATER WATERSHED**

Direct impacts from proposed maintenance within the Sweetwater watershed would occur at one facility group and within a single facility segment. None of the proposed maintenance impacts in this watershed would occur within the MHPA or COZ.

### **4.7.1 SWEETWATER RIVER – PARKSIDE**

#### **Direct Impacts to Vegetation Communities and Jurisdictional Resources**

There is one facility segment, Parkside (Segment 1), proposed for maintenance within the Sweetwater River – Parkside facility group. Proposed maintenance of the Parkside (Segment 1) facility segment would result in permanent direct impacts to two vegetation communities and/or land cover types (Figure 6-103). Maintenance impacts would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities. Impacts from loading and access at this segment would be limited to developed or disturbed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include developed concrete-lined channel, and are significant, absent mitigation (Table 4-70a; Figure 7-103). However, impacts from maintenance of developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-70b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018). Any other direct impacts to sensitive vegetation communities that occur from maintenance activities would be considered significant, absent mitigation (**BIO-2**).

The Sweetwater River - Parkside facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

All permanent impacts proposed at the Parkside (Segment 1) facility segment that are within the previously permitted maintenance area for this channel would not require additional mitigation under the MWMP (Appendix F).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-70a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Sweetwater River – Parkside Facility Group**

MWMP Mapping Vegetation Community(Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Parkside_1 (Acres)</i>
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.99
<b>Total</b>			<b>0.99</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>2</sup> Impacts are considered significant and would not require mitigation.

**Table 4-70b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Sweetwater River – Parkside Facility Group**

MWMP Mapping Vegetation Community(Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			<i>Parkside_1 (Acres)</i>
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	<0.01
<b>Total</b>			<b>&lt;0.01</b>

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.7.2 DIRECT IMPACTS TO SENSITIVE PLANT SPECIES IN THE SWEETWATER WATERSHED

In the Sweetwater watershed, there were no sensitive plant species observed during focused plant surveys in 2019 (or during previous biological surveys) or that have a high or moderate potential to occur in suitable habitat (see Appendix D). Therefore, there are no potential impacts and mitigation is not required.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 4.7.3 DIRECT IMPACTS TO SENSITIVE WILDLIFE IN THE SWEETWATER WATERSHED

In the Sweetwater watershed, there were no sensitive wildlife species observed during focused surveys or that had a high potential to occur in suitable habitat within the limits of MWMP facility segment maintenance areas. In addition, direct impacts to nesting birds and raptors, which were not observed but have potential to occur in suitable habitat within and adjacent to the facility segment's maintenance areas, would be mitigated to a level below significance through **MM-BIO-4** and **MM-BIO-6**. Four sensitive wildlife species have moderate potential to occur within the Sweetwater watershed study area (see Appendix E). Impacts to these species would be significant, absent mitigation (**BIO-4**, and **BIO-6**).

## 4.8 DIRECT IMPACTS IN THE OTAY WATERSHED

Direct impacts from proposed maintenance within the Otay watershed would occur at two facility groups within eight individual facility segments, as described in Sections 4.8.1 and 4.8.4. There would be no direct impacts to the MHPA as part of the proposed maintenance activities. There is one facility group (two facility segments) within the COZ that would be impacted by maintenance activities.

### 4.8.1 NESTOR CREEK – NESTOR FACILITY GROUP

#### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are six facility segments proposed for maintenance within the Nestor Creek - Nestor facility group: Cedar (Segment 1), Cedar (Segment 2), Dahlia (Segment 1), Cerissa (Segment 1), Grove (Segment 1), and 30th St (Segment 1). Proposed maintenance within these facility segments would result in permanent direct impacts to 12 vegetation communities and/or land cover types (Figures 6-104 through 6-110). Maintenance impacts within these facility segments would result from a track-steer, skid-steer, bulldozer, and loader working within the channel and carrying material outside the channel or to a gradall/excavator stationed outside of the channel limits that would reach into the channels to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources include freshwater marsh, freshwater marsh (concrete-lined), riparian forest (southern willow forest), riparian forest (southern willow forest; concrete-lined), disturbed wetland (Arundo-dominated), disturbed wetland (concrete-lined), disturbed wetland, natural flood channel, and developed concrete-lined channel and would be considered significant (except for the disturbed wetland [Arundo-dominated] communities), absent mitigation (**BIO-1.6a** and **BIO-2**) (Table 4-71a; Figures 7-104 through 7-110). Maintenance impacts to disturbed wetland (Arundo-dominated) and developed concrete-lined channel would not require mitigation.

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

Permanent direct impacts to uplands are to Tier IV only (Table 4-71b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Nestor Creek - Nestor facility group is not located within the MHPA; therefore, no direct impacts to the MHPA designated lands would occur from maintenance activities. However, in this facility group, direct impacts to wetlands within the COZ would occur at two of the facility segments: Cedar (Segments 1 and 2). Any permanent impacts proposed at the Cedar (Segments 1 and 2) facility segments that are within previously permitted maintenance areas would not require additional mitigation under the MWMP (Appendix F).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 4-71a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Nestor Creek – Nestor Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number					
			<i>Cedar_1</i> (Acres)	<i>Cedar_2</i> (Acres)	<i>Dahlia_1</i> (Acres)	<i>Cerissa_1</i> (Acres)	<i>Grove_1</i> (Acres)	<i>30th St_1</i> (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C / CC	-	0.24	-	-	-	-
		A / R / C	-	-	0.46	-	-	0.64
Disturbed Wetland (11200)	Disturbed Wetland <sup>1</sup>	A / R / C	-	-	-	0.22	0.43	-
Disturbed Wetland (Arundo- Dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	-	-	-	0.08	-	-
		CC / C	<0.01	0.02	-	-	-	-
		C	-	-	-	<0.01	-	-

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-71a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Nestor Creek – Nestor Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number					
			<i>Cedar_1</i> (Acres)	<i>Cedar_2</i> (Acres)	<i>Dahlia_1</i> (Acres)	<i>Cerissa_1</i> (Acres)	<i>Grove_1</i> (Acres)	<i>30th St_1</i> (Acres)
Disturbed Wetland (Concrete-lined) (11200)	Disturbed Wetland <sup>1</sup>	A / R / C	-	0.05	-	-	-	-
Freshwater Marsh (52400)	Freshwater Marsh <sup>1</sup>	A / R / C	-	-	-	0.48	-	-
Freshwater Marsh (concrete-lined) (52400)	Freshwater Marsh <sup>1</sup>	A / R / C	-	0.02	-	-	-	-

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-71a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Nestor Creek – Nestor Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number					
			<i>Cedar_1</i> (Acres)	<i>Cedar_2</i> (Acres)	<i>Dahlia_1</i> (Acres)	<i>Cerissa_1</i> (Acres)	<i>Grove_1</i> (Acres)	<i>30th St_1</i> (Acres)
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C / CC	0.03	0.01	–	–	–	–
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland <sup>1</sup>	A / R / C	–	–	–	0.91	0.21	0.02
		C	–	–	–	–	–	<0.01
Riparian Forest (Southern Willow Forest, Concrete-Lined) (61320)	Riparian Forest or Woodland <sup>1</sup>	A / R / C	–	–	–	–	–	0.16
<b>Total</b>			<b>0.03</b>	<b>0.35</b>	<b>0.46</b>	<b>1.69</b>	<b>0.64</b>	<b>0.82</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.6a and BIO-2).

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

**Table 4-71b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Nestor Creek – Nestor Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number					
			<i>Cedar_1</i> (Acres)	<i>Cedar_2</i> (Acres)	<i>Dahlia_1</i> (Acres)	<i>Cerissa_1</i> (Acres)	<i>Grove_1</i> (Acres)	<i>30th St_1</i> (Acres)
Non-Native Upland Vegetation Communities								
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	–	0.02	–	0.10	0.15	<0.01
Land Covers								
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.01	0.16	–	2.53	0.01	0.94
Urban/ Developed (12000)	Disturbed Land <sup>3</sup>	IV	<0.01	0.19	0.03	0.04	0.06	<0.01
Total			0.01	0.37	0.03	2.67	0.22	0.94

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated. See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 4.8.2 NESTOR CREEK – OUTER FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are two facility segments proposed for maintenance within the Nestor Creek – Outer facility group: Outer (Segment 1) and Outer (Segment 2). Proposed maintenance of these facility segments would result in permanent direct impacts to five vegetation communities and/or land cover types (Figures 6-111 and 6-112). Maintenance impacts within these facility segments would result from a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities. Impacts from loading and access at this segment would be limited to disturbed or developed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include disturbed wetland, and developed concrete-lined channel and would be considered significant, absent mitigation (**BIO-1.6a** and **BIO-2**) (Table 4-72a; Figures 7-111 and 7-112). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-72b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Nestor Creek – Outer facility group is not located within MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-72a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Nestor Creek – Outer Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			Outer_1 (Acres)	Outer_2 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	<0.01	0.01
Disturbed Wetland (11200)	Disturbed Wetland <sup>1</sup>	A / R / C	0.13	–
<b>Total</b>			<b>0.13</b>	<b>0.01</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.6a and BIO-2).

<sup>2</sup> Impacts are considered significant and would not require mitigation.

**Table 4-72b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Nestor Creek – Outer Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Outer_1 (Acres)	Outer_2 (Acres)
Non-Native Upland Vegetation Communities				
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.05	0.01
Land Covers				
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.04	–
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	<0.01	0.16
Total			0.09	0.17

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.8.3 DIRECT IMPACTS TO SENSITIVE PLANT SPECIES IN THE OTAY WATERSHED

In the Otay watershed, there were no sensitive plant species observed during focused plant surveys in 2019 (or during previous biological surveys) or that have high or moderate potential to occur within suitable habitat (see Appendix D). Therefore, there are no potential impacts and mitigation is not required.

## 4.8.4 DIRECT IMPACTS TO SENSITIVE WILDLIFE IN THE OTAY WATERSHED

In the Otay watershed, there are five sensitive wildlife species that were either observed during focused surveys or have a high potential to occur in suitable habitat within the limits of MWMP facility segment maintenance areas and, therefore, would be directly impacted by maintenance activities or by removal of this habitat (**BIO-1.6a**, **BIO-1.6b**, **BIO-2**, **BIO-4**, **BIO-5**, and **BIO-6**): least

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Bell's vireo, southwestern willow flycatcher, yellow-breasted chat, Ridgway's rail, and yellow warbler. Additionally, raptor species that include federally protected white-tailed kite, MSCP Covered Species northern harrier and Cooper's hawk, and California gull have a high potential to occur or were observed within or adjacent to MWMP facility segments in the Otay watershed (Appendix E). Two sensitive wildlife species have moderate potential to occur within the Otay watershed study area (see Appendix E). Impacts to these species would be considered significant absent mitigation (**BIO-1.6a**, **BsIO-4**, and **BIO-6**). Further details regarding direct and indirect impacts to sensitive wildlife species within each of the facility segments in this watershed are provided in Table 4-73. Impacts would be considered significant absent mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-73**

**Direct and Indirect Impacts to Sensitive Wildlife by Facility Group and Facility Segment within the Otay Watershed**

<b>Facility Segment</b>	<b>Least Bell's Vireo</b>	<b>Southwestern Willow Flycatcher</b>	<b>Yellow-Breasted Chat</b>	<b>Ridgway's Rail</b>	<b>Yellow Warbler</b>	<b>Raptors &amp; California Gull</b>
<i>Nestor Creek – Nestor Facility Group</i>						
Cedar (Segment 1)	None	None	None	BIO-5, EP-BIO-3a-c, EP-BIO-4	None	None
Cedar (Segment 2)	None	None	None	BIO-5, EP-BIO-3a-c, EP-BIO-4	None	None
Dahlia (Segment 1)	None	None	None	None	None	None
Cerissa (Segment 1)	BIO-1.5a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-1.5a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-1.5a, BIO-7, EP-BIO-4, EP-BIO-6	None	* BIO-1.5a, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	*BIO-4, BIO-6, EP-BIO-3a-c
Grove (Segment 1)	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
30th St (Segment 1)	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Nestor Creek – Outer Facility Group</i>						
Outer (Segment 1)	None	None	None	None	None	None
Outer (Segment 2)	None	None	None	None	None	None

**Note:**

\* Species was observed at this facility segment during 2017 focused surveys or during surveys conducted during previous maintenance activities within the segment.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## **4.9 DIRECT IMPACTS IN THE TIJUANA RIVER WATERSHED**

Direct impacts from proposed maintenance within the Tijuana River watershed would occur at six facility groups (11 individual facility segments), as described in Sections 4.9.1 through 4.9.8. A portion of these maintenance impacts would occur within the MHPA at one facility group in two facility segments. There are two facility groups (three facility segments) within the COZ that would be impacted by maintenance activities.

### **4.9.1 TIJUANA RIVER – PILOT & SMUGGLER’S FACILITY GROUP**

#### **Direct Impacts to Vegetation Communities and Jurisdictional Resources**

There are two channel segments within the Tijuana River – Pilot and Smuggler’s facility group: Pilot Channel (Segment 1) and Smuggler’s Gulch (Segment 1). Proposed maintenance of the Pilot Channel (Segment 1) facility segment would result in permanent direct impacts to ten vegetation communities and/or land cover types (Figures 6-113 through 6-116). Maintenance impacts in these facility segments would result from a bulldozer scraping material from within the channel and transporting that material to central locations where it is loaded into rock truck and transported to a sorting and stockpiling location outside of channel limits. Three equipment turn-arounds are used along the channel to facilitate maintenance. Access in this segment is achieved with a ramp on the eastern bank of Smuggler’s Gulch (Segment 1) channel.

Permanent impacts to wetlands and jurisdictional resources include disturbed riparian scrub, riparian scrub (mulefat scrub), riparian forest (southern willow forest), riparian scrub (southern willow scrub), natural flood channel, disturbed land, ornamental planting, and developed concrete-lined channel and would be considered significant, absent mitigation (Table 4-74a; Figures 7-113 through 7-118). Maintenance impacts to developed concrete-lined channel would not require mitigation.

All permanent impacts proposed at the Pilot Channel (Segment 1) and Smuggler’s Gulch (Segment 1) facility segments that are within a previously permitted maintenance area for these channels would not require additional mitigation under the MWMP (Appendix F).

Permanent direct impacts to uplands are to Tier IV only (Table 4-74b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018). Any other direct impacts to sensitive vegetation communities that occur from maintenance activities would be considered significant, absent mitigation (**BIO-2**).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Maintenance activities would impact 18.09 acres of MHPA designated lands within the Tijuana River – Pilot and Smuggler’s facility group and would be aligned to have the minimum practicable impact to the MHPA. In addition, direct impacts to wetlands would occur within the COZ in both facility segments.

**Table 4-74a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Tijuana River – Pilot and Smuggler’s Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			Pilot Channel_ 1 (Acres)	Smuggler's Gulch_1 (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	–	0.04
Disturbed Riparian Scrub (63000)	Riparian Scrub <sup>1</sup>	C / CC	–	0.01
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C / CC	2.90	1.42
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	A / R / C / CC	<0.01	–
Riparian Scrub (Mulefat Scrub) (63310)	Riparian Scrub <sup>1</sup>	C / CC	–	0.08
Riparian Scrub (Southern Willow Scrub) (63320)	Riparian Scrub <sup>1</sup>	A / R / C / CC	0.02	–
<b>Total</b>			<b>2.92</b>	<b>1.54</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, and are within a previously permitted maintenance area for these channels would not require additional mitigation under the MWMP (Appendix F).

<sup>2</sup> Impacts are considered significant and would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-74b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Tijuana River – Pilot and Smuggler’s Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Pilot Channel_ 1 (Acres)	Smuggler's Gulch_1 (Acres)
Non-Native Upland Vegetation Communities				
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	–	0.02
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	<0.01	2.92
Land Covers				
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.39	3.28
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	–	0.04
Total			0.39	6.27

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.9.2 TIJUANA RIVER – TOCAYO FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment, Tocayo (Segment 2), proposed for maintenance within the Tijuana River – Tocayo facility group. Proposed maintenance of the Tocayo (Segment 2) facility segment would result in permanent direct impacts to five vegetation communities and/or land cover types (Figures 6-119 and 6-121). Maintenance impacts would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities. Impacts from loading and access at this segment would be limited to developed or disturbed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include riparian forest (southern willow forest; concrete-lined), and developed concrete-lined channel and would be considered significant,

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

absent mitigation (**BIO-1.7a** and **BIO-2**) (Table 4-75a; Figures 7-119 and 7-121). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-75b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Tijuana River – Tocayo facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. However, direct impacts to wetlands would occur within the COZ in this facility group.

**Table 4-75a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Tijuana River – Tocayo Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Tocayo_2</i> (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	1.45
Riparian Forest (Southern Willow Forest, Concrete-Lined), (61320)	Riparian Forest or Woodland <sup>1</sup>	A / R / C / CC	0.05
<b>Total</b>			1.50

**Note:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.7a and BIO-2).

<sup>2</sup> Impacts are considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-75b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Tijuana River – Tocayo Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			<i>Tocayo_2 (Acres)</i>
<i>Non-Native Upland Vegetation Communities</i>			
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	<0.01
<i>Land Covers</i>			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	<0.01
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.01
Total			0.01

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.9.3 TIJUANA RIVER – SMYTHE FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are five facility segments within the Tijuana River – Smythe facility group: Smythe (Segment 1), Via de la Bandola (Segment 1), and Via Encantadoras (Segments 1, 2, and 3). Proposed maintenance of these facility segments would result in permanent direct impacts to nine vegetation communities and/or land cover types (Figures 6-122 through 6-126). Maintenance impacts within these facility segments would result from a skid-steer, loader, or bulldozer working within the channel and gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities. Impacts from access and staging would be limited to developed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include riparian forest (southern willow forest), riparian scrub (southern willow scrub), natural flood channel, and developed concrete-lined channel and would be considered significant, absent mitigation (**BIO-1.7a**, and **BIO-2**) (Table 4-76a;

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Figures 7-122 through 7-126). Maintenance impacts to developed concrete-lined channel would not require mitigation.

Permanent direct impacts to uplands are to Tier IV only (Table 4-76b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Tijuana River – Smythe facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in any of the segments in this facility group.

All permanent impacts proposed at the Smythe (Segment 1) and Via de la Bandola (Segment 1) facility segments that are within a previously permitted maintenance area for these channels would not require additional mitigation under the MWMP (Appendix F).

**Table 4-76a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Tijuana River – Smythe Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number				
			<i>Smythe_1</i> (Acres)	<i>Via de la Bandola_1</i> (Acres)	<i>Via Encantadoras_1</i> (Acres)	<i>Via Encantadoras_2</i> (Acres)	<i>Via Encantadoras_3</i> (Acres)
Developed Concrete- lined Channel (64200)	Disturbed Wetland (Unvegetate d Concrete- Lined) <sup>2</sup>	A / R / C	-	0.23	-	0.67	0.49
Disturbed Freshwater Marsh (52400)	Freshwater Marsh <sup>1</sup>	A / R / C / CC	-	-	0.08	-	-
Disturbed Riparian Forest (Southern Willow Forest)	Riparian Forest or Woodland <sup>1</sup>	A / R / C	-	-	0.02	-	-

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-76a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Tijuana River – Smythe Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number				
			Smythe_1 (Acres)	Via de la Bandola_1 (Acres)	Via Encantadoras_1 (Acres)	Via Encantadoras_2 (Acres)	Via Encantadoras_3 (Acres)
(61320)							
Natural Flood Channel (64200)	Natural Flood Channel <sup>1, 5</sup>	A / R / C	0.30	-	-	-	-
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland <sup>1</sup>	A / R / C	-	-	-	-	<0.01
		A / R / C	-	-	-	-	0.12
Riparian Scrub (Southern Willow Scrub) (63320)	Riparian Scrub <sup>1</sup>	A / R / C	0.24	-	-	-	-
<b>Total</b>			<b>0.54</b>	<b>0.23</b>	<b>0.11</b>	<b>0.67</b>	<b>0.61</b>

**Note:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.7a and BIO-2).

<sup>2</sup> Impacts are considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-76b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Tijuana River – Smythe Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number				
			Smythe_1 (Acres)	Via de la Bandola_1 (Acres)	Via Encantadoras_1 (Acres)	Via Encantadoras_2 (Acres)	Via Encantadoras_3 (Acres)
Non-Native Upland Vegetation Communities							
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.18	<0.01	0.17	-	-
Land Covers							
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	1.33	-	-	-	0.17
Urban/ Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.02	0.07	-	0.03	0.02
Total			1.53	0.07	0.17	0.03	0.19

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.9.4 SPRING CANYON CREEK – CACTUS FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There are two facility segments proposed for maintenance within the Spring Canyon Creek – Cactus facility group: Cactus (Segment 1) and Cactus (Segment 2). Proposed maintenance of the Cactus (Segment 1) and Cactus (Segment 2) facility segments would result in permanent direct impacts to six vegetation communities and/or land cover types (Figures 6-127 and 6-128). Maintenance impacts within these facility segments would result from a skid-steer and loader working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

maintenance activities. Impacts from loading and access at this segment would be limited to developed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands and jurisdictional resources include riparian scrub, riparian forest (southern willow forest), riparian forest (southern willow forest; concrete-lined), disturbed wetland (concrete-lined), and developed concrete-lined channel. Spring Canyon Creek – Cactus is a basin constructed within historic uplands and has been delineated as non-jurisdictional for USACE, RWQCB, CDFW, and the City as an artificial wetland and permanent best management practice (BMP). Therefore, no jurisdictional resources occur at this site since the wetlands are considered artificial. Impacts would not be significant and would not require mitigation (Table 4-77a; Figures 7-127 and 7-128).

Permanent direct impacts to uplands are to Tier IV only (Table 4-77b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

The Spring Canyon Creek – Cactus facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in either of the segments in this facility group.

**Table 4-77a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Spring Canyon Creek – Cactus Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			<i>Cactus_1</i> (Acres)	<i>Cactus_2</i> (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	City	0.02	0.30
Disturbed Wetland (Concrete-lined) (11200)	Disturbed Wetland <sup>1</sup>	City	–	0.05
Riparian Forest (Southern Willow Forest; Concrete-lined) (61320)	Riparian Forest or Woodland <sup>1</sup>	City	0.14	0.21

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-77a**  
**Wetland Vegetation Community and Land Cover Impacts in the Spring Canyon Creek – Cactus Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number	
			Cactus_1 (Acres)	Cactus_2 (Acres)
Riparian Scrub (concrete-lined) (63000)	Riparian Scrub <sup>1</sup>	City	–	0.04
<b>Total</b>			<b>0.16</b>	<b>0.60</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.7a and BIO-2).

<sup>2</sup> Impacts are considered significant and would not require mitigation.

**Table 4-77b**  
**Upland Vegetation Community and Land Cover Impacts in the Spring Canyon Creek – Cactus Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number	
			Cactus_1 (Acres)	Cactus_2 (Acres)
Non-Native Upland Vegetation Communities				
Eucalyptus Woodland (79100)	Eucalyptus Woodland <sup>3</sup>	IV	–	<0.01
Land Covers				
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.36	1.09
Total			0.36	1.09

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 4.9.5 TIJUANA RIVER – SIEMPRE VIVA FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment, Siempre Viva (Segment 1), proposed for maintenance within the Tijuana River – Siempre facility group. Proposed maintenance of the Siempre Viva (Segment 1) facility segment would result in permanent direct impacts to nine vegetation communities and/or land cover types (Figures 6-129). Maintenance impacts would result from a skid-steer working within the channel and a gradall/excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities. Impacts from loading and access at this segment would be limited to developed land such that no mitigation would be necessary for these impacts.

Permanent impacts to wetlands include disturbed freshwater marsh, riparian scrub, riparian forest (southern willow forest), riparian scrub (southern willow scrub), disturbed wetland, and developed concrete-lined channel (Table 4-78a; Figure 7-129). Siempre Viva (Segment 1) is a basin constructed within historic uplands and has been determined by USACE, RWQCB, CDFW, and the City to be an artificial wetland and a non-jurisdictional, permanent best management practice (BMP). Therefore, no jurisdictional resources occur at this site since the wetlands are considered artificial. Impacts would not be significant and would not require mitigation (Table 4-75; Figure 6-125) (Zack, pers. comm. 2017).

Permanent direct impacts to uplands are to Tier IV only (Table 4-78b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018). Any other direct impacts to sensitive vegetation communities that occur from maintenance activities would be considered significant, absent mitigation (**BIO-2**).

The Tijuana River – Siempre Viva facility group is not located within the MHPA designated lands; therefore, there would be no direct impacts to the MHPA designated lands from maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 4-78a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Tijuana River – Siempre Viva Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>Siempre Viva_1</i> (Acres)
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>3</sup>	None	0.10
Disturbed Freshwater Marsh (52400)	Freshwater Marsh <sup>3</sup>	None	0.08
Disturbed Wetland (11200)	Disturbed Wetland <sup>3</sup>	None	0.66
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland <sup>3</sup>	None	0.39
Riparian Scrub (63000)	Riparian Scrub <sup>3</sup>	None	0.19
Riparian Scrub (Southern Willow Scrub) (63320)	Riparian Scrub <sup>3</sup>	None	0.13
<b>Total</b>			<b>1.56</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = CCC Jurisdictional  
Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not  
add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant, but would not require mitigation

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-78b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Tijuana River – Siempre Viva Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			Siempre Viva_1 (Acres)
Non-Native Upland Vegetation Communities			
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	IV	0.11
Land Covers			
Disturbed Land (11300)	Disturbed Land <sup>3</sup>	IV	0.02
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	1.16
Total			1.29

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 4.9.6 TIJUANA RIVER – LA MEDIA FACILITY GROUP

### Direct Impacts to Vegetation Communities and Jurisdictional Resources

There is one facility segment, La Media (Segment 1), proposed for maintenance within the Tijuana River – La Media facility group. Proposed maintenance of the La Media (Segment 1) facility segment would result in permanent direct impacts to three vegetation communities and/or land cover types (Figure 6-130). Maintenance impacts would result from an excavator stationed outside of the channel limits reaching into the channel to perform maintenance activities.

Permanent impacts to wetlands and jurisdictional resources include freshwater marsh, and would be considered significant absent mitigation (**BIO-1.7a** and **BIO-2**) (Table 4-79a; Figure 7-130).

Permanent direct impacts to uplands are to Tier IV only (Table 4-79b). Impacts to Tier IV communities are not significant and would not require mitigation (City of San Diego 2018).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

The Tijuana River – La Media facility group is partially located within the MHPA boundary; however, there would be no direct impacts to MHPA designated lands as a result of maintenance activities. In addition, there would be no direct impacts to wetlands within the COZ in this facility group.

**Table 4-79a**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**Tijuana River – La Media Facility Group**

General Vegetation Type (Holland/Oberbauer Code)	SDBG Wetland Vegetation Community	Jurisdiction	Facility Segment Name_Number
			<i>La Media_1</i> (Acres)
Freshwater Marsh (52400)	Freshwater Marsh <sup>1</sup>	A / R / C	0.02
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland <sup>1</sup>	A / R / C	<0.01
<b>Total</b>			<b>0.02</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, absent mitigation (BIO-1.7a and BIO-2).

**Table 4-79b**  
**Upland Vegetation Community and Land Cover Impacts in the**  
**Tijuana River – La Media Facility Group**

General Vegetation Type (Holland/Oberbauer Code)	SDBG Vegetation Community	Tier	Facility Segment Name_Number
			<i>La Media_1</i> (Acres)
Urban/Developed (12000)	Disturbed Land <sup>3</sup>	IV	0.02
<b>Total</b>			<b>0.02</b>

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

### 4.9.7 DIRECT IMPACTS TO SENSITIVE PLANT SPECIES IN THE TIJUANA RIVER WATERSHED

Five sensitive plant species were observed during focused plant surveys in 2019 in the Tijuana River watershed: singlewhorl burrobrush (CRPR 2B.2), San Diego County viguiera (CRPR 4.2), seaside cistanthe (CRPR 4.2), cliff spurge (CRPR 2B.2), and San Diego marsh-elder (CRPR 2B.2).

One sensitive plant species, singlewhorl burrobrush, would be directly impacted by maintenance activities within Smuggler's Gulch (Segment 1) facility. Impacts to singlewhorl burrobrush are considered significant, if unavoidable, would require habitat-based mitigation measures (**BIO-1a** and **BIO-1b**).

There are no other sensitive plant species that have high or moderate potential to occur within suitable habitat in the Tijuana River watershed (see Appendix D).

### 4.9.8 DIRECT IMPACTS TO SENSITIVE WILDLIFE IN THE TIJUANA RIVER WATERSHED

In the Tijuana River watershed, six sensitive wildlife species were either observed during focused surveys (or during previous biological surveys) or have a high potential to occur in suitable habitat within the limits of MWMP facility segment maintenance areas and, therefore, would be directly impacted by maintenance activities or by removal of this habitat (**BIO-1.7a**, **BIO-2**, **BIO-4**, **BIO-5**, and **BIO-6**): coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, yellow-breasted chat, Ridgway's rail, and yellow warbler. Additionally, raptors and other sensitive wildlife species, which include federally protected white-tailed kite, MSCP Covered Species northern harrier, California horned lark, monarch, and Cooper's hawk, have a high potential to occur or were observed within or adjacent to MWMP facility segments in the Tijuana River watershed (Appendix E). Eight sensitive wildlife species have moderate potential to occur within the Tijuana River watershed study area (see Appendix E). Impacts to these species would be considered significant absent mitigation (**BIO-1.7a**, **BIO-4**, and **BIO-6**). Further details regarding direct and indirect impacts to sensitive wildlife species within each of the facility segments in this watershed are provided in Table 4-81. Impacts would be significant absent mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-81**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the Tijuana River Watershed**

Facility Segment	Least Bell's Vireo	Southwestern Willow Flycatcher	Yellow-Breasted Chat	Ridgway's Rail	Yellow Warbler	Coastal California Gnatcatcher	Raptors
<i>Tijuana River – Pilot and Smuggler's Facility Group</i>							
Pilot Channel (Segment 1)	*BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	*BIO-1.7a, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-5, EP-BIO-3a-c, EP-BIO-4	*BIO-1.7a, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	*BIO-4, BIO-6, EP-BIO-3a-c
Smuggler's Gulch (Segment 1)	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	BIO-5, EP-BIO-3a-c, EP-BIO-4	*BIO-1.7a, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	*BIO 1.7b, BIO-2, EP-BIO-3a-c, EP-BIO-4, BIO-7	*BIO-4, BIO-6, EP-BIO-3a-c
<i>Tijuana River – Tocayo Facility Group</i>							
Tocayo (Segment 2)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Tijuana River – Siempre Viva Facility Group</i>							
Siempre Viva (Segment 1)	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	None	None	EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	BIO-4, BIO-6, EP-BIO-3a-c
<i>Spring Canyon Creek- Cactus Facility Group</i>							
Cactus (Segment 1)	BIO-1.7a, BIO-5, EP-BIO-3a-c, EP-BIO-	None	None	None	BIO-1.7a, EP-BIO-3a-c, EP-BIO-	None	BIO-1.7a, BIO-4, BIO-6, EP-BIO-3a-c

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-81**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the Tijuana River Watershed**

Facility Segment	Least Bell's Vireo	Southwestern Willow Flycatcher	Yellow-Breasted Chat	Ridgway's Rail	Yellow Warbler	Coastal California Gnatcatcher	Raptors
	4, EP-BIO-6				4, EP-BIO-6		
Cactus (Segment 2)	BIO-1.7a, BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	None	None	BIO-1.7a, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	BIO-1.7a, BIO-4, BIO-6, EP-BIO-3a-c
<i>Tijuana River – Smythe Facility Group</i>							
Smythe (Segment 1)	BIO-5, EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	None	None	EP-BIO-3a-c, EP-BIO-4, EP-BIO-6	None	*BIO-4, BIO-6, EP-BIO-3a-c
Via de la Bandola (Segment 1)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
Via Encantado ras (Segment 1)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
Via Encantado ras (Segment 2)	None	None	None	None	None	None	BIO-4, BIO-6, EP-BIO-3a-c
Via Encantado ras	BIO-1.7a, BIO-5, EP-BIO-	None	None	None	BIO-1.7a, EP-BIO-3a-c,	None	BIO-1.7a, BIO-4, BIO-6,

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-81**  
**Direct and Indirect Impacts to Sensitive Wildlife**  
**by Facility Group and Facility Segment within the Tijuana River Watershed**

Facility Segment	Least Bell's Vireo	Southwestern Willow Flycatcher	Yellow-Breasted Chat	Ridgway's Rail	Yellow Warbler	Coastal California Gnatcatcher	Raptors
(Segment 3)	3a-c, EP-BIO-4, EP-BIO-6				EP-BIO-4, EP-BIO-6		EP-BIO-3a-c
<i>Tijuana River – La Media Facility Group</i>							
La Media (Segment 1)	BIO-5, EP-BIO-3a-c, EP-BIO-4	None	None	None	EP-BIO-3a-c, EP-BIO-4	None	BIO-4, BIO-6, EP-BIO-3a-c

**Notes:**

- \* Species was observed at this facility segment during 2017 focused surveys or during surveys conducted during previous maintenance activities within the segment.

## **4.10 IMPACTS TO WILDLIFE CORRIDORS AND HABITAT CONNECTIVITY**

No new facilities are proposed and, therefore, no direct, long-term changes to existing wildlife corridors would occur as a result of the MWMP. The majority of the MWMP existing facilities are located within urban areas surrounded by fencing and other development such that either the facilities does not provide access to suitable habitat for wildlife or it would not be feasible for wildlife to access and use them as corridors to core habitat areas. However, for facilities where short-term maintenance work proposed under the MWMP could disrupt wildlife movement, the effect would be due to temporary increases in human activity and noise. The facilities where the greatest likelihood for short-term affects on wildlife movement to occur from maintenance are those located within or partially within the following MSCP biological core and linkage areas: Los Peñasquitos Canyon, Los Peñasquitos Lagoon/Soledad Canyon Creek, San Diego River, and the Tijuana River Valley (Figures 3A–3C). In addition, there are smaller, local wildlife movement areas associated with additional areas in the MHPA (e.g., Carroll Canyon Creek, Alvarado Canyon Creek, Chollas Creek, and Norfolk Canyon Creek).

For the majority of MWMP facilities, maintenance would be completed in 45 days or less (e.g., mobilization, post-construction BMPs), with more than half of those efforts being completed in two weeks or less. Given the short duration of activities, regardless of the location in a larger biological

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

core/linkage area or in a local movement area, temporary adverse wildlife usage effects associated with maintenance would not be expected to interfere substantially with overall wildlife usage of the corridor or long-term suitability of the habitat in that area for wildlife movement. For example, in Los Peñasquitos Canyon and along the San Diego River, MWMP facilities are limited to tributaries and occupy a limited, narrow portion of the available habitat for wildlife usage. In areas where wildlife usage may be more constricted (e.g., Carroll Canyon Creek or Alvarado Canyon Creek), wildlife movement in the area may be more severely impacted. However, the impacts of maintenance activities would be short in duration, and wildlife usage of the corridor would be expected to recover after maintenance. In most cases, increased human activities associated with storm water facility maintenance would be similar to other occasional urban disturbance, such as road and building construction. Additionally, except in emergency situations where maintenance during the night is necessary to protect life and/or property, work under the MWMP would only be conducted during daylight hours, which is when wildlife movement is less likely to occur, so nocturnal wildlife movement would still be possible during maintenance.

The only facility in the MSCP biological core and linkage areas or MHPA where maintenance would occur for more than 45 days is Tijuana River – Pilot and Smuggler’s Facility Group. Maintenance of this facility has the potential to significantly disrupt wildlife usage of the habitat in the area, and could reduce wildlife movement functions. However, this project has been previously authorized by all required resource agencies, and the adverse effects on wildlife, including federally listed species, have been mitigated. Maintenance of this facility also provides benefits to the wildlife habitat quality of the river valley by removing excess sediment, trash, and debris.

Therefore, impacts to wildlife corridors from activities proposed under the MWMP would not be significant.

### **4.11 INDIRECT IMPACTS**

As described in Section 4.1.2, indirect impacts could occur in adjacent and downstream areas either in the short-term (i.e., during and immediately following maintenance) or long-term due to the loss of vegetation or sediment associated with maintenance and/or the effects of repeat maintenance. Indirect impacts may affect sensitive vegetation communities, including jurisdictional aquatic resources, the City’s MHPA, and sensitive plants and wildlife.

#### **4.11.1 INDIRECT IMPACTS TO VEGETATION COMMUNITIES AND JURISDICTIONAL AQUATIC RESOURCES**

There were a total of 34 sensitive vegetation communities mapped within the MWMP study area.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## Short-Term Indirect Impacts

Potentially significant short-term indirect impacts include potential for additional vegetation disturbance from human activities (**EP-BIO-3a-c**), potential increases in the spread of invasive plant and/or pest species (**EP-BIO-4** and **EP-BIO-6**), and potential adverse impacts due to storm water runoff pollution.

Implementation of EPs (see Section 5.1), including biological monitoring measures (**EP-BIO-3a, 3b, and 3c**), methods for successful removal of invasive species (**EP-BIO-4**), proper treatment of all woody debris removed from facilities to avoid the spread of shot-hole borer (**EP-BIO-6**), consistency with the MSCP/MHPA Land Use Adjacency Guidelines and Boundary Line Adjustment requirements (**EP-LU-1** and **EP-LU-2**), and implementation of *Water Pollution Control Plan* measures (**EP-WQ-1**), would reduce short-term indirect impacts to sensitive vegetation communities to less than significant. More information regarding shot-hole borer is provided below.

## Shot-Hole Borer

The spread of shot-hole borer invasive pest is a potential long-term indirect impact from maintenance associated with the MWMP. Within San Diego County, there have been two invasive shot hole borer beetles, Polyphagous shot hole borer (*Euwallacea* sp. #1) and Kuroshio shot hole borer (*Euwallacea* sp. #5), identified over the past several years.

These two morphologically indistinguishable shot-hole borers cause indirect impacts to riparian woody vegetation through the spread fungi that the beetle uses as a food source, including *Fusarium euwallaceae*, *Graphium euwallaceae*, and *Paracremonium pembeum*. These fungi species cause Fusarium dieback by stopping the flow of water and nutrients within the cambium layer of trees. Fusarium dieback occurs as the fungus colonizes within the tree's tissue, blocking the xylem vessels (Eskalen et al. 2013).

More than 148 native and non-native tree species in Southern California are known to be susceptible to shot-hole borer infestation, with additional species being observed regularly (Eskalen et al. 2013). The primary indicators of shot-hole borer include entrance hole borings of approximately 0.85 millimeters in diameter; staining of the wood surrounding the hole; and a sugary exudate, or gum-like residue. Advanced Fusarium dieback presents as limbs and trunk sections dying and falling to the ground, and ultimately death of the entire tree (Stouthamer et al. 2017).

During infestation, previously healthy mature native riparian tree species, such as willows, sycamores, and Fremont cottonwood (*Populus fremontii*) exhibit dieback of main branches and trunk sections, leaving standing snags. The cause for this pattern of standing snags is that shot-hole

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

borers generally burrow their galleries in a singular plane (usually horizontal) once entering a tree trunk or limb (Stouthamer et al. 2017). This physically weakens the trunk/branch in that particular location, and physically disrupts water and nutrient flows beyond that plane intersection, essentially “starving” the remainder of that trunk/limb section. This inhibiting of water and nutrient flow is further exacerbated by the introduction of the fungus species for which shot-hole borer is a vector, which also inhibits water and nutrient transport. Shot-hole borer may cause long-term indirect impacts to riparian woody vegetation communities as a result of maintenance activities through introduction of the species and associated fungal infection to riparian areas where it was not previously present. Implementation of **EP-BIO-6** would reduce the potential for spread of shot-hole borer from maintenance activities to a level less than significant.

Long-term indirect impacts to sensitive vegetation communities may include adverse impacts associated with the spread of invasive plant or pest species, alteration of drainage patterns, and reduction in water quality conditions as a result of routine, repeated maintenance and removal of vegetation and sediment (**BIO-8**). Although implementation of EPs (see Section 5.1), including methods for successful removal of invasive species (**EP-BIO-4**), proper treatment of all woody debris removed from facilities to avoid the spread of shot-hole borer (**EP-BIO-6**), consistency with the MSCP/MHPA Land Use Adjacency Guidelines and Boundary Line Adjustment requirements (**EP-LU-1** and **EP-LU-2**), and preparation of a *Water Quality Pollution Control Plan* (**EP-WQ-1**), would reduce those potential impacts to less than significant, the potential for adverse impacts to sensitive vegetation communities due to alteration of drainage patterns and/or reduction in water quality conditions would be potentially significant, absent mitigation (**BIO-8**).

### 4.11.2 INDIRECT IMPACTS TO SENSITIVE PLANT SPECIES

Most of the indirect impacts to vegetation communities cited above can also affect sensitive plants (**EP-BIO-3a-c**, **EP-BIO-4**, **EP-BIO-6**). In addition, where individual sensitive plant species occur adjacent to proposed MWMP facilities, the potential for indirect impacts to sensitive plant species is increased (**EP-BIO-5**). Implementation of EPs (see Section 5.1), including biological monitoring measures (**EP-BIO-3a**, **3b**, and **3c**), methods for successful removal of invasive species (**EP-BIO-4**), proper treatment of all woody debris removed from facilities to avoid the spread of shot-hole borer (**EP-BIO-6**), and implementation sensitive plant species protection (**EP-BIO-5**), would reduce indirect impacts to sensitive plant species to less than significant.

### 4.11.3 INDIRECT IMPACTS TO SENSITIVE WILDLIFE SPECIES

Many of the indirect impacts to vegetation communities and sensitive plants previously described can also affect sensitive wildlife due to the potential significant degradation of habitat used by wildlife (**EP-BIO-3a-c**, **BIO-2**, and **EP-BIO-6**). Wildlife may also be affected in the short term by

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

indirect impacts such as emergency nighttime work, increased human presence, and maintenance-related noise (which can disrupt normal activities, cause lasting stress, and subject wildlife to higher predation risks). Indirect impacts to sensitive wildlife species are detailed by watershed in Tables 4-18, 4-27, 4-43, 4-69, 4-73, 4-78. Implementation of EPs (see Section 5.1), including biological monitoring measures (**EP-BIO-3a, 3b, and 3c**), methods for successful removal of invasive species (**EP-BIO-4**), and proper treatment of all woody debris removed from facilities to avoid the spread of shot-hole borer (**EP-BIO-6**), would reduce indirect impacts related to habitat degradation to sensitive wildlife species to than significant.

If maintenance is conducted adjacent to portions of the MHPA occupied by California gnatcatcher during the breeding season, these potential noise impacts would be significant, absent mitigation (**BIO-7**).

### **4.12 CUMULATIVE IMPACTS**

The MSCP is a long-term regional conservation plan established to protect sensitive species and habitats in San Diego County. The MSCP is divided into subarea plans that are implemented separately from one another. The Project site is within the City of San Diego MSCP Subarea Plan and portions are within, intersect, or are adjacent to the MSCP Preserve area (i.e., the MHPA).

In an effort to eliminate cumulative impacts to sensitive biological resources throughout San Diego, the City is participating in a regional conservation planning effort, San Diego MSCP. This planning effort is designed to address cumulative impacts through development of a regional plan that addresses impacts to Covered Species and habitats in a manner that assures their conservation despite impacts of cumulative project over the long term. The ultimate goal of this plan is the establishment of biological reserve areas in conformance with the State of California Natural Communities Conservation Planning Act.

Cumulative impacts to wetland vegetation communities from implementation of the MWMP are not expected to be significant since all activities proposed are in conformance with the regional and City plans described above, which requires implementation of compensatory mitigation that results in a no-net-loss of wetland area or functions. In addition, no vernal pools, native grassland, or Tier I (e.g., oak woodland) habitats would be impacted as part of the MWMP. Impacts to Tier II, Tier IIIA, and Tier IIIB (i.e., coastal sage scrub, chaparral, and non-native grassland) are cumulatively less than one acre, are located primarily outside the MHPA, and occur in mostly separate, distinct urban settings such that the cumulative effect on habitat availability for sensitive species and other habitat functions is negligible and less than significant.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 4.13 CONSISTENCY WITH THE MULTIPLE SPECIES CONSERVATION PROGRAM

The MWMP is a compatible land use within the MHPA and follows the siting criteria outlined in Section 1.4.2 of the MSCP. Because there are MWMP facility segment maintenance areas that occur within and adjacent to the MHPA, the project is required to document compliance with the MSCP Land Use Adjacency Guidelines. A matrix has been prepared documenting compliance with the MSCP (Table 4-82a and Table 4-82b).

**Table 4-82a**  
**Project Consistency Determination with MSCP Land Use Considerations**

<b>MSCP Section</b>	<b>Applicability</b>	<b>Implementation</b>
<b>MHPA Compatible Land Uses Section 1.4.1 MSCP Subarea Plan</b>	<b>Applicability</b>	<b>Implementation</b>
<p><b>The following land uses are considered conditionally compatible with the biological objectives of the MSCP and thus will be allowed within the City's MHPA:</b></p> <ul style="list-style-type: none"> <li>• Passive recreation</li> <li>• Utility lines and roads in compliance with policies described in Section 1.4.2</li> <li>• Limited water facilities and other essential public facilities</li> <li>• Limited low density residential uses</li> <li>• Brush management (Zone 2)</li> <li>• Limited agriculture</li> </ul>	The MWMP would maintain existing public infrastructure and would qualify as an essential public project; therefore, it is a compatible land use within the City's MHPA.	<b>N/A</b>
<b>MHPA General Planning Policies and Design Guidelines Section 1.4.2 MSCP Subarea Plan</b>	<b>Applicability</b>	<b>Implementation</b>
<i>Roads and Utilities</i>		
All proposed utility lines (e.g., sewer, water, etc.) should be designed to avoid or minimize intrusion into the MHPA. These facilities should be routed through developed or developing areas rather than the MHPA, where possible. If no other routing is feasible, then the lines should follow previously existing roads,	Maintenance of infrastructure (i.e., facility segments) under the MWMP would have a total of 14.72 acres of short-term impacts within the MHPA, which would be limited to the minimum necessary area to provide	N/A

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-82a**  
**Project Consistency Determination with MSCP Land Use Considerations**

MSCP Section	Applicability	Implementation
easements, rights-of-way and disturbed areas, minimizing habitat fragmentation.	flood control function. In addition, maintenance crew access and staging areas have been sited to remain within developed or disturbed areas within the MHPA whenever feasible.	
All new development for utilities and facilities within or crossing the MHPA shall be planned, designed, located and constructed to minimize environmental impacts. All such activities must avoid disturbing the habitat of MSCP Covered Species and wetlands. If avoidance is infeasible, mitigation will be required.	Impacts to MHPA lands (i.e., 14.72 acres for all facilities) are necessary to complete the proposed storm drain improvements and include impacts to disturbed and developed areas that are within the MHPA boundary. Work planned is associated with existing channels and infrastructure and does not include the construction of new facilities in MHPA lands. Impacts to California gnatcatcher could occur in MHPA lands at five facility segments if work is to occur during the breeding season.	Maintenance will be conducted outside the breeding season for California gnatcatcher (March 1–August 15) at these five facility segments. If avoidance of the breeding season at any of these locations is infeasible, pre-construction protocol-level surveys for this species shall be conducted and proper noise attenuation features, nest buffers, and nest avoidance will be implemented in the event that nesting California gnatcatchers are observed within 300 feet of the work site.
Temporary construction areas and roads, staging areas, or permanent access roads must not disturb existing habitat unless determined to be unavoidable. All such activities must occur on existing agricultural lands or in other disturbed areas rather	All temporary access and staging areas will be situated within previously developed or disturbed areas, and will avoid native habitat to the maximum	Any unexpected impacts to vegetated areas temporarily disturbed by maintenance activities will require

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-82a**  
**Project Consistency Determination with MSCP Land Use Considerations**

<b>MSCP Section</b>	<b>Applicability</b>	<b>Implementation</b>
than in habitat. If temporary habitat disturbance is unavoidable, then restoration of, and/or mitigation for, the disturbed area after project completion will be required.	extent practicable. Given the periodic nature of maintenance, appropriate erosion control measures will also be implemented in areas subject to erosion between maintenance events.	restoration with native species ( <b>BIO-2</b> ).
Construction and maintenance activities in wildlife corridors must avoid significant disruption of corridor usage. Environmental documents and mitigation monitoring and reporting programs covering such development must clearly specify how this will be achieved, and construction plans must contain all the pertinent information and be readily available to crews in the field. Training of construction crews and field workers must be conducted to ensure that all conditions are met. A responsible party must be specified.	Maintenance activities will be relatively short in duration or would occur in areas that are surrounded by native habitat that can provide movement linkage for wildlife when maintenance is being performed. Maintenance activities would only occur during daylight hours, when wildlife movement is typically limited. EPs include training of field crews in the protocols needed to avoid impacts to sensitive resources, including wildlife corridors.	MHPA boundaries will be clearly marked in the field and a biologist will be on site full-time to ensure these boundaries are observed.
Roads in the MHPA will be limited to those identified in Community Plan Circulation Elements, collector streets essential for area circulation, and necessary maintenance/emergency access roads. Local streets should not cross the MHPA except where needed to access isolated development areas.	Access, staging, and stockpiling areas and routes have been sited to be within disturbed or developed areas whenever possible, and to minimize impacts to sensitive habitat where necessary.	N/A
Development of roads in canyon bottoms should be avoided whenever feasible. If an alternative location outside the MHPA is not feasible, then the road must be designed to cross the shortest length	Access, staging, and stockpiling areas and routes have been sited to be within disturbed or developed areas whenever	N/A

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-82a**  
**Project Consistency Determination with MSCP Land Use Considerations**

<b>MSCP Section</b>	<b>Applicability</b>	<b>Implementation</b>
possible of the MHPA in order to minimize impacts and fragmentation of sensitive species and habitat. If roads cross the MHPA, they should provide for fully-functional wildlife movement capability. Bridges are the preferred method of providing for movement, although culverts in selected locations may be acceptable. Fencing, grading and plant cover should be provided where needed to protect and shield animals, and guide them away from roads to appropriate crossings.	possible, and to minimize impacts to sensitive habitat where necessary.	
Where possible, roads within the MHPA should be narrowed from existing design standards to minimize habitat fragmentation and disruption of wildlife movement and breeding areas. Roads must be located in lower quality habitat or disturbed areas to the extent possible.	Access, staging, and stockpiling areas and routes will be narrowed to the minimum width necessary for maintenance equipment to utilize them. These routes have been sited to be within disturbed or developed areas whenever possible, and to minimize impacts to sensitive habitat where necessary.	N/A
For the most part, existing roads and utility lines are considered a compatible use within the MHPA and therefore will be maintained. Exceptions may occur where underutilized or duplicative road systems are determined not to be necessary as identified in the Framework Management.	Wherever possible, maintenance access routes would be aligned with existing roads and those roads properly maintained.	N/A
<i>Fencing, Lighting, and Storage</i>		
Fencing or other barriers will be used where it is determined to be the best method to achieve conservation goals and adjacent to land uses incompatible with the MHPA. For example, use chain link or cattle	No permanent barriers are required or proposed. Temporary fencing will be used at the up and downstream ends of	This fencing will be installed prior to the start of maintenance activities under supervision of the

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-82a**  
**Project Consistency Determination with MSCP Land Use Considerations**

<b>MSCP Section</b>	<b>Applicability</b>	<b>Implementation</b>
wire to direct wildlife to appropriate corridor crossings, natural rocks/boulders or split rail fencing to direct public access to appropriate locations, and chain link to provide added protection of certain sensitive species or habitats (e.g., vernal pools).	facility segments that have high potential for Ridgway's rail to occur in order to discourage this sensitive wildlife species from entering the project area.	monitoring biologist ( <b>EP-BIO-3a-c</b> ).
Lighting shall be designed to avoid intrusion into the MHPA and effects on wildlife. Lighting in areas of wildlife crossings should be of low sodium or similar lighting. Signage will be limited to access and litter control and educational purposes.	No temporary or permanent lighting is currently proposed as part of MWMP maintenance activities and no night work is planned.	If lighting is required for emergency maintenance, low pressure sodium illumination (or similar) will be used and lighting will be directed away from sensitive vegetation and adjacent trees, according to <b>EP-BIO-2</b> .
<i>Materials Storage</i>		
Prohibit storage of materials (e.g., hazardous or toxic chemicals, equipment, etc.) within the MHPA and ensure appropriate storage per applicable regulations in any areas that may impact the MHPA, especially due to potential leakage.	Equipment storage and the storage of hazardous or toxic chemicals will not occur within the MHPA. Equipment storage and material stockpiling will occur in designated disturbed upland and developed lands.	The project development footprint within and adjacent to MHPA lands will be clearly delineated on maintenance documents and in the field by maintenance crews, under supervision of the monitoring biologist, with temporary flagging and/or fencing, according to <b>EP-BIO-3a-c</b> and <b>EP-WQ-1</b> .

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-82a**  
**Project Consistency Determination with MSCP Land Use Considerations**

MSCP Section	Applicability	Implementation
<i>Flood Control</i>		
Flood control should generally be limited to existing agreements with resource agencies unless demonstrated to be needed based on a cost benefit analysis and pursuant to a restoration plan. Floodplains within the MHPA, and upstream from the MHPA if feasible, should remain in a natural condition and configuration in order to allow for the ecological, geological, hydrological, and other natural processes to remain or be restored.	Maintenance under the MWMP would be limited to the minimum necessary area within each facility in order for the facility to provide adequate flood control function. No artificial material would be installed in any facility within the MHPA and the floodplains will be kept in their natural condition to the maximum extent practicable.	N/A
No berming, channelization, or man-made constraints or barriers to creek, tributary, or river flows should be allowed in any floodplain within the MHPA unless reviewed by all appropriate agencies, and adequately mitigated. Review must include impacts to upstream and downstream habitats, flood flow volumes, velocities and configurations, water availability, and changes to the water table level.	<p>No permanent berming or channelization is proposed. Post-maintenance erosion control measures may be utilized to address erosive velocities, based on hydrology and hydraulic analysis.</p> <p>Temporary berms may also be installed in facilities with active flows at the time of maintenance in order to prevent these flows from travelling through maintenance areas and impacting downstream water quality.</p>	The use of temporary diversions and post-maintenance erosion control will be based on analysis provided in the <i>Water Pollution Control Plan (WPCP)</i> <b>(EP-WQ-1)</b> .

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-82a**  
**Project Consistency Determination with MSCP Land Use Considerations**

<b>MSCP Section</b>	<b>Applicability</b>	<b>Implementation</b>
No riprap, concrete, or other unnatural material shall be used to stabilize river, creek, tributary, and channel banks within the MHPA. River, stream, and channel banks shall be natural, and stabilized where necessary with willows and other appropriate native plantings. Rock gabions may be used where necessary to dissipate flows and should incorporate design features to ensure wildlife movement.	No new artificial materials will be used to stabilize facility banks within the MHPA. Riprap, concrete, and other materials will only be replaced, as necessary and in accordance with prior as-built or original design, if appropriate. Riprap may be installed as a post-maintenance erosion control measure, but only in areas outside the MHPA.	N/A
<b>MHPA Land Use Adjacency Guidelines Section 1.4.3 MSCP Subarea Plan</b>	<b>Applicability</b>	<b>Implementation</b>
<i>Drainage</i>		
All new and proposed parking lots and developed areas in and adjacent to the preserve must not drain directly into the MHPA. All developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials and other elements that might degrade or harm the natural environment or ecosystem processes within the MHPA.	Ground disturbance for the MWMP will be limited to removal of accumulated material in flood control facilities and no paved lots or new development will be installed. Measures would be taken to prevent runoff of hazardous material from access, staging, and stockpile locations into sensitive areas. Consistent with the City Storm Water Standards Manual, flows toward the MHPA shall be minimized.	The MHPA boundary and the limits of maintenance disturbance shall be clearly delineated on the construction documents and surveyed by the monitoring biologist. Measures to prevent runoff will be implemented according to <b>EP-BIO-3a-c, EP-WQ-1, and EP-LU-1</b> .

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 4-82a**  
**Project Consistency Determination with MSCP Land Use Considerations**

<b>MSCP Section</b>	<b>Applicability</b>	<b>Implementation</b>
<b>MHPA Land Use Adjacency Guidelines Section 1.4.3 MSCP Subarea Plan</b>	<b>Applicability</b>	<b>Implementation</b>
<i>Toxics</i>		
Land uses, such as recreation and agriculture, that use chemicals or generate by-products such as manure, that are potentially toxic or impactful to wildlife, sensitive species, habitat, or water quality need to incorporate measures to reduce impacts caused by the application and/or drainage of such materials into the MHPA.	No hazardous construction materials storage would be allowed which could impact the adjacent MHPA (including fuel or sediment) and any drainage from the construction site must be clear of such materials. Consistent with the City Storm Water Standards Manual, flows toward the MHPA shall be minimized.	The contractor shall ensure all areas for staging, storage of equipment and materials, trash, equipment maintenance, and other construction related activities are within the limits of the project Area of Potential Effect (APE).
<i>Lighting</i>		
Lighting of all developed areas adjacent to the MHPA should be directed away from the MHPA. Where necessary, development should provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the MHPA and sensitive species from night lighting.	No additional permanent lighting or night work is proposed for the MWMP.	If lighting is required for emergency nighttime maintenance, it would be used according to the measures described in <b>EP-BIO-2</b>

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-82a**  
**Project Consistency Determination with MSCP Land Use Considerations**

<b>MSCP Section</b>	<b>Applicability</b>	<b>Implementation</b>
<b>MHPA Land Use Adjacency Guidelines Section 1.4.3 MSCP Subarea Plan</b>	<b>Applicability</b>	<b>Implementation</b>
<i>Noise</i>		
Uses in or adjacent to the MHPA should be designed to minimize noise impacts. Berms or walls should be constructed adjacent to commercial areas, recreational areas, and any other use that may introduce noises that could impact or interfere with wildlife utilization of the MHPA. Excessively noisy uses or activities adjacent to breeding areas must incorporate noise reduction measures and be curtailed during the breeding season of sensitive species. Adequate noise reduction measures should also be incorporated for the remainder of the year.	Whenever possible, maintenance activities under the MWMP would be conducted outside of the breeding season of sensitive wildlife species. If maintenance is required to be conducted during the breeding season of sensitive wildlife and suitable habitat is present within or adjacent to the facility segment planned for maintenance, appropriate measures will be taken to reduce noise impacts to a level below significant.	Protocol surveys may be required for potential impacts to certain avian species during their breeding season: California gnatcatcher (3/1–8/15), least Bell's vireo (04/01–09/15), southwestern willow flycatcher (05/01–09/01), and Ridgway's rail (03/15–08/15).
<i>Barriers</i>		
New development adjacent to the MHPA may be required to provide barriers (e.g., non-invasive vegetation, rocks/boulders, fences, walls, and/or signage) along the MHPA boundaries to direct public access to appropriate locations and reduce domestic animal predation.	No permanent barriers or new development are required or proposed under the MWMP. All impacts would be short-term and related to maintenance activities. However, fences or other barriers may be installed, as necessary, surrounding mitigation areas associated with the MWMP within and adjacent to the MHPA.	Assessment will be made on a site-by-site basis for mitigation associated with MWMP to determine if barriers are appropriate.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-82a**  
**Project Consistency Determination with MSCP Land Use Considerations**

<b>MSCP Section</b>	<b>Applicability</b>	<b>Implementation</b>
<i>Invasive Species</i>		
No invasive non-native plant species shall be introduced into areas adjacent to the MHPA.	Any plant species installed within 100 feet of the MHPA as part of revegetation work shall comply with the Landscape Regulations (LDC Section 142.0400 and per table 142-04F, Revegetation and Irrigation Requirements) and be non- invasive.	The City shall permanently revegetate all graded, disturbed, or eroded areas using native species, according to <b>BIO-2</b> .
<i>Brush Management</i>		
New residential development located adjacent to and topographically above the MHPA (e.g., along canyon edges) must be set back from slope edges to incorporate Zone 1 brush management areas on the development pad and outside of the MHPA.	The MWMP is not a structural development and would not create any new brush management zones.	N/A
<i>Grading/Land Development</i>		
Manufactured slopes associated with site development shall be included within the development footprint for projects within or adjacent to the MHPA.	No manufactures slopes are proposed or associated with the MWMP.	N/A

**Table 4-82b**  
**Project Consistency Determination with MSCP Framework Management Plan**

<b>MHPA Framework Management Plan Section 1.5.2 MSCP Subarea Plan</b>	<b>Applicability</b>	<b>Implementation</b>
<i>Mitigation</i>		
Mitigation, when required as part of project approvals, shall be performed in accordance with the City of San Diego Environmentally Sensitive Lands Ordinance and Biology Guidelines.	Mitigation would be implemented according to the ratios described in the City of San Diego Environmentally Sensitive Lands Ordinance and	Mitigation ratios and associated mitigation proposed for impacts to sensitive vegetation and jurisdictional aquatic resources are

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 4-82b**  
**Project Consistency Determination with MSCP Framework Management Plan**

MHPA Framework Management Plan Section 1.5.2 MSCP Subarea Plan	Applicability	Implementation
	Biology Guidelines, as well as according to the requirements described in all permits issued by the resource agencies.	described in Section 5.2 and will be implemented according to <b>BIO-1a</b> and <b>BIO-1b</b> .
<i>Restoration</i>		
Restoration or revegetation undertaken in the MHPA shall be performed in a manner acceptable to the City. Where Covered Species status identifies the need for reintroduction and/or increasing the population, the Covered Species will be included in restoration/revegetation plans, as appropriate. Restoration or revegetation proposals will be required to prepare a plan that includes elements addressing financial responsibility, site preparation, planting specifications, maintenance, monitoring and success criteria, and remediation and contingency measures. Wetland restoration/revegetation proposals are subject to permit authorization by federal and state agencies.	The project will temporarily displace native sage scrub and chaparral habitats and developed and ornamental vegetation. Following project completion, the temporarily impacted areas will be revegetated and restored in place.	A revegetation plan will be prepared featuring native species that are typical of the area and erosion control features including silt fence and straw fiber rolls, where appropriate. The revegetation areas will be monitored and maintained for 25 months to ensure adequate establishment and sustainability of the plantings/seedlings. This plan will be submitted to development Services Department for review and approval.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-82b**  
**Project Consistency Determination with MSCP Framework Management Plan**

MHPA Framework Management Plan Section 1.5.2 MSCP Subarea Plan	Applicability	Implementation
<i>Flood Control</i>		
Perform standard maintenance, such as clearing and dredging of existing flood channels, during the non-breeding or nesting season of sensitive bird or wildlife species utilizing the riparian habitat. For the least Bell's vireo, the non-breeding season generally includes mid-September through mid-March	Whenever possible, maintenance activities under the MWMP will be conducted outside of the breeding season of sensitive wildlife species. If maintenance is required to be conducted during the breeding season of sensitive wildlife and suitable habitat is present within or adjacent to the facility segment planned for maintenance, appropriate mitigation and avoidance measures will be taken to reduce habitat and/or noise impacts to a level below significant.	If maintenance is required during the nesting season, <b>BIO-4</b> , <b>BIO-5</b> , and/or <b>BIO-6</b> , will be implemented, depending on the presence of suitable habitat for various sensitive species and MHPA.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-82b**  
**Project Consistency Determination with MSCP Framework Management Plan**

MHPA Framework Management Plan Section 1.5.2 MSCP Subarea Plan	Applicability	Implementation
Review existing flood control channels within the MHPA periodically (every five to ten years) to determine the need for their retention and maintenance, and to assess alternatives, such as restoration of natural rivers and floodplains	The City conducts regular inspections and hydrology/hydraulic analysis to determine the need for maintenance and to identify potential system deficiencies. The MWMP is focused on maintenance and repair; the City has a Capital Improvement Program (CIP) that includes projects to improve storm water infrastructure.	The MWMP provides a systematic method for determining the need for maintenance of facilities within the MHPA and required EPs and mitigation measures to reduce impacts to less than significant. Mitigation may include restoration of natural rivers and floodplains, including locations where existing maintained facilities may be converted to self-sustaining mitigation sites. Periodic review of the need to retain storm water infrastructure in the MHPA is conducted as part of the City's Watershed Master Plan and CIP projects.
<i>Special Conditions for Covered Species</i>		
<i>Covered Wildlife Species</i>		
Area-specific management directives for the coastal California gnatcatcher must include measures to reduce edge effects and minimize disturbance during the nesting period, fire protection measures to reduce the potential for habitat degradation due to unplanned fire, and management measures to maintain or improve habitat quality including	Whenever possible, maintenance activities under the MWMP would be conducted outside of the breeding season of sensitive wildlife species. If maintenance is required to be conducted during the breeding season of	Mitigation ratios and associated mitigation proposed for impacts to sensitive species habitat are described in Section 5.2 and will be implemented according to <b>BIO-1b</b> .

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-82b**  
**Project Consistency Determination with MSCP Framework Management Plan**

<b>MHPA Framework Management Plan Section 1.5.2 MSCP Subarea Plan</b>	<b>Applicability</b>	<b>Implementation</b>
vegetation structure. No cleaning of occupied habitat within the cities' MHPAs and within the County's Biological Resource Core Areas may occur between March 1 and August 15.	sensitive wildlife and suitable habitat is present within or adjacent to the facility segment planned for maintenance, appropriate mitigation and avoidance measures will be taken to reduce habitat and/or noise impacts to a level below significant.	Protocol surveys will be required for potential impacts to California gnatcatcher if maintenance is proposed within or adjacent to suitable habitat within the MHPA during their breeding season: 3/1–8/15.
Area-specific management directives for least Bell's vireo and southwestern willow flycatcher must include measures to provide appropriate successional habitat, upland buffers for all known populations, cowbird control, and specific measures to protect against detrimental edge effects to these species. Any clearing of occupied habitat must occur between September 15 and March 15 for vireo and between September 1 and May for flycatcher (i.e., outside of the species' nesting seasons).	Whenever possible, maintenance activities under the MWMP would be conducted outside of the breeding season of sensitive wildlife species. If maintenance is required to be conducted during the breeding season of sensitive wildlife and suitable habitat is present within or adjacent to the facility segment planned for maintenance, appropriate mitigation and avoidance measures will be taken to reduce habitat and/or noise impacts to a level below significant.	Mitigation ratios and associated mitigation proposed for impacts to sensitive species habitat are described in Section 5.2 and will be implemented according to <b>BIO-1a</b> .  Protocol surveys will be required for potential impacts to least Bell's vireo and southwestern willow flycatcher during their breeding seasons: 04/01–09/15 and 05/01–09/01, respectively.
Area-specific management directives for Cooper's hawk must include a 300-foot impact avoidance area around any active nests as well as the minimization of disturbance in oak woodlands and oak riparian forests.	Whenever possible, maintenance activities under the MWMP would be conducted outside of the breeding season of sensitive wildlife species. If	Nesting surveys will be required for potential impacts to certain avian species during their breeding season:

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-82b**  
**Project Consistency Determination with MSCP Framework Management Plan**

MHPA Framework Management Plan Section 1.5.2 MSCP Subarea Plan	Applicability	Implementation
	maintenance is required to be conducted during the breeding season of sensitive wildlife and suitable habitat is present within or adjacent to the facility segment planned for maintenance, appropriate mitigation and avoidance measures will be taken to reduce habitat and/or noise impacts to a level below significant.	Cooper's hawk (03/01–08/31).
Area-specific management directives for Ridgway's rail must include active management of wetlands to ensure a healthy tidal saltmarsh environment, and specific measures to protect against detrimental edge effects to this species.	Whenever possible, maintenance activities under the MWMP would be conducted outside of the breeding season of sensitive wildlife species. If maintenance is required to be conducted during the breeding season of sensitive wildlife and suitable habitat is present within or adjacent to the facility segment planned for maintenance, appropriate mitigation and avoidance measures will be taken to reduce habitat and/or noise impacts to a level below significant.	Mitigation ratios and associated mitigation proposed for impacts to sensitive species habitat are described in Section 5.2 and will be implemented according to <b>BIO-1a</b> .  Focused surveys will be required for potential impacts to Ridgway's rail during their breeding season: 03/15–08/15.
Area specific management directives for northern harrier must manage agricultural and disturbed lands (which become part of the preserve) within four miles of nesting	Whenever possible, maintenance activities under the MWMP would be conducted outside of	If avoidance of the breeding season (01/15–09/15) at any of the MWMP facilities

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-82b**  
**Project Consistency Determination with MSCP Framework Management Plan**

MHPA Framework Management Plan Section 1.5.2 MSCP Subarea Plan	Applicability	Implementation
habitat to provide foraging habitat; and include an impact avoidance area (900 foot or maximum possible within the preserve) around active nests. The preserve management coordination group shall coordinate efforts to manage for wintering northern harriers' foraging habitat within the preserve.	the breeding season of sensitive wildlife species. If maintenance is required to be conducted during the breeding season of sensitive wildlife and suitable habitat is present within or adjacent to the facility segment planned for maintenance, appropriate mitigation and avoidance measures will be taken to reduce habitat and/or noise impacts to a level below significant.	where sensitive birds (e.g., raptors) have potential to be present, pre-maintenance nesting surveys for these species shall be conducted, and proper noise attenuation features, nest buffers, and nest avoidance shall be implemented in accordance with the maintenance authorization measures.
Area specific management directives for Belding's savannah sparrow must include specific measures to protect against detrimental edge effects to this species.	Whenever possible, maintenance activities under the MWMP would be conducted outside of the breeding season of sensitive wildlife species. If maintenance is required to be conducted during the breeding season of sensitive wildlife and suitable habitat is present within or adjacent to the facility segment planned for maintenance, appropriate mitigation and avoidance measures will be taken to reduce habitat and/or noise impacts to a level below significant.	Mitigation ratios and associated mitigation proposed for impacts to sensitive species habitat are described in Section 5.2 and will be implemented according to <b>BIO-1a</b> .  If avoidance of the breeding season (January 15 through September 15) at any of the MWMP facilities where sensitive birds (e.g., raptors) have potential to be present, pre-maintenance nesting surveys for these species shall be conducted, and proper

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-82b**  
**Project Consistency Determination with MSCP Framework Management Plan**

MHPA Framework Management Plan Section 1.5.2 MSCP Subarea Plan	Applicability	Implementation
		noise attenuation features, nest buffers, and nest avoidance shall be implemented, in accordance with the maintenance authorization measures.
Area specific management directives for California leasat tern must include protection of nesting sites from human disturbance during reproductive season, predator control, and specific measures to protect against detrimental edge effects to this species. Incidental take (during the breeding season) associated with maintenance/removal of dikes/levees, beach maintenance/enhancement is not authorized except as specifically approved on a case-by-case basis by the wildlife agencies.	Whenever possible, maintenance activities under the MWMP would be conducted outside of the breeding season of sensitive wildlife species. If maintenance is required to be conducted during the breeding season of sensitive wildlife and suitable habitat is present within or adjacent to the facility segment planned for maintenance, appropriate mitigation and avoidance measures will be taken to reduce habitat and/or noise impacts to a level below significant.	Mitigation ratios and associated mitigation proposed for impacts to sensitive species habitat are described in Section 5.2 and will be implemented according to <b>BIO-1a</b> .  If avoidance of the breeding season (January 15 through September 15) at any of the MWMP facilities where sensitive birds (e.g., raptors) have potential to be present, pre-maintenance nesting surveys for these species shall be conducted, and proper noise attenuation features, nest buffers, and nest avoidance shall be implemented, in accordance with the maintenance authorization measures.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 4-82b**  
**Project Consistency Determination with MSCP Framework Management Plan**

MHPA Framework Management Plan Section 1.5.2 MSCP Subarea Plan	Applicability	Implementation
<i>Covered Plant Species</i>		
Area specific management directives for Orcutt's brodiaea, Torrey pine, and willow monardella must include specific measures to protect against detrimental edge effects to these species. The San Vicente population of Orcutt's brodiaea is identified as a critical population in the County's MSCP Subarea Plan and must be 100% conserved. The single natural occurring population at the Torrey Pines State Reserve will also be conserved and appropriately managed.	Whenever possible, maintenance activities under the MWMP would avoid or minimize impacts to MSCP covered plant species populations. No maintenance is proposed to occur within or in the vicinity of the San Vicente Orcutt's brodiaea population or Torrey Pines State Preserve.	Unavoidable impacts to MSCP Covered Species would not be considered significant because MWMP maintenance activities are considered consistent and covered activities under the MSCP. However, Covered Species would be incorporated into wetland mitigation plan design, wherever possible. To further protect against detrimental edge effects, any MSCP covered plant species populations present in the vicinity of maintenance will be delineated for avoidance (if possible) using flagging or other demarcation method in coordination with the monitoring biologist.

The MWMP maintenance plan has incorporated City-wide drainage analyses with the intent of selecting and prioritizing for maintenance the facilities determined to have a high flood risk, while also avoiding facilities within the MHPA that contain sensitive vegetation wherever possible. The

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

MWMP is considered an essential public project and, therefore, is a land use consistent with the SDBG (City of San Diego 2018).

The City's permit to "take" Covered Species under the MSCP is based primarily on the concept that 90% of lands within the MHPA would be preserved. The City's take permit for MSCP Covered Species also includes additional species-specific requirements for avoidance and mitigation for unavoidable impacts. Although encroachment into the MHPA is proposed as part of the MWMP, the proposed storm water facility maintenance would be considered an Essential Public Project (City of San Diego 2018) and an allowed use within the MHPA. Therefore, MWMP maintenance and repair activities would not require a boundary adjustment. Required compensatory mitigation may include sites that involve a Boundary Line Adjustment; compensatory mitigation, including those that would result in potential impacts to the MHPA, are addressed programmatically in Appendix F.

## **4.14 DEVIATIONS TO ENVIRONMENTALLY SENSITIVE LANDS REGULATIONS**

Plans submitted in accordance with Chapter 4, Article 3, Division 1 of the City Municipal Code, ESL Regulations shall, to the maximum extent feasible, comply with the various ESL Regulations. If a proposed development does not comply with all applicable development ESL Regulations, the decision-maker may approve, conditionally approve, or deny the proposed Site Development Permit and grant the deviation based on specific findings that must be made in accordance with LDC Section 143.0150. Applicable findings would be required for any deviations that would conflict with any local policies or ordinances, such as ESL, and would need to be approved by the decision-making body.

Within the COZ, deviations from ESL Regulations, including wetland regulations, may only be granted if the decision-maker determines that the uses permitted by the regulations will not provide an economically viable use of the property based on the findings associated with the project's CDP.

Within the COZ, the ESL Regulations generally establish a 25% allowable development area in steep hillside areas, although development of up to 40% is permitted under certain circumstances for certain types of development, including public utility systems. Additionally, for projects occurring within the COZ, the ESL Regulations require a 100-foot buffer to be maintained around all wetlands, as appropriate, to protect the functions and values of the wetland. A lesser or greater buffer may be warranted based on consultation with the resources agencies (i.e., USACE, USFWS, and CDFW).

Outside the COZ, deviations to the wetland regulations in Section 143.0141(b) can be granted if applicable findings are made and the project falls under one of the following three options: (1) Essential Public Project Option, (2) Economic Viability Option, or (3) Biologically Superior Option. MWMP activities that may require a deviation from ESL Regulations (specifically, wetland

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

regulations) would fall under the Essential Public Projects Option because there would be no feasible alternative that would avoid wetlands, and the activity would be the maintenance of existing public infrastructure that contains wetland vegetation.

## 4.14.1 Essential Public Projects Option

The MWMP is an Essential Public Project according to the SDBG and the definition stated in LDC Section 143.0150(d)(1)(ii) Linear Infrastructure, including storm water conveyance systems including appurtenances; or (iii) Maintenance of existing infrastructure. The MWMP proposes activities to maintain existing public infrastructure through the removal of vegetation and sediment from existing open drainage conveyance facilities and through conducting repairs to damaged existing infrastructure to provide flood control and protection. Based on the City's ESL Regulations and SDBG, the proposed project impacts to the MHPA outside of the COZ, including impacts to wetlands, may be considered only if the project alignment is shown to be "located on the least sensitive portion of the site." Under the Essential Public Projects Option "[A] deviation may only be requested for an Essential Public Project where no feasible alternative exists that would avoid impacts to wetlands." Since maintenance would need to occur within jurisdictional wetland areas, avoidance measures are limited to facilities where maintenance would not provide additional flood protection or benefit, or at specific locations where a Capital Improvement Program project is planned for the near future. Minimization of wetland impacts may include "adequate buffers and/or designs that maintain full hydrologic function and wildlife movement," per the SDBG.

The maintenance areas identified in the MWMP (i.e., project-level FMPs) were developed using site-specific hydrology and hydraulic modeling to determine the minimal area of maintenance that can provide an adequate level of flood protection. In many instances, the maintenance areas have been significantly reduced and impacts to wetlands vegetation avoided when the hydrology and hydraulic modeling shows no increase or change in flood protection or level of service. If a facility is not damaged or in need of repair and currently has a 100-year flood conveyance capacity, no maintenance that would impact wetlands (i.e., FMP) is proposed. In addition, no maintenance or FMP is proposed for certain facility locations (e.g., Los Peñasquitos Canyon Creek at Los Peñasquitos Lagoon) where maintenance could potentially provide a flood protection benefit, but a Capital Improvement Program project is actively planned for that area. In other locations, facilities are in highly sensitive resource areas (e.g., Rose Creek and San Diego River), so no routine maintenance FMP is proposed. All proposed FMPs are expected to result in some flood risk reduction benefit and are in locations where there are no Capital Improvement Program projects scheduled to be constructed in the near-term that would reduce flood risk without maintenance.

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

In addition, EPs included in the MWMP ensure that impacts are minimized during implementation through the completion of focused surveys and avoidance of impacts to active nests, and where feasible to sensitive plant occurrences. All significant impacts are proposed to be mitigated in accordance with the requirements of SDBG Table 2a. As discussed in Section 4.13, with the incorporation of EPs and MMs, including adherence to Land Use Adjacency Guidelines and MSCP species-specific requirements, the MWMP would not have a significant adverse impact to the MSCP or the *Vernal Pool Habitat Conservation Plan*.

The Environmental Impact Report (EIR) for the MWMP includes an alternatives analysis (Chapter 8). The SDBG requires analysis of a no project alternative, a wetlands avoidance alternative, and “an appropriate range of substantial wetland impact minimization alternatives.”

As stated in EIR Chapter 8, under the No Project/No Action Alternative, maintenance activities would continue through individual maintenance projects and minor maintenance activities. Under this scenario, the City’s operational efficiency (both cost and the duration of activities) to conduct maintenance and coordinate mitigation would be reduced. It is possible that, due to the need to review and permit certain maintenance projects individually, the number of maintenance activities that may occur concurrently, or annually, may be less than under the proposed MWMP. This would reduce project impacts in the short term, but also result in an increase of flood risk during that period. Therefore, this alternative would not achieve the MWMP objectives to reduce flooding and protect life and property. Also, over the long-term, impacts would not be reduced under this alternative.

A wetlands avoidance alternative is not feasible because wetlands are located within the facilities that (without maintenance) do not have sufficient capacity to provide necessary flood protection to adjacent life, property, and infrastructure. EIR Chapter 8 includes two alternatives that may provide wetlands avoidance, but were considered and rejected: off-site runoff reduction (low-impact development) and alternative engineering design. Under these alternatives, infrastructure improvements would be implemented to provide flood risk reduction outside of the existing storm water facilities or through expansion of storm water facilities. TSW is actively planning for construction of low-impact development features, but as discussed in EIR Chapter 8, these features are not designed to provide flood protection, and would not adequately modify flood flows such that flooding would be reduced to the degree proposed under the MWMP. Similarly, TSW is actively planning and constructing Capital Improvement Program projects that provide flood protection through modification of existing infrastructure. However, the cost and time required to implement a Capital Improvement Program project does not meet the objective of the MWMP to reduce flood risk in the near term. Based on analysis of these alternatives, a wetland avoidance alternative to the MWMP is not feasible. The MWMP requires regulatory permit approvals from state and federal

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

agencies, all of which have an expiration date and/or require periodic renewal. These agencies also require evaluation of wetland avoidance.

MWMP EIR Chapter 8 includes analysis of several alternatives that would minimize impacts to wetlands: reduced in-stream maintenance alternative, limited sediment removal alternative, alternative sediment management approach, and reduced project alternative. Under these alternatives, access to the facilities would be modified, sediment removal in earthen-bottom channels would be prohibited, the area of maintenance would be modified to protect some in-stream vegetation, or certain high-impact facilities would be removed from the program. Of these alternatives, the reduced project alternative is identified as the Environmentally Superior Alternative, but none of these alternative would fully achieve the objectives of the MWMP, which are aimed to reduce flooding and protect life and property.

Table 4-83 provides a summary of MWMP compliance with deviation requirements under the Essential Public Projects Option of the LDC.

**Table 4-83**  
**Summary of Compliance with Wetland Deviation Requirements**  
**Under Land Development Code Essential Public Project Option**

Requirement	MWMP Compliance
Project meets Essential Public Project definition as defined in Land Development Code (LDC) Section 143.0150(d)(1) and the San Diego Biology Guidelines (SDBG)	The MWMP meets the Essential Public Project definition as stated in LDC Section 143.0150(d)(1)(ii) and (iii) and the SDBG because the activities described are linear infrastructure, including storm water conveyance systems, including appurtenances, or the maintenance of existing infrastructure. The MWMP activities consist of maintenance and repair of existing public infrastructure to provide flood control and protection for the City of San Diego (City) through the removal of accumulated vegetation, sediment, trash, and debris, and repair of damaged infrastructure within the City's storm water conveyance system.
No Project Alternative does not meet project objectives	The No Project Alternative would result in an unacceptable level of flood risk for many areas of the City compared with implementation of the MWMP.
Wetlands Avoidance Alternative does not meet project objectives	Wetland avoidance alternatives are not feasible either due to the inadequate function of low-impact development or the cost and additional time required to construct Capital Improvement Program projects that could reduce or eliminate the need for maintenance.
Wetland Impact Minimization Alternatives do not meet project objectives	Wetland impact minimization alternatives would result in an increased flood risk in many areas of the City compared to implementation of the MWMP.
Wetland impacts are minimized to the maximum extent practicable	Maintenance and repair identified in the MWMP is limited to those locations where such activities are necessary to reduce flood risk or repair

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 4-83**  
**Summary of Compliance with Wetland Deviation Requirements**  
**Under Land Development Code Essential Public Project Option**

Requirement	MWMP Compliance
	damaged infrastructure, and further minimization would not meet the project objective.
All impacts are mitigated in accordance with SDBG Table 2a	SDBG Table 2a is incorporated into MM-BIO-1a and required for all maintenance activities that would result in significant impacts to wetlands.
Project does not have a significant adverse impact to the MSCP or the <i>Vernal Pool Habitat Conservation Plan</i>	As discussed in Section 4.13, with the incorporation of EPs and MMs, including adherence to MHPA Land Use Adjacency Guidelines and MSCP species-specific requirements, the project would not have a significant adverse impact to the MSCP or the <i>Vernal Pool Habitat Conservation Plan</i> .

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 5 ENVIRONMENTAL PROTOCOLS AND MITIGATION MEASURES

The following EPs and mitigation measures address the MWMP's potentially significant and significant direct and indirect effects to sensitive vegetation, sensitive plant and wildlife species, and jurisdictional aquatic resources.

### 5.1 ENVIRONMENTAL PROTOCOLS

The first two biological-resource-related EPs are not associated with a potentially significant impact, but provide additional assurances that adverse biological impacts would be avoided and minimized to the maximum extent practicable.

**EP-BIO-1 FMP Preparation/Verification.** The Transportation & Storm Water Department (TSW) shall prepare a Facility Maintenance Plan (FMP) for new facilities or verify consistency of the FMPs in the approved *Municipal Waterways Maintenance Plan* (MWMP) Appendix A, which shall include written and graphic depiction of the facility-specific biological resources/impacts and avoidance areas, access/staging/loading routes, the equipment that will be used to complete the maintenance, and applicable mitigation measures. FMPs are designed to avoid and minimize impacts to biological resources to the maximum extent practicable while providing flood risk reductions and ensuring the ongoing functionality of existing infrastructure. If compensatory mitigation has been provided for previously permitted maintenance areas, proof of mitigation implementation/credit will be provided as part of the FMP.

**EP-BIO-2 Lighting Restrictions.** TSW shall ensure nighttime lighting required during emergency maintenance complies with the City of San Diego (City) Outdoor Lighting Regulations pursuant to Land Development Code (LDC) Section 142.0740 to the maximum extent practicable, and shall be low pressure sodium illumination (or similar) and directed away from the Multiple Species Conservation Program preserve when the work site is adjacent to the Multi-Habitat Planning Area (MHPA) using appropriate placement and shielding.

Potentially significant indirect impacts include potential for loss of habitat, sensitive plant species, and reduction of wildlife use during maintenance. These indirect impacts would be reduced to less than significant through implementation of **EP-BIO-3a, b, and c**, and **EP-WQ-1** (note, **EP-WQ-1** is listed at the end of this section).

**EP-BIO-3a Qualified Biological Monitor.** TSW shall ensure the following protocols are included in the FMP for each project within or adjacent to sensitive biological resources:

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

1. **Qualified Biologist.** At least 3 days prior to the start of maintenance activities, the Project Biologist shall submit a letter to Mitigation Monitoring Coordination (MMC) that confirms a qualified monitoring biologist (QMB), as defined in the City of San Diego Biology Guidelines (SDBG), has been retained to implement required monitoring. This letter shall also include the names and resumes of all persons involved in the biological monitoring of the project, a schedule for the proposed work, and the facility's pre-approved FMP.
2. **Documentation.** Prior to the commencing maintenance on any storm water facility within, or immediately adjacent to, an MHPA, the Environmental Designee (ED) shall verify that all MHPA boundaries and limits of work have been delineated on all maintenance documents.
3. **Biological Construction Mitigation/Monitoring Exhibit.** The Qualified Biologist shall present a Biological Construction Mitigation/Monitoring Exhibit (BCME), which includes limits of work, proposed monitoring schedule, avian or other wildlife surveys/survey schedules (including general avian nesting and U.S. Fish and Wildlife Service [USFWS] protocol), timing of surveys, avian construction avoidance areas/noise buffers/barriers, other impact avoidance areas, and any subsequent requirements determined by the Qualified Biologist and the City ED/MMC. The BCME shall include the FMP site plan, written and graphic depiction of the project's biological mitigation/ monitoring program, and a schedule. Where the potential for impacts to biological resources is limited (e.g., removal of sediment or debris from an unvegetated concrete structure that flows into a closed storm drain system during the non-breeding season), the monitoring program may be limited to a pre- and post-maintenance verification inspections. For highly sensitive resource areas, full-time biological monitors may be required. The BCME shall be approved by the MMC prior to the start of maintenance.
4. **Resource Marking/Protection.** Prior to maintenance activities, the Qualified Biologist shall supervise the placement of orange construction fencing or visible marker, staking, or flagging along the limits of the facility maintenance area adjacent to sensitive biological habitats, as shown on the BCME, to ensure crews remain in the approved maintenance areas. These demarcations will not be required for facilities with existing structures, such as chain-link fencing, along the limits or facilities that are adjacent to urban and non-sensitive habitat areas.  
  
This phase shall include flagging plant specimens and delineating buffers to protect sensitive biological resources (e.g., habitats, sensitive flora and fauna

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

species, including nesting birds) during construction. Appropriate steps/care shall be taken to minimize attraction of nest predators to the site.

**EP-BIO-3b Pre-Construction Meeting/Education.** Prior to the start of any activity where the FMP for the proposed maintenance area indicates that significant impacts to biological resources may occur, TSW shall arrange an on-site pre-maintenance meeting with the following in attendance: MMC representative, Project Consultant(s) (e.g., QMB), TSW, Construction Manager (CM) (if applicable), Resident Engineer (RE) (if applicable), and other parties of interest. At this meeting, the QMB shall identify and discuss the maintenance protocols that apply to the maintenance activities and the sensitive nature of the adjacent habitat with the crew and subcontractor.

At the pre-maintenance meeting, the QMB shall submit to the MMC and CM a copy of the FMP and BCME that identifies areas to be protected, fenced, and monitored. This data shall include all planned locations and design of noise attenuation walls or other devices, if applicable.

Prior to commencement of maintenance activities, the Qualified Biologist shall meet with the crew supervisor and the maintenance crew and conduct an on-site educational session regarding the need to avoid impacts outside of the approved maintenance area and to protect sensitive flora and fauna that may occur at the specific facility (e.g., explain the avian and wetland buffers, flag system for removal of invasive species or retention of sensitive plants, and clarify acceptable access routes/methods and staging areas).

**EP-BIO-3c Biological Monitoring and Reporting.** The designated QMB shall inspect/monitor the project area in accordance with the approved BCME. This may be limited to pre- and post-maintenance inspections, weekly visits, or full-time monitoring, as determined by the Qualified Biologist and MMC.

The QMB shall document monitoring events via a Consultant Site Visit Record. This record shall be sent to the TSW each month and the TSW shall forward copies to MMC. However, if weekly reports are submitted as part of a separate agency permit requirement, these reports may be forwarded to MMC in place of Consultant Site Visit Record submittals.

If no deviations from the FMP occur during maintenance, no additional documentation is required. If deviations from the FMP occur, such as unanticipated impacts to sensitive vegetation communities or unanticipated discharge of

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

pollutants, a Final Monitoring Report shall be prepared within 3 months following the completion of mitigation monitoring detailing maintenance and monitoring that occurred and any remedial or compensatory measures taken.

Potentially significant indirect impact includes degradation of sensitive vegetation communities and habitat for sensitive plant and wildlife species due maintenance activities potentially increasing the spread of invasive plant species. These indirect impacts would be reduced to a level less than significant through implementation of **EP-BIO-4** and **EP-LU-1** (note, **EP-LU-1** is listed at the end of this section).

**EP-BIO-4 Handling of Non-Native Invasive Plant Species.** Where an FMP involves potential disturbance of non-native invasive plant species (as identified by the California Invasive Plant Council), TSW shall implement standard environmental hygiene practices and the following maintenance procedures, or current best practices, to ensure that dispersal of propagules (e.g., seeds, stems) are avoided or minimized:

- When non-native invasive plants can be removed entirely (e.g., root and above-ground plant material), the removal shall be monitored by the QMB.
- When removing the roots of non-native invasive plants is not feasible (e.g., when erosive flows are predicted), TSW shall determine if any above-ground plant material can be removed (e.g., cut/trimmed). The removal of any above-ground plant material shall be monitored by the QMB. If herbicides are used to treat roots or cut/trimmed plants, it shall be applied by a Licensed Pest Control Advisor using chemicals permitted as safe within aquatic environments.
- When removing the roots and above-ground non-native invasive plants is not feasible (e.g., due to limited access), TSW shall coordinate with the QMB to determine if herbicides or other methods to treat plant material could be implemented. If herbicides are used to treat roots or cut/trimmed plants, it shall be applied by a Licensed Pest Control Advisor using chemicals permitted as safe within aquatic environments.
- TSW shall inspect and clean in place any equipment and tools used to handle, remove, and/or treat non-native invasive plants on a daily basis during active maintenance to limit the transfer of invasive rhizomes, seeds, and infectious agents to new off-site work areas.

Potentially significant indirect impact could occur from the loss of sensitive plant species adjacent to maintenance activity areas. These indirect impacts would be reduced to a level less than significant through implementation of **EP-BIO-5**.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**EP-BIO-5 Sensitive Plant Species Protection.** If maintenance activities will occur adjacent to areas suitable for listed and/or narrow endemic plants, and no direct impacts are proposed to occur, TSW shall ensure the boundaries of the plant populations designated sensitive by the resource agencies are clearly delineated with flagging or temporary fencing that must remain in place for the duration of the activity.

Potentially significant indirect impact could occur degradation of sensitive vegetation communities and habitat for sensitive plant and wildlife species due maintenance activities potentially increasing the spread of shot hole borer. These indirect impacts would be reduced to a level less than significant through implementation of **EP-BIO-6**.

**EP-BIO-6 Handling of Potential Shot Hole Borer Infestation.** If maintenance within a particular facility will impact woody riparian vegetation within a watershed where shot-hole borer is known to occur, TSW shall ensure a biologist knowledgeable of shot-hole borer life history and behavior conducts an initial pre-maintenance survey of the facility segments to determine if indicators of shot-hole borer infestation are present within the maintenance area.

If no indicators of shot-hole borer are observed, removal and disposal of the vegetative material shall proceed as planned.

If signs of shot-hole borer are observed, the following procedures, or current best practices, shall be implemented to manage the infestation and prevent further spread of the pest:

- Disinfect all tools that come into contact with infected woody material using a 5% bleach solution, Lysol spray, 70% ethanol (or isopropyl).
- Either chip or incinerate all woody vegetative material removed as part of maintenance.
  - If chipping method is used, all woody vegetative material removed as part of maintenance shall be chipped to less than 1 inch to dry the in-wood climate out and make it unsuitable for beetles or fungus.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

Following chipping, material shall be solarized in the facility staging or stockpile area on site using a clear plastic or visqueen covering. The solarizing period shall be a minimum of 2 weeks during summer months and 2 months (or longer depending on weather) during winter months. The goal is to maintain temperatures under the cover between 95°F and 105°F.

**EP-LU-1 MSCP/MHPA – Land Use Adjacency Guidelines.** See MWMP Appendix C.

**EP-LU-2 MSCP/MHPA – Boundary Line Adjustment.** See MWMP Appendix C.

**EP-WQ-1 Water Pollution Control Plan.** See MWMP Appendix C.

The tables below providing acreage of wetland/jurisdictional resource and upland impacts and associated mitigation requirements and may include one or more of the following footnotes: (1) impacts are considered significant, absent mitigation, (2) impacts are considered significant, but would not require mitigation (3) impacts are not considered significant and no mitigation is required, (4) or impacts in the facility group are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and no mitigation is required (5) Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details). For sake of consistency and ease of use, the numbering of these footnotes is consistent in all tables, regardless of the number of footnotes used in any one particular table. Determinations of significance follow the thresholds described in Section 4.1.1.

## **5.2 SENSITIVE VEGETATION COMMUNITIES AND JURISDICTIONAL AQUATIC RESOURCES**

The proposed MWMP project would result in potentially significant impacts to sensitive vegetation communities (i.e., Tier I-III and Wetlands) and jurisdictional aquatic resources within the proposed project boundaries. Even if no mitigation is required for proposed maintenance within a particular facility group (e.g., all maintenance areas consisting entirely of developed concrete-lined channel, impacts would be to non-native species only), as described in Sections 4.2 through 4.9, the facility group has been included in this Section for the sake of consistency.

Permanent impacts to wetlands require compensatory mitigation to replace acreage, functions, and services loss in accordance with SDBG, including ratios for wetlands outlined in Table 2A and uplands outlined in Table 3 of the SDBG. In regards to mitigation for wetland impacts specifically, the SDBG require that '[a]ny impacts to wetlands must be mitigated "in-kind" and achieve a "no-net loss" of wetland functions and values.' This means that for permanent impacts, a minimum ratio of 1:1 mitigation must be provided in the form of creation and/or restoration in order to achieve the no-

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

net loss requirement. Any remaining balance of the mitigation required for a particular impact (e.g., 2:1 mitigation ratio for permanent impacts to freshwater marsh) may be in the form of wetland enhancement and/or acquisition (preservation), but these mitigation methods would not result in an increase in the wetland area. In addition, for permanent impacts that occur within the COZ, mitigation would be required in accordance with the SDBG and should be located in the COZ (mitigation for impacts within COZ cannot occur outside of COZ).

MWMP project facilities are classified in Sections 4.1–4.9 as either previously permitted or newly proposed, or in some cases, a combination of the two.

## Direct Impacts within Previously Permitted Project Areas

Mitigation ratios for previously permitted facilities that have been established by previous approvals generally conform with or exceed the SDBG Table 2A and 3 ratios. In most cases, mitigation has been provided at a mitigation site developed and maintained by the City for wetlands and payment to the City's Habitat Acquisition Fund or Cornerstone Lands for uplands. In some cases, compensatory wetlands mitigation credits have been purchased from third-party mitigation banks.

Appendix F includes details regarding how impacts to sensitive vegetation communities and jurisdictional aquatic resources within previously permitted maintenance have been adequately mitigated. In all cases, the adequacy of one-time mitigation for the permanent loss associated with routine, ongoing maintenance has been previously established according to City, state, and federal regulations and long-term protection measures are in place at each of those mitigation sites to ensure that biological resources restored and protected at those sites remain functional and sustainable. Therefore, with verification of implementation of one-time mitigation (**EP-BIO-1**), potential significant direct impacts to sensitive vegetation communities or jurisdictional aquatic resources from routine maintenance at previously permitted project areas would be reduced to less than significant and no additional mitigation would be required.

Acreage of previously permitted impact areas are included in the facility summaries provided in Sections 5.2.1–5.2.8 for tracking and disclosure purposes. However, as explained previously, additional mitigation is not required for these facilities. Verification of completed mitigation (or prior authorization confirming that no mitigation is required) is incorporated into **EP-BIO-1** and must be included with the final FMP prior to maintenance.

## Direct Impacts within Newly Proposed Project Areas

Direct impacts to sensitive vegetation communities (i.e., Tiers I–III and Wetlands) and jurisdictional aquatic resources within the newly proposed project areas are considered significant absent

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

mitigation (**BIO-1a** and **BIO-1b**). General requirements of wetlands and uplands mitigation are identified in Mitigation Measure (**MM-)****BIO-1a** and **MM-BIO-1b**. Significant impacts and total wetlands and uplands mitigation area identified for each WMA/watershed in Sections 5.2.1 through 5.2.8. Appendix F provides existing draft Habitat Mitigation and Monitoring Plans (HMMPs) and additional potential mitigation sites/credits/opportunities that demonstrate the feasibility of implementing required compensatory mitigation for all proposed MWMP projects.

**Impact BIO-1a** The project would result in direct impacts to sensitive wetlands, including jurisdictional aquatic resources, that would result in a significant loss of acreage, function, and services within proposed MWMP project areas not previously approved (i.e., newly proposed project areas). Facility group FMP impacts to wetlands that would be exempt and not considered significant are described in Section 4.1.1.

**MM-BIO-1a Compensatory Wetlands Mitigation.** Significant impacts to sensitive wetlands, including jurisdictional aquatic resources, resulting from maintenance that require mitigation based on thresholds summarized in Table 4-1, shall be mitigated through (A) implementation of habitat creation, restoration, enhancement, and/or preservation through an approved *Habitat Mitigation and Monitoring Plan* (HMMP) or (B) acquisition of approved mitigation credits, including City of San Diego (City) Advanced Permittee Responsible Mitigation (APRM) sites. Both A and B are equally suitable and equivalent mitigation.

Wetland mitigation required as part of any federal (404) or state (1601/1603) wetland permit shall supersede and shall not be in addition to any mitigation identified in the California Environmental Quality Act (CEQA) document for those wetland areas covered under any federal or state wetland permit. Wetland habitat outside the jurisdiction of the federal and state permits shall be mitigated in accordance with the CEQA document for those wetland areas covered under any federal or state wetland permit. Wetland habitat outside the jurisdiction of the federal and state permits shall be mitigated in accordance with the CEQA document.

- A) An HMMP shall be prepared in accordance with the City of San Diego Biology Guidelines (SDBG). Mitigation shall conform with the SDBG including definitions for creation, restoration, enhancement, and acquisition identified under Environmentally Sensitive Lands (ESL), including satisfaction of no-net-loss by including at least a 1:1 ratio of creation or restoration for all areas of significant impacts to wetlands (see Table 5-1).

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

When proposed mitigation involves habitat enhancement, restoration, or creation, the HMMP shall include the following information:

- Conceptual planting plan including planting zones, grading, and irrigation;
- Seed mix/planting palette;
- Planting specifications;
- Monitoring program including success criteria; and
- Long-term maintenance and preservation plan.

For mitigation which involves habitat acquisition, the HMMP shall include the following:

- Location of proposed acquisition;
- Description of the biological resources to be acquired, including support for the conclusion that the acquired habitat mitigates for the specific maintenance impact; and
- Documentation that the mitigation area would be adequately preserved and maintained in perpetuity.

B) Allocation of mitigation site credits, including City APRM, shall include the following:

- Location of approved mitigation site;
- Description of the mitigation credits to be acquired, including support for the conclusion that the acquired habitat mitigates for the specific maintenance impact;
- Documentation of the credits that are associated with a mitigation bank or APRM site that has been approved by the appropriate Resource Agencies; and
- Documentation in the form of a current mitigation credit ledger.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-1**  
**Wetland Mitigation Ratios**

HABITAT TYPE	MITIGATION RATIO
Coastal Wetlands:	
- Salt marsh	4:1
- Salt panne	4:1
Riparian Habitats:	
- Oak riparian forest	3:1
- Riparian forest or woodland	3:1
- Riparian scrub	2:1
- Riparian scrub in the Coastal Overlay Zone	3:1
Freshwater Marsh	2:1
Freshwater Marsh in the Coastal Overlay Zone	4:1
Natural Flood Channel	2:1
Disturbed Wetland	2:1
Vernal Pools	2:1 to 4:1
Marine Habitats	2:1
Eelgrass Beds	2:1

**Notes:**

Any impacts to wetlands must be mitigated “in-kind” and achieve a “no-net loss” of wetland function and values except as provided for in Section 3B (Economic Viability Option).

- \* Mitigation for vernal pools impacts consistent with the Vernal Pool Habitat Conservation Plan shall be 2:1 for listed fairy shrimp or when no listed plant species are present, 3:1 for San Diego button celery, and 4:1 when listed species with very limited distributions (e.g., spreading navarretia, San Diego mesa mint, California Orcutt grass, and Otay mesa mint) are present. While the ratio is applied to the basin area, the mitigation site must include appropriate watershed to support restored and/or enhanced basins.

**Impact BIO-1b** The MWMP would result in direct impacts to sensitive uplands (Tier I-III B) that would result in a significant loss of acreage, function, and services within proposed MWMP project areas not previously approved (i.e., newly proposed project areas). Facility group FMP impacts to Tier I-III B habitats that would be exempt and not considered significant are described in Section 4.1.1.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**MM-BIO-1b**    **Compensatory Uplands Mitigation.** Cumulative impacts to sensitive uplands under the *Municipal Waterways Maintenance Plan* (MWMP) are generally limited in size (i.e., less than the 5- to 10-acre threshold established in the SDBG) and, therefore, shall be mitigated in accordance with the applicable SDBG mitigation ratios (Table 5-2) through payment into the City's Habitat Acquisition Fund (Fund #10571), as established by City Council Resolution R-275129, adopted on February 12, 1990, or dedication of credits from the City's Cornerstone Lands Marron Valley Mitigation Bank.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-2  
Upland Mitigation Ratios<sup>1</sup>**

TIER	HABITAT TYPE	MITIGATION RATIOS			
<b>TIER 1<sup>2</sup></b> <b>(rare uplands)</b>	Southern Foredunes Torrey Pines Forest Coastal Bluff Scrub Maritime Succulent Scrub Maritime Chaparral Scrub Oak Chaparral Native Grassland Oak Woodlands	Location of Preservation			
				Inside	Outside
		Location of Impact	Inside*	2:1	3:1
			Outside	1:1	2:1
<b>TIER II<sup>3</sup></b> <b>(uncommon uplands)</b>	Coastal Sage Scrub (CSS) CSS/Chaparral	Location of Preservation			
				Inside	Outside
		Location of Impact	Inside*	1:1	2:1
			Outside	1:1	1.5:1
<b>TIER IIIA<sup>3</sup></b> <b>(common uplands)</b>	Mixed Chaparral Chamise Chaparral	Location of Preservation			
				Inside	Outside
		Location of Impact	Inside*	1:1	1.5:1
			Outside	0.5:1	1:1
<b>TIER IIIB<sup>3</sup></b> <b>(common uplands)</b>	Non-Native Grasslands <sup>4</sup>	Location of Preservation			
				Inside	Outside
		Location of Impact	Inside*	1:1	1.5:1
			Outside	0.5:1	1:1
<b>TIER IV</b> <b>(other uplands)</b>	Disturbed Land Agriculture Eucalyptus Woodland Ornamental Plantings	Location of Preservation			
				Inside	Outside
		Location of Impact	Inside*	0:1	0:1
			Outside	0:1	0:1

**Notes:**

1. No mitigation would be required for impacts within the base development area (25%) occurring inside the MHPA. Mitigation for any impacts from development in excess of the 25% base development area for

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

community plan public facilities or for projects processed through the deviation process would be required at the indicated ratios.

2. For all Tier I impacts, the mitigation could (1) occur within the MHPA portion of Tier I (in-kind) or (2) occur outside of the MHPA within the affected habitat type (in-kind).
3. For impacts to Tier II, III A and III B habitats, the mitigation could (1) occur within the MHPA portion of Tiers I – III (out-of-kind) or (2) occur outside of the MHPA within the affected habitat type (in-kind).
4. Mitigation for impacts to occupied burrowing owl habitat (at the subarea plan specified ratio) must be through the conservation of occupied burrowing owl habitat or conservation of lands appropriate for restoration, management, and enhancement of burrowing owl nesting and foraging requirements.

## Unintended Temporary Impacts

Although not expected, there is potential for maintenance activities to result in unintended temporary impacts to native plant species should the limits of work be exceeded inadvertently. Furthermore, any unintended temporary impact could create an opportunity for the recruitment of non-native plant species through the removal of existing native plant species, which would be significant absent mitigation. Any unintended temporary impact areas in sensitive habitat communities would require restoration following the completion of construction. Post construction landscaping in unintended temporary impact areas to non-sensitive habitat, such as non-native vegetation, would be restored with non-habitat forming native species.

**Impact BIO-2** It is possible the channel maintenance could result in unintended impacts to sensitive vegetation communities if the limits of work are inadvertently exceeded.

**MM-BIO-2 Unintended Impact Mitigation.** Should any impacts occur outside of the authorized impact limits, they would be considered permanent and mitigated by either (1) providing mitigation in accordance with the applicable SDBG mitigation ratios or (2) installing an on-site habitat revegetation and erosion control treatment within any unintentional disturbance areas in native habitat in accordance with the SDBG and the Landscape Standards in the City's Land Development Manual. Habitat revegetation shall feature native species that are typical of the area, and erosion control features shall include silt fence and straw fiber rolls, where appropriate (e.g., in areas where sheet flow during rain events may cause erosion). The revegetation areas shall be monitored and maintained for a minimum of 25 months to ensure adequate establishment and sustainability of the plantings/seedlings to reduce the risk of erosion and/or non-native, invasive plant species establishment, in accordance with the Landscape Standards in the City's Land Development Manual.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 5.2.1 SAN DIEGUITO WATERSHED

**Impact BIO-1.1a** Proposed maintenance would result in a total of 0.40 acres of direct impacts to sensitive City wetlands, including jurisdictional aquatic resources under the jurisdiction of the USACE, RWQCB, CDFW, CCC, and/or the City at two facility groups within the San Dieguito watershed.

### 5.2.1.1 Green Valley Creek – Pomerado Facility Group

Significant impacts in the Green Valley Creek – Pomerado facility group would occur within two facility segments and mitigation would be required as shown in Table 5-3. No significant impacts to sensitive vegetation would occur as part of maintenance (Section 4.2.1). These segments have not been previously permitted for impacts (newly proposed) and there are no conceptual mitigation plans approved or currently in the process of approval for the maintenance areas. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F.

**Table 5-3**  
**Mitigation for Impacts to Jurisdictional Resources within the Green Valley Creek – Pomerado Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Pomerado_1 (Acres)</i>	<i>Pomerado_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>	<i>Newly Proposed</i>		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-lined) <sup>2</sup>	A / R / C	1.47	1.87	2:1	0.00
Disturbed Wetland (concrete-lined) (11200)	Disturbed Wetland	A / R / C	0.09	0.06	2:1	0.30

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-3**  
**Mitigation for Impacts to Jurisdictional Resources within the Green Valley Creek – Pomerado Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Pomerado_1 (Acres)</i>	<i>Pomerado_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>	<i>Newly Proposed</i>		
Freshwater Marsh (concrete-lined) (52400)	Freshwater Marsh	A / R / C	–	0.06	2:1	0.12
Riparian Forest (Southern Riparian Forest Concrete-lined) (61300)	Riparian Forest or Woodland	A / R / C	0.04	–	3:1	0.12
<b>Total</b>			<b>1.60</b>	<b>1.99</b>	<b>—</b>	<b>0.54</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

## 5.2.1.2 Green Valley Creek – Paseo del Verano Facility Group

Significant impacts to jurisdictional resources would occur in the Green Valley Creek – Paseo del Verano facility group within one facility segment, and mitigation would be required as shown in Table 5-4. No significant impacts to sensitive vegetation would occur as part of maintenance (Section 4.2.1). This segment has not been previously permitted for impacts (newly proposed) and there are no conceptual mitigation plans currently in the process of approval for the maintenance area. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-4**  
**Mitigation for Impacts to Jurisdictional Resources within the Green Valley Creek – Paseo del  
Verano Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			<i>Paseo del Verano_1 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>		
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland	A / R / C	0.06	3:1	0.18
Riparian Forest (Southern Willow Forest, Concrete- lined) (61320)	Riparian Forest or Woodland	A / R / C	0.12	3:1	0.36
<b>Total</b>			<b>0.18</b>	<b>—</b>	<b>0.54</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

## 5.2.2 PEÑASQUITOS WATERSHED

**Impact BIO-1.2a** Proposed maintenance would result in a total of 1.74 acres of newly proposed and 1.64 acres of previously permitted direct impacts to sensitive City wetlands, including jurisdictional aquatic resources under the jurisdiction of the USACE, RWQCB, CDFW, and/or the City at eight facility groups within the Peñasquitos watershed.

**Impact BIO-1.2b** The proposed MWMP project would result in a total of 0.15 acres of direct impacts to sensitive upland vegetation communities at three facility groups and one structure within the Peñasquitos watershed.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

### 5.2.2.1 Peñasquitos Lagoon – Industrial Facility Group

Significant impacts in the Peñasquitos Lagoon – Industrial facility group would occur within two facility segments. Impacts would be partially within a previously permitted maintenance area with the remaining impacts being newly proposed (Table 5-5). The previously permitted area at this facility has been mitigated through an existing conceptual mitigation plan, which has been approved and is under construction (Appendix F). Any maintenance impacts that occur within previously permitted maintenance areas would not require additional mitigation under the MWMP. Mitigation for any impacts outside of this area may occur out-of-watershed or at one of the potential mitigation projects identified in Appendix F.

**Table 5-5**  
**Mitigation for Impacts to Jurisdictional Resources within the Peñasquitos Lagoon –**  
**Industrial Facility Group (Acres)**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Industrial_1 (Acres)</i>	<i>Industrial_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)<sup>6</sup></i>
			<i>Newly Proposed</i>	<i>Previously Permitted</i>		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- lined) <sup>2</sup>	A / R / C / CC	0.01	0.08	2:1	0.00
Freshwater Marsh (concrete- lined) (52400)	Freshwater Marsh	A / R / C / CC	<0.01	0.02	4:1	0.01
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland	A / R / C / CC	0.02	—	3:1	0.06

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-5**  
**Mitigation for Impacts to Jurisdictional Resources within the Peñasquitos Lagoon – Industrial Facility Group (Acres)**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			Industrial_1 (Acres)	Industrial_2 (Acres)	Mitigation Ratio*	Mitigation Required (Acres) <sup>6</sup>
			Newly Proposed	Previously Permitted		
Riparian Forest (Southern Willow Forest, Concrete-lined) (61320)	Riparian Forest or Woodland	A / R / C / CC	—	0.04	2:1	0.00
<b>Total</b>			<b>0.03</b>	<b>0.14</b>	<b>—</b>	<b>0.07</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = CCC Jurisdictional  
Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

## 5.2.2.2 Peñasquitos Lagoon – Tripp Facility Group

Significant impacts in the Peñasquitos Lagoon – Tripp facility group would occur within one facility segment. Impacts would be entirely within the previously permitted maintenance area (Table 5-6) that has been mitigated through an existing conceptual mitigation plan, which has been approved and is under construction (Appendix F). Any maintenance impacts that occur within previously permitted maintenance areas would not require additional mitigation under the MWMP. Mitigation for any impacts outside of this area may occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-6**  
**Mitigation for Impacts to Jurisdictional Resources within the Peñasquitos Lagoon – Tripp Facility Group (Acres)**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			<i>Tripp_1 (Acres)<sup>1</sup></i>	<i>Mitigation Ratio</i>	<i>Mitigation Required (Acres)<sup>5</sup></i>
			<i>Previously Permitted</i>		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-lined) <sup>2</sup>	A / R / C / CC	0.74	2:1	0.00
Freshwater Marsh (concrete-lined) (52400)	Freshwater Marsh	A / R / C / CC	0.17	4:1	0.00
Riparian Scrub (Southern Willow Scrub, Concrete-lined) (63320)	Riparian Scrub	A / R / C / CC	0.01	3:1	0.00
<b>Total</b>			<b>0.92</b>	<b>—</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = CCC Jurisdictional  
Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

## 5.2.2.3 Los Peñasquitos Canyon Creek – Black Mountain Facility Group

Significant impacts in the Los Peñasquitos Canyon Creek – Black Mountain facility group would occur within two facility segments and mitigation would be required as shown in Tables 5-7 and 5-8. These segments have not been previously permitted for impacts (newly proposed) and there are no conceptual mitigation plans currently in the process of approval for the maintenance areas. Mitigation may

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover. Permanent direct impacts to sensitive upland vegetation communities (Tier I – IIIB) would be below the 0.10-acre threshold described in the SDBG; therefore, the impacts would not be considered significant and no mitigation would be required (Table 5-2).

**Table 5-7**  
**Mitigation for Impacts to Jurisdictional Resources within the Los Peñasquitos Canyon Creek**  
**– Black Mountain Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Black Mountain_1 (Acres)</i>	<i>Black Mountain_ 2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>	<i>Newly Proposed</i>		
Developed Concrete- lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	0.02	–	2:1	0.00
Disturbed Wetland (palm- dominated) (11200)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.01	–	0:1	0.00
Freshwater Marsh (52400)	Freshwater Marsh	A / R / C	0.18	0.25	2:1	0.86
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.10	0.12	2:1	0.44
		C	0.02	–	3:1	0.06

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-7**  
**Mitigation for Impacts to Jurisdictional Resources within the Los Peñasquitos Canyon Creek**  
**– Black Mountain Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			Black Mountain_1 (Acres)	Black Mountain_ 2 (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed	Newly Proposed		
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland	A / R / C	–	0.84	3:1	2.52
Riparian Scrub (63000)	Riparian Scrub	A / R / C	0.03	–	2:1	0.06
Riparian Scrub (Mulefat Scrub) (63310)	Riparian Scrub	C	<0.01	–	2:1	<0.01
		A / R / C	–	0.03	2:1	0.06
Total			0.36	1.24	—	4.00

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

\* Mitigation ratios are for City requirements only.

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>1</sup> Impacts are considered significant, but would not require mitigation.

<sup>2</sup> Impacts are not considered significant and would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-8**  
**Mitigation for Impacts to Sensitive Upland Vegetation Communities within the Los Peñasquitos Canyon Creek – Black Mountain Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Upland Vegetation Community	Tier	Facility Segment Name_Number		City Required Mitigation	
			<i>Black Mountain_1 (Acres)</i>	<i>Black Mountain_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required within MHPA (Acres)</i>
			<i>Newly Proposed</i>	<i>Newly Proposed</i>		
Coastal Sage Scrub ( <i>Baccharis</i> -dominated) (32530)	Coastal Sage Scrub <sup>3</sup>	II	–	0.02	0:1	0.00
Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub <sup>3</sup>	II	0.06	–	0:1	0.00
<b>Total</b>			<b>0.06</b>	<b>0.02</b>	<b>—</b>	<b>0</b>

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 5.2.2.4 Los Peñasquitos Canyon Creek – 5-805 Basin Facility Group

Significant impacts in the Los Peñasquitos Canyon Creek – 5-805 Basin facility group would occur within one facility basin, 5-805 (Segment 1), and would be limited to an area that was previously permitted (Table 5-9). The 5-805 (Segment 1) facility basin was originally constructed as a self-mitigating drainage improvement project that resulted in a net gain of wetland functions and services. Maintenance of the basin was included in the original project description and is required to maintain the functions and services of the constructed wetlands; therefore, the basin is considered previously permitted, and any maintenance impacts that occur within previously permitted maintenance areas would not require additional mitigation under the MWMP. Mitigation for any impacts outside of this previously permitted area may occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Permanent direct impacts to sensitive upland vegetation communities (Tier I – IIIB) would be below the

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

0.10-acre threshold described in the SDBG; therefore, the impacts would not be considered significant and no mitigation would be required (Table 5-2).

**Table 5-9**  
**Mitigation for Impacts to Jurisdictional Resources within the Los Peñasquitos Canyon Creek**  
**- 5-805 Basin Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			5-805_1 (Acres)	Mitigation Ratio*	Mitigation Required (Acres) <sup>6</sup>
			Previously Permitted		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C / CC	<0.01	2:1	0.00
Coastal Salt Marsh (52200)	Salt Marsh	A / R / C / CC	0.92	4:1	0.00
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland	A / R / C / CC	0.07	3:1	0.00
Riparian Scrub (Mulefat Scrub) (63310)	Riparian Scrub	C / CC	0.04	3:1	0.00
Tamarisk Scrub (63810)	Riparian Scrub (Invasive) <sup>3</sup>	C / CC	0.12	0:1	0.00
<b>Total</b>			<b>1.16</b>	<b>—</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Table 5-10

## Mitigation for Impacts to Sensitive Vegetation

### Communities Types within the Los Peñasquitos Canyon Creek – 5-805 Basin Facility Group

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Upland Vegetation Community	Tier	Facility Segment Name_Number	City Required Mitigation	
			5-805_1 (Acres)		
			Previously Permitted	Mitigation Ratio*	Mitigation Required within MHPA (Acres) <sup>6</sup>
Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub	II	0.05	0:1	0.00
Disturbed Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub	II	<0.01	0:1	0.00
<b>Total</b>			<b>0.05</b>	<b>—</b>	<b>0.00</b>

#### Notes:

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

#### 5.2.2.5 Soledad Canyon Creek – Sorrento Facility Group

Significant impacts in the Soledad Canyon Creek – Sorrento facility group would occur within two facility segments and mitigation would be required as shown in Table 5-11. Previously permitted impacts within the two segments in this facility group (Roselle [Segments 1 and 2]) were mitigated through a conceptual mitigation plan that has been approved and is under construction (Appendix F). Any maintenance impacts that occur within previously permitted maintenance areas would not require additional mitigation under the MWMP. Mitigation for any impacts outside of this area may occur out-of-watershed or at one of the potential mitigation projects identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Table 5-11

Mitigation for Impacts to Jurisdictional Resources within the Soledad Canyon Creek – Sorrento Facility Group (Acres)

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Roselle_1 (Acres)</i>	<i>Roselle_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)<sup>6</sup></i>
			<i>Previously Permitted</i>	<i>Previously Permitted</i>		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C / CC	0.01	4.14	2:1	0.00
Disturbed Wetland (Arundo- dominated)(651 00)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C / CC	0.01	<0.01	0:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C / CC	0.05	0.01	2:1	0.00
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland	A / R / C / CC	0.10	0.01	3:1	0.00

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-11**  
**Mitigation for Impacts to Jurisdictional Resources within the Soledad Canyon Creek – Sorrento Facility Group (Acres)**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Roselle_1 (Acres)</i>	<i>Roselle_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)<sup>6</sup></i>
			<i>Previously Permitted</i>	<i>Previously Permitted</i>		
Riparian Scrub (Southern Willow Scrub) (63320)	Riparian Scrub	A / R / C / CC	–	0.03	3:1	0.00
<b>Total</b>			<b>0.17</b>	<b>4.19</b>	–	<b>0.00</b>

**Notes:**

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated. See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 5.2.2.6 Carroll Canyon Creek – Carroll Facility Group

Significant impacts in the Carroll Canyon Creek – Carroll facility group would occur within one facility segment and mitigation would be required as shown in Tables 5-12 and 5-13. Proposed impacts would be partially within the previously permitted maintenance area (including impacts to sensitive upland vegetation) that has been mitigated through an existing conceptual mitigation plan, which has been approved and is under construction (Appendix F). Any maintenance impacts that occur within previously permitted maintenance areas would not require additional mitigation under the MWMP. Mitigation for any impacts outside of the previously permitted area may occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

**Table 5-12**  
**Mitigation for Impacts to Jurisdictional Resources within the Carroll Canyon Creek – Carroll Facility Group**

MWMP Mapping Vegetation Community, (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Carroll Canyon_1 (Acres)<sup>1</sup></i>		Mitigation Ratio <sup>*</sup>	Mitigation Required (Acres) <sup>6</sup>
			<i>Newly Proposed</i>	<i>Previously Permitted</i>		
Disturbed Riparian Forest (Southern Riparian Forest) (61300)	Riparian Forest or Woodland	C	—	<0.01	3:1	0
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.05	0.03	2:1	0.10
<b>Total</b>			<b>0.05</b>	<b>0.03</b>	<b>—</b>	<b>0.10</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>\*</sup> Mitigation ratios are for City requirements only.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

**Table 5-13**  
**Mitigation for Impacts to Sensitive Upland Vegetation Communities within the Carroll Canyon Creek – Carroll Facility Group**

MWMP Mapping Vegetation Community, (Holland/Oberbauer Code)	City Upland Vegetation Community	Tier	Facility Segment Name_Number	City Required Mitigation	
			Carroll Canyon_1 (Acres)	Mitigation Ratio*	Mitigation Required within MHPA (Acres) <sup>6</sup>
			Previously Permitted		
Non-Native Grassland (42200)	Non-Native Grassland <sup>6</sup>	IIIB	0.01	0:1	0.00
<b>Total</b>			<b>0.01</b>	<b>—</b>	<b>0.00</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

## 5.2.2.7 Soledad Canyon Creek – Flintkote Facility Group

Jurisdictional resource impacts in the Soledad Canyon Creek – Flintkote facility group would occur within one facility segment and would be limited to an area that was previously permitted (Table 5-14). Previously permitted impacts within the Flintkote (Segment 1) were mitigated through a conceptual mitigation plan that has been approved and is under construction (Appendix F). Any maintenance impacts that occurs within previously permitted maintenance areas would not require additional mitigation under the MWMP. Mitigation for any impacts outside of this area may occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-14**  
**Mitigation for Impacts to Jurisdictional Resources within the Soledad Canyon Creek – Flintkote Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			Flintkote_1 (Acres)	Mitigation Ratio*	Mitigation Required (Acres) <sup>6</sup>
			Previously Permitted		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C / CC	0.53	2:1	0.00
<b>Total</b>			<b>0.53</b>	<b>—</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = Coastal Commission Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

## 5.2.2.8 Soledad Canyon Creek – Dunhill Facility Group

Significant impacts in the Soledad Canyon Creek – Dunhill facility group would occur within one facility segment and mitigation would be required as shown in Table 5-15. The segment has not been previously permitted for impacts (newly proposed) and there are no conceptual mitigation plans currently in the process of approval for the maintenance area. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-15**  
**Mitigation for Impacts to Jurisdictional Resources within the Soledad Canyon Creek –**  
**Dunhill Facility Group (Acres)**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Numb er	City Required Mitigation	
			<i>Dunhill_1 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>		
Disturbed Wetland (11200)	Disturbed Wetland	A / R / C / CC	0.08	2:1	0.16
Freshwater Marsh (52400)	Freshwater Marsh	A / R / C / CC	0.03	4:1	0.12
<b>Total</b>			<b>0.12</b>	<b>—</b>	<b>0.28</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

### 5.2.2.9 Chicarita Creek – Via San Marco Facility Group

Jurisdictional resource impacts in the Chicarita Creek – Via San Marco facility group would occur within one facility segment. As shown in Table 5-16, all impacts would be limited to developed concrete-lined channel, which has been previously engineered for flood control and maintenance and would therefore not require mitigation.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-16**  
**Mitigation for Impacts to Jurisdictional Resources within the Chicarita Creek – Via San  
Marco Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			<i>Via San Marco_1 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.20	2:1	0.00
<b>Total</b>			<b>0.20</b>	<b>—</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

### 5.2.2.10 10450 Sorrento Valley Road (HW04220) Structure

Impacts would occur to sensitive upland vegetation (Tier I – IIIB) as part of maintenance at the 10450 Sorrento Valley Road (HW04220) structure, as shown in Table 5-17. The total impacts proposed at this structure are below the 0.10-acre threshold described in the SDBG; therefore, the impacts would not be considered significant and no mitigation would be required.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-17**  
**Mitigation for Impacts to Sensitive Upland Vegetation Communities within the 10450 Sorrento Valley Road (HW04220) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Upland Vegetation Community	Tier	Structure Name	City Required Mitigation	
			10450 Sorrento Valley Road (Acres)	Mitigation Ratio*	Mitigation Required within MHPA (Acres)
			Newly Proposed		
Coastal Sage Scrub ( <i>Baccharis</i> -dominated) (32530)	Coastal Sage Scrub <sup>4</sup>	II	0.01	0:1	0.00
<b>Total</b>			<b>0.01</b>	<b>—</b>	<b>0.00</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

## 5.2.3 MISSION BAY WATERSHED

**Impact BIO-1.3a** Proposed maintenance within the Mission Bay watershed would result in a total of 1.04 acres of newly proposed and 1.14 acres of previously permitted direct impacts to sensitive City wetlands, including jurisdictional aquatic resources under the jurisdiction of the USACE, RWQCB, CDFW, CCC, and/or the City.

**Impact BIO-1.3b** The proposed MWMP project would result in a total of 0.34 acres of direct impacts to sensitive upland vegetation communities within the Mission Bay watershed.

### 5.2.3.1 Torrey Pines – Torrey Facility Group

Significant impacts in the Torrey Pines – Torrey facility group would occur within one facility segment and mitigation would be required as shown in Table 5-18. The segment has not been previously permitted

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

for impacts (newly proposed) and there are no conceptual mitigation plans currently in the process of approval for the maintenance area. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

**Table 5-18**  
**Mitigation for Impacts to Jurisdictional Resources within the Torrey Pines –**  
**Torrey Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			<i>Torrey Pines_1 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>		
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.02	2:1	0.04
<b>Total</b>			<b>0.02</b>	<b>—</b>	<b>0.04</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

\* Mitigation ratios are for City requirements only.

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

### 5.2.3.2 Alta La Jolla – Vickie Facility Group

Significant impacts in the Alta La Jolla – Vickie facility group would occur within one facility segment and mitigation would be required as shown in Tables 5-19 and 5-20. The basin was constructed as a self-mitigating, drainage improvement project and maintenance of the basin was included in the original project description. Therefore, if maintenance conducted is consistent with the original design, no additional mitigation would be required. Mitigation for any impacts outside of the previously permitted area may occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-19**  
**Mitigation for Impacts to Jurisdictional Resources within the**  
**Alta La Jolla – Vickie Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Tier/ Wetland/ Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			<i>Alta La Jolla_1 (Acres)</i>		
			<i>Previously Permitted</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	<0.01	2:1	0.00
Riparian Scrub (Mulefat Scrub) (63310)	Riparian Scrub	C	0.38	2:1	0.00
<b>Total</b>			<b>0.38</b>	<b>—</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-20**  
**Mitigation for Impacts to Sensitive Vegetation**  
**Communities Types within the Alta La Jolla – Vickie Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Upland Vegetation Community	Tier	Facility Segment Name_Number	City Required Mitigation	
			<i>Alta La Jolla_1 (Acres)</i>		
			<i>Previously Permitted</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required within MHPA (Acres)<sup>6</sup></i>
Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub	II	0.24	1:1	0.00
Disturbed Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub	II	0.10	1:1	0.00
<b>Total</b>			<b>0.34</b>	<b>—</b>	<b>0.00</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

## 5.2.3.3 Mission Bay – MBHS Facility Group

Significant impacts in the Mission Bay – MBHS facility group would occur within two facility segments. Impacts would be entirely within the previously permitted maintenance area (Table 5-21) that has been mitigated through an existing conceptual mitigation plan, which has been approved and is under construction (Appendix F). Any maintenance impacts that occur within previously permitted maintenance areas would not require additional mitigation under the MWMP. Mitigation for impacts occurring outside of this area may occur out-of-watershed or at one of the potential mitigation projects identified in Appendix F. Impacts to natural flood channel would be mitigated at

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

### **5.2.3.4 Mission Bay – Mission Bay Drive Facility Group**

Significant impacts in the Mission Bay – Mission Bay Drive facility group would occur within one facility segment and mitigation would be required as shown in Table 5-22. The segment has not been previously permitted for impacts (newly proposed), and there are no conceptual mitigation plans currently in the process of approval for the maintenance area. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-21**  
**Mitigation for Impacts to Jurisdictional Resources within the Mission Bay – MBHS Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>MBHS_1 (Acres)</i>	<i>PB-Olney_1 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)<sup>6</sup></i>
			<i>Previously Permitted</i>	<i>Previously Permitted</i>		
Developed Concrete- lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C / CC	0.37	<0.01	2:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C / CC	–	0.19	2:1	0.00
<b>Total</b>			<b>0.37</b>	<b>0.19</b>	<b>–</b>	<b>0.00</b>

**Notes:** MBHS = Mission Bay High School, PB = Pacific Beach, A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = CCC Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-22**  
**Mitigation for Impacts to Jurisdictional Resources within the Mission Bay –**  
**Mission Bay Drive Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			Mission Bay Drive_1 (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed		
Disturbed Freshwater Marsh (52400)	Freshwater Marsh	A / R / C / CC	0.50	4:1	2.00
Disturbed Wetland (Arundo-Dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C / CC	0.10	0:1	0.00
		C / CC	<0.01	0:1	0.00
Disturbed Wetland (palm-dominated) (11200)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C / CC	0.02	0:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C / CC	<0.01	2:1	0.01
<b>Total</b>			<b>0.62</b>	<b>—</b>	<b>2.02</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = CCC Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.  
See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 5.2.4.5 Miramar – Engineer Facility Group

The City has been determined through coordination with the resource agencies that the wetland vegetation within the one segment in the Miramar – Engineer facility group was artificially installed and does not represent a jurisdictional resource, as shown in Table 5-23. Therefore, impacts to these vegetation communities would not be considered significant and no mitigation would be required.

**Table 5-23**  
**Mitigation for Impacts to Jurisdictional Resources**  
**within the Miramar – Engineer Facility Group (Acres)**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			Engineer_1 (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Previously Permitted		
Disturbed Wetland (Concrete-lined) (11200)	Disturbed Wetland <sup>3</sup>	None	0.57	0:1	0.00
<b>Total</b>			<b>0.57</b>	<b>—</b>	<b>0.00</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>3</sup> Impacts are not considered significant (because the community has been determined to be non-jurisdictional) and would not require mitigation.

## 5.2.5.6 Tecolote Creek – Chateau Facility Group

Jurisdictional resource impacts in the Tecolote Creek – Chateau facility group would occur within one facility segment. As shown in Table 5-24, all impacts would be limited to developed concrete-lined channel, which has been previously engineered for flood control and maintenance, and would therefore not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-24**  
**Mitigation for Impacts to Jurisdictional Resources within the Tecolote Creek –**  
**Chateau Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Chateau_1 (Acres)</i>	<i>Chateau_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>	<i>Newly Proposed</i>		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	2.79	0.48	2:1	0.00
<b>Total</b>			<b>2.79</b>	<b>0.48</b>	<b>—</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

## 5.2.3.7 Tecolote Creek – Genesee Facility Group

Significant impacts in the Tecolote Creek – Genesee facility group would occur within one facility segment and mitigation would be required as shown in Table 5-25. The segment has not been previously permitted for impacts (newly proposed) and there are no conceptual mitigation plans currently in the process of approval for the maintenance area. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-25**  
**Mitigation for Impacts to Jurisdictional Resources within the Tecolote Creek –**  
**Genesee Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdiction al Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			Genesee_1 (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed		
Disturbed Freshwater Marsh (52400)	Freshwater Marsh	A / R / C	0.06	2:1	0.12
Disturbed Wetland (Arundo-Dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.02	0:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.10	2:1	0.20
Riparian Forest (Coast Live Oak) (61310)	Riparian Forest or Woodland	A / R / C	0.18	3:1	0.54
		C	0.11	3:1	0.33
Riparian Forest (Southern Riparian Forest) (61300)	Riparian Forest or Woodland	A / R / C	0.04	3:1	0.11
		C	0.03	3:1	0.09
Total			0.53	—	1.39

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 5.2.4 SAN DIEGO RIVER WATERSHED

**Impact BIO-1.4a** Proposed maintenance within the San Diego River watershed would result in 1.47 acres of newly proposed and 1.93 acres of previously permitted direct impacts to sensitive City wetlands, including jurisdictional aquatic resources under the jurisdiction of the USACE, RWQCB, CDFW, and/or the City.

**Impact BIO-1.4b** The proposed MWMP project would result in a total of 0.05 acre of newly proposed to sensitive upland vegetation communities within the San Diego River watershed.

### 5.2.4.1 San Diego River – Nimitz Facility Group

Significant impacts in the San Diego River – Nimitz facility group would occur within two facility segments and mitigation would be required as shown in Table 5-26. These segments have not been previously mitigated and there are no conceptual mitigation plans currently in the process of approval for the maintenance areas. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover. No mitigation would be required for impacts to developed concrete-lined channel.

**Table 5-26**  
**Mitigation for Impacts to Jurisdictional Resources within the San Diego River - Nimitz Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number			City Required Mitigation	
			Nimitz_1 (Acres)	Nimitz_2 (Acres)	Nimitz_3 (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed	Newly Proposed	Newly Proposed		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	<0.01	0.05	<0.01	2:1	0.00

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-26**  
**Mitigation for Impacts to Jurisdictional Resources within the San Diego River -**  
**Nimitz Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number			City Required Mitigation	
			Nimitz_1 (Acres)	Nimitz_2 (Acres)	Nimitz_3 (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed	Newly Proposed	Newly Proposed		
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.02	–	0.07	2:1	0.18
<b>Total</b>			<b>0.02</b>	<b>0.05</b>	<b>0.07</b>	<b>—</b>	<b>0.18</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

## 5.2.4.2 San Diego River – Valeta Facility Group

Significant impacts in the San Diego River – Valeta facility group would occur within one facility segment and mitigation would be required as shown in Tables 5-27 and 5-28. This segment has not been previously mitigated and there are no conceptual mitigation plans currently in the process of approval for the maintenance area. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Permanent direct impacts to sensitive upland vegetation communities (Tier I – IIIB) would be below the 0.10-acre threshold described in the SDBG; therefore, the impacts would not be considered significant and no mitigation would be required (Table 5-27).

## 5.2.4.3 Murphy Canyon Creek – Stadium Facility Group

Significant impacts in the Murphy Canyon Creek – Stadium facility group would occur within three facility segments and mitigation would be required as shown in Table 5-29 and 5-30. Previously permitted impacts within two segments in this facility group (Stadium [Segments 1 and 2]) were mitigated through

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

a conceptual mitigation plan that has been approved and is under construction (Appendix F). Any new maintenance impacts that occur within previously permitted maintenance areas would not require additional mitigation under the MWMP. The other segment in the Murphy Canyon Creek – Stadium facility group (Murphy Canyon [Segment 1]) were not previously permitted for impacts and there are no conceptual mitigation plans currently in the process of approval for this maintenance area. Mitigation for impacts in these segments may occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover. Permanent direct impacts to coastal sage scrub would be below the 0.10-acre threshold described in the SDBG; therefore, the impacts would not be significant and no mitigation would be required (Table 5-29).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-27**  
**Mitigation for Impacts to Jurisdictional Resources within the San Diego River –**  
**Valeta Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			Valeta_1 (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed		
Freshwater Marsh (concrete-lined) (52400)	Freshwater Marsh	A / R / C / CC	<0.01	4:1	0.02
		A / R / C	0.01	2:1	0.02
Riparian Scrub (Southern Willow Scrub, Concrete-lined) (63320)	Riparian Scrub	A / R / C / CC	0.04	3:1	0.13
		A / R / C	0.01	2:1	0.02
Total			0.06	—	0.20

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = CCC Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 5-28**

**Mitigation for Impacts to Sensitive Upland Vegetation Communities Types within the San Diego River – Valeta Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Upland Vegetation Community	Tier	Facility Segment Name_Number	City Required Mitigation	
			Valeta_1 (Acres)	Mitigation Ratio*	Mitigation Required within MHPA (Acres)
			Newly Proposed		
Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub <sup>4</sup>	II	<0.01	0:1	0.00
<b>Total</b>			<b>&lt;0.01</b>	<b>—</b>	<b>0.00</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated. See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-29**  
**Mitigation for Impacts to Jurisdictional Resources within the Murphy Canyon Creek – Stadium Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number			City Required Mitigation	
			<i>Stadium_1 (Acres)</i>	<i>Stadium_2 (Acres)</i>	<i>Murphy Canyon_1 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)<sup>6</sup></i>
			<i>Previously Permitted</i>	<i>Previously Permitted</i>	<i>Newly Proposed</i>		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	0.01	0.18	0.49	2:1	0.00
Disturbed Wetland (11200)	Disturbed Wetland	A / R / C	0.67	-	-	2:1	0.00
		C	0.18	<0.01	-	2:1	0.00
Disturbed Wetland (Arundo- dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.05	-	-	0:1	0.00
		C	0.03	-	-	0:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.04	-	-	2:1	0.00
		A / R / C	0.22	-	-	3:1	0.00

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-29**  
**Mitigation for Impacts to Jurisdictional Resources within the Murphy Canyon Creek – Stadium Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number			City Required Mitigation	
			<i>Stadium_1 (Acres)</i>	<i>Stadium_2 (Acres)</i>	<i>Murphy Canyon_1 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)<sup>6</sup></i>
			<i>Previously Permitted</i>	<i>Previously Permitted</i>	<i>Newly Proposed</i>		
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland	C	0.10	–	–	3:1	0.00
<b>Total</b>			<b>1.30</b>	<b>0.18</b>	<b>0.49</b>	<b>–</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details)

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-30**

**Mitigation for Impacts to Sensitive Upland Vegetation Communities within the Murphy Canyon Creek – Stadium Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Upland Vegetation Community	Tier	Facility Segment Name_Number			City Required Mitigation	
			<i>Stadium_1 (Acres)<sup>1</sup></i>	<i>Stadium_2 (Acres)<sup>1</sup></i>	<i>Murphy Canyon_1 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required within MHPA (Acres)<sup>6</sup></i>
			<i>Previously Permitted</i>	<i>Previously Permitted</i>	<i>Newly Proposed</i>		
Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub <sup>4</sup>	II	–	–	<0.01	0:1	0.00
<b>Total</b>			–	–	<b>&lt;0.01</b>	–	<b>0.00</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated. See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

### **5.2.4.4 Alvarado Canyon Creek – Mission Gorge Facility Group**

Significant impacts in the Alvarado Canyon Creek – Mission Gorge facility group would occur within four facility segments and mitigation would be required as shown in Table 5-31. Previously permitted impacts within two of the segments (Mission Gorge [Segments 1 and 2]) were mitigated through a conceptual mitigation plan that has been approved and is under construction (Appendix F). Any maintenance impacts that occur within previously permitted maintenance areas would not require additional mitigation under the MWMP. The other two segments in the Alvarado Canyon Creek – Mission Gorge facility group (Mission Gorge [Segments 3 and 4]) were not previously permitted and there are no conceptual mitigation plans currently in the process of approval for these maintenance areas. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Table 5-31

Mitigation for Impacts to Jurisdictional Resources within the Alvarado Canyon Creek – Mission Gorge Facility Group

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number				City Required Mitigation	
			Mission Gorge_1 (Acres)	Mission Gorge_2 (Acres)	Mission Gorge_3 (Acres)	Mission Gorge_4 (Acres)	Mitigation Ratio*	Mitigation Required (Acres) <sup>6</sup>
			Previously Permitted	Previously Permitted	Newly Proposed	Newly Proposed		
Developed Concrete- lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	0.65	0.62	0.59	0.57	2:1	0.00
Disturbed Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland	A / R / C	–	–	0.34	–	3:1	1.02
Disturbed Wetland (Arundo- dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	–	–	0.02	–	0:1	0.00

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-31**

**Mitigation for Impacts to Jurisdictional Resources within the Alvarado Canyon Creek – Mission Gorge Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number				City Required Mitigation	
			Mission Gorge_1 (Acres)	Mission Gorge_2 (Acres)	Mission Gorge_3 (Acres)	Mission Gorge_4 (Acres)	Mitigation Ratio*	Mitigation Required (Acres) <sup>6</sup>
			Previously Permitted	Previously Permitted	Newly Proposed	Newly Proposed		
Freshwater Marsh (52400)	Freshwater Marsh	A / R / C	0.01	–	–	–	2:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.03	–	–	–	2:1	0.00
<b>Total</b>			<b>0.69</b>	<b>0.62</b>	<b>0.95</b>	<b>0.57</b>	<b>–</b>	<b>1.02</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

## **5.2.4.5 Alvarado Canyon Creek – Alvarado Facility Group**

Significant impacts in the Alvarado Canyon Creek – Alvarado Facility Group facility group would occur within three facility segments and mitigation would be required as shown in Table 5-32. Previously permitted impacts within one of the segments (Alvarado [Segment 1]) were mitigated through a conceptual mitigation plan that has been approved and is under construction (Appendix F). Any maintenance impacts that occur within previously permitted maintenance areas would not require additional mitigation under the MWMP. The other segments in the Alvarado Canyon Creek – Alvarado facility group (Alvarado [Segments 2 and 3]) was not previously permitted for impact. However, it consists entirely of developed concrete-lined channel; therefore, no mitigation would be necessary for impacts.

## **5.2.4.6 Murray Reservoir – Cowles Mountain Facility Group**

Significant impacts in the Murray Reservoir – Cowles Mountain facility group would occur within one of two facility segments, and mitigation would be required as shown in Table 5-33. The segment has not been previously permitted for impacts (newly proposed) and there are no conceptual mitigation plans currently in the process of approval for the maintenance area. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-32**  
**Mitigation for Impacts to Jurisdictional Resources within the Alvarado Canyon Creek – Alvarado Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Tier / Wetland / Jurisdiction	Facility Segment Name_Number			City Required Mitigation	
			Alvarado_1 (Acres)	Alvarado_2 (Acres)	Alvarado_3 (Acres)	Mitigation Ratio*	Mitigation Required (Acres) <sup>6</sup>
			Previously Permitted	Newly Proposed	Newly Proposed		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	–	1.05	0.13	2:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.68	–		2:1	0.00
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland	A / R / C	<0.01	–	–	3:1	0.00
<b>Total</b>			<b>0.68</b>	<b>1.05</b>	<b>0.13</b>	<b>–</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-33**  
**Mitigation for Impacts to Jurisdictional Resources within the Murray Reservoir – Cowles Mountain Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Cowles Mountain_1 (Acres)</i>	<i>Cowles Mountain_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>	<i>Newly Proposed</i>		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.31	1.25	2:1	0.00
Disturbed Freshwater Marsh (Concrete-lined) (52400)	Freshwater Marsh	C	0.01	–	2:1	0.02
Disturbed Riparian Scrub (Concrete- lined) (63000)	Riparian Scrub	C	0.01	–	2:1	0.02
Disturbed Wetland (Concrete-lined) (11200)	Disturbed Wetland	A / R / C	0.01	–	2:1	0.02
<b>Total</b>			<b>0.34</b>	<b>1.25</b>	<b>–</b>	<b>0.06</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant and would require mitigation.

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

### **5.2.4.7 Norfolk Canyon Creek – Fairmount Facility Group**

Significant impacts in the Norfolk Canyon Creek – Fairmount facility group would occur within five facility segments and mitigation would be required as shown in Tables 5-34 and 5-35. These segments have not been previously mitigated and there are no conceptual mitigation plans currently in the process of approval for the maintenance areas. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. No mitigation would be required for impacts to developed concrete-lined channel or disturbed wetland (palm-dominated) vegetation. Permanent direct impacts to coastal sage scrub and would be below the 0.10-acre threshold described in the SDBG; therefore, the impacts would not be significant and no mitigation would be required (Table 5-34).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-34**  
**Mitigation for Impacts to Jurisdictional Resources within the Norfolk Canyon Creek – Fairmount Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number						City Required Mitigation	
			Baja_1 (Acres)		Fairmount _1 (Acres)	Fairmount _2 (Acres)	Fairmount _3 (Acres)	Fairmount _4 (Acres)	Mitigation Ratio*	Mitigation Required (Acres) <sup>6</sup>
			Previously Permitted	Newly Proposed	Newly Proposed	Newly Proposed	Newly Proposed	Newly Proposed		
Developed Concrete- lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	0.06	0.47	0.14	0.26	<0.01	-	2:1	0.00
Disturbed Wetland (Concrete- lined) (11200)	Disturbed Wetland	A / R / C	-	-	-	-	-	0.47	2:1	0.94
Disturbed Wetland (palm- dominated) (11200)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.09	<0.0 1	-	-	0.01	-	0:1	0.00
<b>Total</b>			<b>0.15</b>	<b>0.47</b>	<b>0.14</b>	<b>0.26</b>	<b>0.01</b>	<b>0.47</b>	<b>-</b>	<b>0.94</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated. See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

**Table 5-35**  
**Mitigation for Upland Vegetation Community and Land Cover Impacts within the Norfolk Canyon Creek –  
Fairmount Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Upland Vegetation Community	Tier	Facility Segment Name_Number						City Required Mitigation	
			Baja_1 (Acres)		Fairmount _1 (Acres)	Fairmount _2 (Acres)	Fairmount _3 (Acres)	Fairmount _4 (Acres)	Mitigation Ratio*	Mitigation Required (Acres) <sup>6</sup>
			Previously Permitted	Newly Proposed	Newly Proposed	Newly Proposed	Newly Proposed	Newly Proposed		
Chamise Chaparral (37200)	Chamise Chaparral <sup>4</sup>	IIIA	-	-	-	<0.01	<0.01	-	0:1	0.00
<b>Total</b>			<b>-</b>	<b>-</b>	<b>-</b>	<b>&lt;0.01</b>	<b>&lt;0.01</b>	<b>-</b>	<b>-</b>	<b>0.00</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

### 5.2.4.8 San Diego River – Camino del Rio Facility Group

Significant impacts in the San Diego River – Camino del Rio facility group would occur within two facility segments and mitigation would be required as shown in Table 5-36. These segments have not been previously mitigated and there are no conceptual mitigation plans currently in the process of approval for the maintenance areas. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. No mitigation would be required for impacts to developed concrete-lined channel.

**Table 5-36**  
**Mitigation for Impacts to Jurisdictional Resources within the San Diego River – Camino del Rio Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Camino del Arroyo_1 (Acres)</i>	<i>Camino del Rio_1 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>	<i>Newly Proposed</i>		
Developed Concrete- lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	0.29	0.26	2:1	0.00
Riparian Forest (Concrete- lined) (61000)	Riparian Forest or Woodland	A / R / C	–	0.03	3:1	0.10
Riparian Scrub (Concrete- lined) (63000)	Riparian Scrub	A / R / C	0.07	0.33	2:1	0.80
<b>Total</b>			<b>0.36</b>	<b>0.62</b>	<b>—</b>	<b>0.90</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 5.2.4.9 1331 Washington (OT03537) Structure

Jurisdictional resource impacts in the 1331 Washington (OT03537) facility would occur within the structure. As shown in Table 5-37, all impacts would be limited to developed concrete-lined channel, which has been previously engineered for flood control and maintenance, and would therefore not require mitigation.

**Table 5-37**  
**Mitigation for Impacts to Jurisdictional Resources within the**  
**1331 Washington (OT03537) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Structure Name	City Required Mitigation	
			1277 Camino Del Rio South (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.01	2:1	0.00
<b>Total</b>			<b>0.01</b>	—	0.00

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

## 5.2.4.10 1277 Camino Del Rio South (IN10399) Structure

Jurisdictional resource impacts in the 1277 Camino Del Rio South (IN10399) facility would occur within the structure. As shown in Table 5-38, all impacts would be limited to developed concrete-lined channel, which has been previously engineered for flood control and maintenance, and would therefore not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-38**  
**Mitigation for Impacts to Jurisdictional Resources within the 1277 Camino Del Rio South (IN10399) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Structure Name	City Required Mitigation	
			1277 Camino Del Rio South (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed		
Disturbed Wetland (Concrete-lined) (11200)	Disturbed Wetland (Unvegetated Concrete-lined) <sup>2</sup>	A / R / C	0.01	2:1	0.00
<b>Total</b>			<b>0.01</b>	<b>—</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

## 5.2.4.11 5505 Friars Road (OT05573) Structure

Jurisdictional resource impacts in the 5505 Friars Road (OT05573) facility would occur within the structure. As shown in Table 5-39, all impacts would be limited to disturbed wetland (Arundo-dominated), an invasive-dominated vegetation community. In addition, this structure was previously permitted, so mitigation would not be required.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-39**  
**Mitigation for Impacts to Jurisdictional Resources within the**  
**5505 Friars Road (OT05573) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Structure Name	City Required Mitigation	
			5505 Friars Road (Acres)	Mitigation Ratio*	Mitigation Required (Acres) <sup>6</sup>
			Previously Permitted		
Disturbed Wetland (Arundo-dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.03	0:1	0.00
<b>Total</b>			<b>0.03</b>	—	0.00

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

## 5.2.4.12 1660 Hotel Circle North (OT03321) Structure

Significant impacts would occur as part of maintenance at the 1660 Hotel Circle North (OT03321) structure and mitigation would be required as shown in Table 5-40. The structure has not been previously permitted for impacts (newly proposed) and there are no conceptual mitigation plans currently in the process of approval for the maintenance area. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-40**  
**Mitigation for Impacts to Jurisdictional Resources within the 1660 Hotel Circle North (OT03321) Structure (Acres)**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Structure Name	City Required Mitigation	
			1660 Hotel Circle North (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed		
Disturbed Wetland (11200)	Disturbed Wetland	A / R / C	<0.01	2:1	0.01
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.02	2:1	0.04
<b>Total</b>			<b>0.02</b>	<b>—</b>	<b>0.05</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

## 5.2.4.13 901 Hotel Circle South (HW02440) Structure

Jurisdictional resource impacts in the 901 Hotel Circle South (HW02440) facility would occur within one structure. As shown in Table 5-41, all impacts would be limited to developed concrete-lined channel, which has been previously engineered for flood control and maintenance, and would therefore not require mitigation. Permanent direct impacts to CSS/Chaparral and would be below the 0.10-acre threshold described in the SDBG; therefore, the impacts would not be significant and no mitigation would be required (Table 5-42).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-41**  
**Mitigation for Impacts to Jurisdictional Resources within the 901 Hotel Circle South (HW02440) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Structure Name	City Required Mitigation	
			901 Hotel Circle South (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.06	2:1	0.00
<b>Total</b>			<b>0.06</b>	—	0.00

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

**Table 5-42**  
**Mitigation for Upland Vegetation Community and Land Cover Impacts within the 901 Hotel Circle South (HW02440) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Upland Vegetation Community	Tier	Structure Name	City Required Mitigation	
			901 Hotel Circle South (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed		
CSS/Chaparral (37G00)	CSS / Chaparral <sup>4</sup>	II	0.02	0:1	0.00
<b>Total</b>			<b>0.02</b>	—	0.00

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

## 5.2.4.14 2087 Hotel Circle South (HW02437) Structure

Significant impacts would occur as part of maintenance at the 2087 Hotel Circle South (HW02437) structure and mitigation would be required as shown in Table 5-43. The structure has not been previously permitted for impacts (newly proposed) and there are no conceptual mitigation plans currently in the process of approval for the maintenance area. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover. Permanent direct impacts to CSS/Chaparral and would be below the 0.10-acre threshold described in the SDBG; therefore, the impacts would not be significant and no mitigation would be required (Table 5-44).

**Table 5-43**  
**Mitigation for Impacts to Jurisdictional Resources within the 2087 Hotel Circle South (HW02437) Structure (Acres)**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Structure Name	City Required Mitigation	
			2087 Hotel Circle South (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.01	2:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.03	2:1	0.06
<b>Total</b>			<b>0.04</b>	<b>—</b>	<b>0.06</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

**Table 5-44**

**Mitigation for Upland Vegetation Community and Land Cover Impacts within within the 2087 Hotel Circle South (HW02437) Structure (Acres)**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Upland Vegetation Community	Tier	Structure Name	City Required Mitigation	
			2087 Hotel Circle South (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed		
CSS/Chaparral (37G00)	CSS / Chaparral <sup>4</sup>	II	0.02	0:1	0.00
Oak Woodland (71100)	Oak Woodlands <sup>4</sup>	I	<0.01	0:1	0.00
<b>Total</b>			<b>0.02</b>	<b>—</b>	<b>0.00</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

## 5.2.5 PUEBLO SAN DIEGO WATERSHED

**Impact BIO-1.5a** Proposed maintenance within the Pueblo watershed would result in 1.40 acres of newly proposed and 1.58 acres of previously permitted direct impacts to sensitive City wetlands, including jurisdictional aquatic resources under the jurisdiction of the USACE, RWQCB, CDFW, and/or the City.

**Impact BIO-1.5b** The proposed MWMP project would result in 0.13 acres of newly proposed and 0.31 acres of previously permitted impacts to sensitive upland vegetation communities within the Pueblo watershed.

### 5.2.5.1 Washington Canyon Creek – Washington Facility Group

Significant impacts in the Washington Canyon Creek – Washington facility group would occur within two facility segments and mitigation would be required as shown in Table 5-45. Previously permitted

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

impacts within one of the segments (Washington [Segment 2]) are proposed to be mitigated through a draft conceptual mitigation plan that is currently awaiting approval from the applicable resource agencies (Appendix F). Any remaining mitigation required for previous maintenance impacts in this segment that is not covered by the draft conceptual mitigation plan may occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Previously permitted impacts also occurred in the maintenance area of the second segment in this facility group (Washington [Segment 1]); however, because only invasive species were impacted during that maintenance, no mitigation was required. Any new maintenance impacts that occur within the previously permitted maintenance areas would not require additional mitigation under the MWMP. Mitigation for any impacts outside of this area may occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-45**

**Mitigation for Impacts to Jurisdictional Resources within the Washington Canyon Creek – Washington Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Washington_1 (Acres)</i>	<i>Washington_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)<sup>6</sup></i>
			<i>Previously Permitted</i>	<i>Previously Permitted</i>		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.01	0.55	2:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.23	<0.01	2:1	0.00
<b>Total</b>			<b>0.24</b>	<b>0.55</b>	<b>-</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 5.2.5.2 Mission Hills Canyon Park – Titus Facility Group

Significant impacts in the Mission Hills Canyon Park – Titus facility group would occur within one facility segment and mitigation would be required as shown in Table 5-46. Previously permitted impacts within this segment (Titus [Segment 1]) were to invasive upland vegetation such that no mitigation was required. Therefore, any maintenance impacts that occur within previously permitted maintenance areas would not require additional mitigation under the MWMP since any jurisdictional resources present would be artificially created by previous maintenance activities.

**Table 5-46**  
**Mitigation for Impacts to Jurisdictional Resources within the Mission Hill Canyon Creek - Titus Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			<i>Titus_1 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)<sup>6</sup></i>
			<i>Previously Permitted</i>		
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.01	2:1	0.00
<b>Total</b>			<b>0.01</b>	<b>–</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

## 5.2.5.3 Maple Canyon Creek – Maple Facility Group

Significant impacts in the Maple Canyon Creek - Maple facility group would occur within one facility segment and mitigation would be required as shown in Table 5-47. The segment has not been previously mitigated and there are no conceptual mitigation plans currently in the process of approval for the maintenance area. Mitigation may potentially occur out-of-watershed or at one of

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

**Table 5-47**  
**Mitigation for Impacts to Jurisdictional Resources within the Maple Canyon Creek – Maple Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			Maple_1 (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed		
Disturbed Wetland (palm-dominated)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.01	0:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.08	2:1	0.16
<b>Total</b>			<b>0.09</b>	<b>—</b>	<b>0.16</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

### 5.2.5.4 Powerhouse Canyon Creek – Pershing Facility Group

Significant impacts in the Powerhouse Canyon Creek – Pershing facility group would occur within one facility segment and mitigation would be required as shown in Table 5-48. The segment has not been previously mitigated and there are no conceptual mitigation plans currently in the process of approval for the maintenance area. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-48**  
**Mitigation for Impacts to Jurisdictional Resources within the Powerhouse Canyon Creek – Pershing Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			Pershing_1 (Acres)	Pershing_2 (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed	Newly Proposed		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	1.12	0.12	2:1	0.00
Riparian Scrub (Concrete-lined) (63000)	Riparian Scrub	A / R / C	0.06	0.01	2:1	0.13
Riparian Scrub (Southern Willow Scrub, Concrete-lined) (63320)	Riparian Scrub	A / R / C	—	0.05	2:1	0.09
<b>Total</b>			<b>1.18</b>	<b>0.17</b>	<b>—</b>	<b>0.22</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

## 5.2.5.5 San Diego Bay – 28th St Facility Group

Total impacts to wetlands at the San Diego Bay – 28th St facility group would be less than 0.01 acre and therefore not significant; no mitigation would be required, as shown in Table 5-49.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-49**  
**Mitigation for Impacts to Jurisdictional Resources within the San Diego Bay – 28th St Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			28th St_1 (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed		
Disturbed Wetland (11200)	Disturbed Wetland <sup>4</sup>	A / R / C	<0.01	0:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>4</sup>	A / R / C	<0.01	0:1	0.00
<b>Total</b>			<b>&lt;0.01</b>	<b>—</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

## 5.2.5.6 Chollas Creek – National Facility Group

Significant impacts in the Chollas Creek – National facility group would occur within two facility segments and mitigation would be required as shown in Table 5-50. Previously permitted impacts within the two segments (National [Segment 1] and National [Segment 2]) are proposed to be partially mitigated through a draft conceptual mitigation plan that is currently awaiting approval from the applicable resource agencies (Appendix F). Any remaining mitigation required for previous maintenance impacts in this segment that is not covered by the draft conceptual mitigation plan may occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Any new maintenance impacts that occur within the previously permitted maintenance areas would not require additional mitigation under the MWMP. Mitigation for any impacts outside of the previously permitted areas may occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-50**  
**Mitigation for Impacts to Jurisdictional Resources within the Chollas Creek – National Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			National_1 (Acres)	National_2 (Acres)	Mitigation Ratio*	Mitigation Required (Acres) <sup>6</sup>
			Previously Permitted	Previously Permitted		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	3.59 <sup>2</sup>	–	2:1	0.00
Disturbed Wetland (Arundo- dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	<0.01	0.05	0:1	0.00
		C	<0.01	–	0:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.01	0.62	2:1	0.00
<b>Total</b>			<b>3.60</b>	<b>0.67</b>	<b>–</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

### 5.2.5.7 Chollas Creek – Rolando Facility Group

Significant impacts in the Chollas Creek – Rolando facility group would occur within three facility segments and mitigation would be required as shown in Table 5-51. Previously permitted impacts within one of the three segments (Rolando [Segment 2]) are proposed to be partially mitigated through a draft conceptual mitigation plan that is currently awaiting approval from the applicable resource agencies (Appendix F). Any remaining mitigation required for previous maintenance impacts in this segment that is not covered by the draft conceptual mitigation plan may occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Any maintenance impacts that occur within previously permitted maintenance areas would not require additional mitigation under the MWMP. The other two segments in the Chollas Creek – Rolando facility group (Cartagena [Segment 1] and Rolando [Segment 1]) were not previously mitigated and there are no conceptual mitigation plans currently in the process of approval for these maintenance areas. Mitigation for impacts in these segments may occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover. Permanent direct impacts to coastal sage scrub would be below the 0.10-acre threshold described in the SDBG; therefore, the impacts would not be significant and no mitigation would be required (Table 5-52).

**Table 5-51**  
**Mitigation for Impacts to Jurisdictional Resources within the Chollas Creek –**  
**Rolando Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number				City Required Mitigation	
			Cartagena_1 (Acres)	Rolando_1 (Acres)	Rolando_2 (Acres)		Mitigation Ratio*	Mitigation Required (Acres) <sup>6</sup>
			Newly Proposed	Newly Proposed	Previously Permitted	Newly Proposed		
Developed Concrete- lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	0.56	0.18	0.05	<0.01	2:1	0.00

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-51**  
**Mitigation for Impacts to Jurisdictional Resources within the Chollas Creek –**  
**Rolando Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number				City Required Mitigation	
			Cartagena_1 (Acres)	Rolando_1 (Acres)	Rolando_2 (Acres)		Mitigation Ratio *	Mitigation Required (Acres) <sup>6</sup>
			Newly Proposed	Newly Proposed	Previously Permitted	Newly Proposed		
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	-	-	0.21	<0.01	2:1	<0.01
Riparian Scrub (Southern Willow Scrub) (63320)	Riparian Scrub	A / R / C	-	-	0.01	-	2:1	0.00
<b>Total</b>			<b>0.56</b>	<b>0.18</b>	<b>0.22</b>	<b>&lt;0.01</b>	<b>-</b>	<b>&lt;0.01</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-52**  
**Mitigation for Impacts to Sensitive Upland Vegetation Communities within the Chollas  
Creek – Rolando Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Upland Vegetation Community	Tier	Facility Segment Name_Number			City Required Mitigation	
			Cartagena_1 (Acres)	Rolando_1 (Acres)	Rolando_2 (Acres)	Mitigation Ratio*	Mitigation Required within MHPA (Acres) <sup>6</sup>
			Newly Proposed	Newly Proposed	Previously Permitted		
Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub <sup>4</sup>	II	<0.01	-	-	0:1	0.00
<b>Total</b>			<b>&lt;0.01</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.00</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

## 5.2.5.8 Chollas Creek – Martin Facility Group

Significant impacts in the Chollas Creek – Martin facility group would occur within one facility segment, and mitigation would be required as shown in Table 5-53. The segment has not been previously mitigated and there are no conceptual mitigation plans currently in the process of approval for the maintenance area. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-53**  
**Mitigation for Impacts to Jurisdictional Resources within the Chollas Creek – Martin Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			<i>Martin_1 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>		
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.01	2:1	0.02
Riparian Scrub (Southern Willow Scrub; Concrete-lined) (63320)	Riparian Scrub	A / R / C	0.01	2:1	0.02
<b>Total</b>			<b>0.02</b>	<b>—</b>	<b>0.04</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

## 5.2.5.9 Chollas Creek – J St Facility Group

Jurisdictional resource impacts proposed as part of maintenance at the Chollas Creek – J St Facility Group would occur within one facility segment. As shown in Table 5-54, since all impacts would be limited to the disturbed wetland (Arundo-dominated) vegetation community, impacts would not be considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-54**  
**Mitigation for Impacts to Jurisdictional Resources within the Chollas Creek – J St Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			J St_1 (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed		
Disturbed Wetland (Arundo-dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.05	0:1	0.00
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	A / R / C	0.01	0:1	0.00
<b>Total</b>			<b>0.05</b>	<b>—</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 5.2.5.10 Auburn Creek – Home Facility Group

Significant impacts in the Auburn Creek – Home facility group would occur within four facility segments and mitigation would be required as shown in Table 5-55. Previously permitted impacts within two of the segments (Home [Segments 1 and 5]) are proposed to be mitigated through draft conceptual mitigation plans that are currently awaiting approval from the applicable resource agencies (Appendix F). Additional mitigation is required for previous impacts within Home (Segment 1) that are not covered by the draft conceptual mitigation plan. This additional mitigation may occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Any maintenance impacts that occur within previously permitted maintenance areas would not require additional mitigation under the MWMP. The other two facility segments in the Auburn Creek – Home facility group (Home [Segments 2 and 3]) were not previously mitigated and there are no conceptual mitigation plans currently in the process of approval for these maintenance areas. Mitigation for impacts in these segments may occur out-of-watershed or at one of the potential mitigation sites

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-55**  
**Mitigation for Impacts to Jurisdictional Resources within the Auburn Creek – Home Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number					City Required Mitigation	
			Home_1 (Acres)		Home_2 (Acres)	Home_3 (Acres)	Home_5 (Acres)	Mitigation Ratio*	Mitigation Required (Acres) <sup>6</sup>
			Newly Proposed	Previously Permitted	Previously Permitted	Newly Proposed	Previously Permitted		
Developed Concrete- lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	–	–	–	0.25	0.04	2:1	0.00
Disturbed Wetland (Arundo- dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	–	–	<0.01	<0.01	–	0:1	0.00
		C	–	–	0.01	–	<0.01	0:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.08	0.11	0.06	–	0.19	2:1	0.00

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-55**  
**Mitigation for Impacts to Jurisdictional Resources within the Auburn Creek – Home Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number					City Required Mitigation	
			Home_1 (Acres)		Home_2 (Acres)	Home_3 (Acres)	Home_5 (Acres)	Mitigation Ratio*	Mitigation Required (Acres) <sup>6</sup>
			Newly Proposed	Previously Permitted	Previously Permitted	Newly Proposed	Previously Permitted		
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland	C	–	<0.01	–	–	–	3:1	0.01
<b>Total</b>			<b>0.08</b>	<b>0.11</b>	<b>0.07</b>	<b>0.25</b>	<b>0.23</b>	<b>–</b>	<b>0.01</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

### **5.2.5.11 Auburn Creek – Wightman Facility Group**

Significant impacts in the Auburn Creek – Wightman facility group would occur within two facility segments and mitigation would be required as shown in Table 5-56. Previously permitted impacts within both segments (Wightman [Segments 1 and 2]) are proposed to be partially mitigated through a draft conceptual mitigation plan that is currently awaiting approval from the applicable resource agencies (Appendix F). Any remaining mitigation required for previous maintenance impacts in this segment that is not covered by the draft conceptual mitigation plan may occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover. Any maintenance impacts that occur within previously permitted maintenance areas would not require additional mitigation under the MWMP.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 5-56**  
**Mitigation for Impacts to Jurisdictional Resources within the Auburn Creek – Wightman Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Wightman_1 (Acres)</i>	<i>Wightman_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>	<i>Newly Proposed</i>		
Developed Concrete- lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	0.04	–	2:1	0.00
Disturbed Wetland (Arundo- dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	<0.01	0.01	0:1	0.00
		C	<0.01	–	0:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.07	0.08	2:1	0.30

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-56**  
**Mitigation for Impacts to Jurisdictional Resources within the Auburn Creek – Wightman Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Wightman_1 (Acres)</i>	<i>Wightman_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>	<i>Newly Proposed</i>		
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland	A / R / C	<0.01	0.14	3:1	0.42
<b>Total</b>			<b>0.12</b>	<b>0.23</b>	<b>-</b>	<b>0.72</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 5.2.5.12 Chollas Creek – Megan Facility Group

Significant impacts in the Chollas Creek – Megan facility group would occur within two facility segments and mitigation would be required as shown in Tables 5-57 and 5-58. These segments have not been previously mitigated and there are no conceptual mitigation plans currently in the process of approval for the maintenance areas. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover. Permanent direct impacts to sensitive upland vegetation communities (Tier I – IIIB) would be below the 0.10-acre threshold described in the SDBG; therefore, the impacts would not be significant and no mitigation would be required (Table 5-56).

**Table 5-57**  
**Mitigation for Impacts to Jurisdictional Resources within the Chollas Creek – Megan Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			Megan_1 (Acres)	Megan_2 (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed	Newly Proposed		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.28	–	2:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	<0.01	0.09	2:1	0.18
Riparian Scrub (concrete-lined) (63000)	Riparian Scrub	A / R / C	0.01	–	2:1	0.02
<b>Total</b>			<b>0.29</b>	<b>0.09</b>	<b>–</b>	<b>0.20</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

**Table 5-58**  
**Mitigation for Impacts to Sensitive Upland Vegetation Communities within the Chollas Creek – Megan Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Upland Vegetation Community	Tier	Facility Segment Name_Number		City Required Mitigation	
			Megan_1 (Acres)	Megan_2 (Acres)	Mitigation Ratio*	Mitigation Required within MHPA (Acres)
			Newly Proposed	Newly Proposed		
Coastal Sage Scrub (Baccharis-dominated) (32530)	Coastal Sage Scrub <sup>4</sup>	II	0.01	–	0:1	0.00
Disturbed Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub <sup>4</sup>	II	<0.01	–	0:1	0.00
<b>Total</b>			<b>0.01</b>	<b>–</b>	<b>—</b>	<b>0.00</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

## 5.2.5.13 Chollas Creek – 54th St Facility Group

Significant impacts in the Chollas Creek – 54th St facility group would occur within one facility segment and mitigation would be required as shown in Table 5-59. The segment has not been previously mitigated and there are no conceptual mitigation plans currently in the process of approval for the maintenance area. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-59**  
**Mitigation for Impacts to Jurisdictional Resources within the Chollas Creek – 54th St Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			54th St_1 (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.08	2:1	0.00
Riparian Scrub (Southern Willow Scrub, Concrete-lined) (63320)	Riparian Scrub	A / R / C	0.01	2:1	0.02
<b>Total</b>			<b>0.09</b>	<b>—</b>	<b>0.02</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

## 5.2.5.14 South Chollas Creek – Southcrest Facility Group

Significant impacts in the South Chollas Creek – Southcrest facility group would occur within two facility segments and mitigation would be required as shown in Table 5-60. These segments have not been previously mitigated and there are no conceptual mitigation plans currently in the process of approval for the maintenance areas. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

**Table 5-60**  
**Mitigation for Impacts to Jurisdictional Resources within the South Chollas Creek –**  
**Southcrest Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Alpha_1 (Acres)</i>	<i>Ocean View_1 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>	<i>Newly Proposed</i>		
Developed Concrete- lined Channel, (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	0.20	1.54	2:1	0.00
Disturbed Wetland (11200)	Disturbed Wetland	A / R / C	0.28	–	2:1	0.56
Disturbed Wetland (Arundo- dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.50	–	0:1	0.00
Disturbed Wetland (Arundo- dominated; concrete- lined), (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	–	0.05	0:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.66	0.01	2:1	1.33

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-60**  
**Mitigation for Impacts to Jurisdictional Resources within the South Chollas Creek – Southcrest Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Alpha_1 (Acres)</i>	<i>Ocean View_1 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>	<i>Newly Proposed</i>		
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland	A / R / C	0.06	–	3:1	0.17
Riparian Forest (Southern Willow Forest, Concrete-lined), (61320)	Riparian Forest or Woodland	A / R / C	–	0.09	3:1	0.27
<b>Total</b>			<b>1.69</b>	<b>1.68</b>	<b>—</b>	<b>2.32</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

## 5.2.5.15 South Chollas Creek – Euclid Facility Group

Jurisdictional resource impacts would occur as part of maintenance at the South Chollas Creek – Euclid facility group within one facility segment. As shown in Table 5-61, all impacts would be limited to developed concrete-lined channel or disturbed wetland (Arundo-dominated); therefore, would not be considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-61**  
**Mitigation for Impacts to Jurisdictional Resources within the South Chollas Creek – Euclid Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			<i>Euclid_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>		
Developed Concrete-lined Channel, (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.78	2:1	0.00
Disturbed Wetland (Arundo-dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	C	<0.01	0:1	0.00
<b>Total</b>			<b>0.78</b>	<b>—</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 5.2.5.16 South Chollas Creek – Federal Facility Group

Significant impacts in the South Chollas Creek – Federal facility group would occur within two facility segments and mitigation would be required as shown in Tables 5-62 and 5-63. These segments have not been previously mitigated and there are no conceptual mitigation plans currently in the process of approval for the maintenance areas. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover. Upland sensitive vegetation impacts at this structure would be mitigated in accordance with the applicable City MSCP mitigation ratios through payment into the City's Habitat Acquisition Fund, acquisition and preservation of specific land, or purchase of mitigation credit(s) within the MHPA.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-62**  
**Mitigation for Impacts to Jurisdictional Resources within the South Chollas Creek – Federal Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number			City Required Mitigation	
			<i>Federal_1 (Acres)</i>	<i>Federal_2 (Acres)</i>		<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)<sup>6</sup></i>
			<i>Previously Permitted</i>	<i>Previously Permitted</i>	<i>Newly Proposed</i>		
Developed Concrete-lined Channel (11200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	<0.01	0.38	0.07	2:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.03	–	–	2:1	0.00
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland	A / R / C	0.02	–	–	3:1	0.06
<b>Total</b>			<b>0.05</b>	<b>0.38</b>	<b>0.07</b>	<b>—</b>	<b>0.06</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-63**

**Mitigation for Impacts to Sensitive Upland Vegetation Communities within the South Chollas Creek – Federal Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Upland Vegetation Community	Tier	Facility Segment Name_Number		City Required Mitigation	
			<i>Federal_1 (Acres)</i>	<i>Federal_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required within MHPA (Acres)<sup>6</sup></i>
			<i>Previously Permitted</i>	<i>Previously Permitted</i>		
Coastal Sage Scrub (Baccharis- dominated) (32530)	Coastal Sage Scrub	II	<0.01	–	1:1	0.00
Disturbed Diegan Coastal Sage Scrub (32500)	Coastal Sage Scrub	II	–	0.15	1:1	0.00
<b>Total</b>			<b>&lt;0.01</b>	<b>0.15</b>	<b>—</b>	<b>0.00</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated. See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 5.2.5.17 South Chollas Creek Encanto Branch – Castana Facility Group

Significant impacts in the South Chollas Creek Encanto Branch – Castana facility group would occur within one facility segment, and mitigation would be required as shown in Table 5-64. The segment in South Chollas Creek Encanto Branch – Castana facility group (Castana [Segment 1]) was not previously permitted for impact. It consists entirely of natural flood and these impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration. The remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

**Table 5-64**  
**Wetland Vegetation Community and Land Cover Impacts in the**  
**South Chollas Creek Encanto Branch – Castana Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			<i>Castana_1 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>		
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.03	2:1	0.06
<b>Total</b>			<b>0.03</b>	–	<b>0.06</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

## 5.2.5.18 South Chollas Creek Encanto Branch – Imperial Facility Group

All impacts proposed as part of maintenance at the South Chollas Creek – Euclid facility group would occur within one facility segment. As shown in Table 5-65, all impacts would be limited to developed concrete-lined channel or disturbed wetland (Arundo-dominated) and, therefore, would not be considered significant and would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-65**  
**Mitigation for Impacts to Jurisdictional Resources within the South Chollas Creek Encanto  
Branch – Imperial Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			<i>Imperial_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>		
Developed Concrete-lined Channel, (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	0.78	2:1	0.00
Disturbed Wetland (Arundo- dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	<0.01	0:1	0.00
<b>Total</b>			<b>0.78</b>	<b>—</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 5.2.5.19 South Chollas Creek Encanto Branch – Jamacha Facility Group

Significant impacts in the South Chollas Creek Encanto Branch – Jamacha facility group would occur within one facility segment and mitigation would be required as shown in Tables 5-66 and 5-67. Previously permitted impacts, including those to sensitive upland vegetation, within Jamacha (Segment 1) are proposed to be mitigated through a draft conceptual mitigation plan that is currently awaiting approval from the applicable resource agencies (Appendix F). Any new maintenance impacts that occur within previously permitted maintenance areas would not require additional mitigation under the MWMP. Mitigation for new impacts that occur outside of a previously mitigated maintenance area may occur out-of-watershed or through one of the potential mitigation projects identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

requirement may be met through on-site enhancement of this land cover. Impacts would occur to non-native grassland at this facility group from maintenance activities, as described in Table 5-64. The total impacts proposed at these segments are below the 1.0-acre threshold described in the SDBG for habitats that are surrounded by urban development; therefore, impacts would not be significant and no mitigation would be required.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-66**

**Mitigation for Impacts to Jurisdictional Resources within the South Chollas Creek Encanto Branch – Jamacha Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Jamacha_1 (Acres)<sup>1</sup></i>		<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)<sup>6</sup></i>
			<i>Previously Permitted</i>	<i>Newly Proposed</i>		
Disturbed Wetland (11200)	Disturbed Wetland	C	0.01	0.01	2:1	0.02
Disturbed Wetland (Arundo- Dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	C	0.03	0.09	0:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C	0.04	0.07	2:1	0.00
<b>Total</b>			<b>0.08</b>	<b>0.17</b>	<b>–</b>	<b>0.02</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-67**  
**Mitigation for Impacts to Sensitive Upland Vegetation Communities within the South Chollas Creek Encanto Branch –  
Jamacha Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Upland Vegetation Community	Tier	Facility Segment Name_Number		City Required Mitigation	
			<i>Jamacha_1</i> <i>(Acres)</i> <sup>1</sup>		<i>Mitigation Ratio*</i>	<i>Mitigation Required within MHPA (Acres)</i> <sup>6</sup>
			<i>Previously Permitted</i>	<i>Newly Proposed</i>		
Non-Native Grassland (42200)	Non-Native Grassland <sup>4</sup>	IIIB	0.16 <sup>2</sup>	0.11	0:1	0.00
<b>Total</b>			<b>0.16</b>	<b>0.11</b>	<b>–</b>	<b>0.00</b>

**Notes:** Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated. See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>4</sup> Impacts are below the threshold of significance defined by the SDBG, therefore impacts are not considered significant and would not require mitigation.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 5.2.5.20 Paleta Creek – Cottonwood Facility Group

Significant impacts in the Paleta Creek – Cottonwood facility group would occur within two facility segments and would be limited to developed concrete-lined channel such that no mitigation would be required (Table 68). Previously permitted impacts within both segments (Cottonwood [Segments 1 and 2]) are proposed to be partially mitigated through a draft conceptual mitigation plan that is currently awaiting approval from the applicable resource agencies (Appendix F). Any remaining mitigation required for previous maintenance impacts in this segment that is not covered by the draft conceptual mitigation plan may occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Any new maintenance impacts that occur within previously permitted maintenance areas would not require additional mitigation under the MWMP.

**Table 5-68**  
**Mitigation for Impacts to Jurisdictional Resources within the Paleta Creek – Cottonwood Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Cottonwood_1 (Acres)</i>	<i>Cottonwood_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)<sup>6</sup></i>
			<i>Previously Permitted</i>	<i>Previously Permitted</i>		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.31	1.21	2:1	0.00
<b>Total</b>			<b>0.31</b>	<b>1.21</b>	<b>—</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 5.2.5.21 Paleta Creek – Solola Facility Group

Significant impacts in the Paleta Creek – Solola facility group would occur within two facility segments and would be limited to developed concrete-lined channel such that no mitigation would be required (Table 5-69). These segments have not been previously mitigated and there are no conceptual mitigation plans currently in the process of approval for the maintenance areas.

**Table 5-69**  
**Mitigation for Impacts to Jurisdictional Resources within the Paleta Creek – Solola Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Solola_1 (Acres)</i>	<i>Solola_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>	<i>Newly Proposed</i>		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	1.35	0.63	2:1	0.00
<b>Total</b>			<b>1.35</b>	<b>0.63</b>	<b>—</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

## 5.2.5.22 3644 Roselawn (OT03694) Structure

Significant impacts would occur as part of maintenance at the 3644 Roselawn (OT03694) structure, and mitigation would be required as shown in Table 5-70. The maintenance proposed at this structure would be entirely within a Tier IV vegetation community (i.e., ornamental plantings) that contains no jurisdictional features (e.g., ordinary high water mark, hydrophytic plants), and therefore is not under the jurisdiction of any agency or the City; impacts would not be significant and no mitigation would be required.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-70**  
**Mitigation for Impacts to Jurisdictional Resources within the 3644 Roselawn (OT03694) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Structure Name	City Required Mitigation	
			3644 Roselawn (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed		
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	None	0.01	0:1	0.00
<b>Total</b>			<b>0.01</b>	<b>—</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 5.2.5.23 4204 J Street (HW04013) Structure

Significant impacts would occur as part of maintenance at the 4204 J Street (HW04013) structure and mitigation would be required as shown in Table 5-71. The structure has not been previously permitted for impacts (newly proposed) and there are no conceptual mitigation plans currently in the process of approval for the maintenance area. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-71**  
**Mitigation for Impacts to Jurisdictional Resources within the 4202 J Street (HW04013) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Structure Name	City Required Mitigation	
			4224 J Street (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed		
Disturbed Wetland (Arundo-Dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	0.03	0:1	0.00
Riparian Scrub (Southern Willow Scrub) (63320)	Riparian Scrub	A / R / C	0.01	2:1	0.02
<b>Total</b>			<b>0.04</b>	<b>—</b>	<b>0.02</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 5.2.5.24 1206 Goodyear (OT04671) Structure

Significant impacts would occur as part of maintenance at the 1206 Goodyear (OT04671) structure, and mitigation would be required as shown in Table 5-72. The maintenance proposed at this structure would be entirely within a Tier IV vegetation community (i.e., ornamental plantings) that contains no jurisdictional features (e.g., ordinary high water mark, hydrophytic plants), and therefore is not under the jurisdiction of any agency or the City; impacts would not be significant and no mitigation would be required.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-72**  
**Mitigation for Impacts to Jurisdictional Resources within the 1206 Goodyear (OT04671) Structure**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Structure Name	City Required Mitigation	
			1206 Goodyear (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed		
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	None	<0.01	0:1	0.00
<b>Total</b>			<b>0.01</b>	<b>—</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

## 5.2.6 SWEETWATER WATERSHED

As mentioned in Section 4.7.1, all impacts to sensitive vegetation or jurisdictional resources are within the limits of the previously permitted maintenance area (Appendix F) and, therefore, no mitigation for these impacts would be required.

### 5.2.6.1 Sweetwater River - Parkside Facility Group

Jurisdictional resource impacts in the Soledad Canyon Creek – Flintkote facility group would occur within one facility segment and would be limited to an area that was previously permitted (Table 5-73). Previously permitted impacts within Flintkote (Segment 1) were mitigated through a conceptual mitigation plan that has been approved, and the mitigation is under construction (Appendix F). Any maintenance impacts that occurs within previously permitted maintenance areas would not require additional mitigation under the MWMP. Mitigation for any impacts outside of this area may occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-73**  
**Mitigation for Impacts to Jurisdictional Resources within the Sweetwater River – Parkside Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			Parkside_1 (Acres)	Mitigation Ratio*	Mitigation Required (Acres) <sup>6</sup>
			Previously Permitted		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	0.99	2:1	0.00
<b>Total</b>			<b>0.99</b>	<b>—</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

## 5.2.7 OTAY WATERSHED

**Impact BIO-1.6a** Proposed maintenance within the Otay watershed would result in 2.57 acres of newly proposed and 0.11 acres of previously permitted direct impacts to sensitive City wetlands, including jurisdictional aquatic resources under the jurisdiction of the USACE, RWQCB, CDFW, and/or the City.

### 5.2.7.1 Nestor Creek – Nestor Facility Group

Significant impacts in the Nestor Creek – Nestor facility group would occur within six facility segments and mitigation would be required as shown in Table 5-74. Impacts within the maintenance area of two of the segments (Cedar [Segments 1 and 2]) are proposed to be mitigated through a draft conceptual mitigation plan that is currently awaiting approval from the applicable resource agencies (Appendix F). Any maintenance impacts that occur within previously permitted maintenance areas would not require additional mitigation under the MWMP. The other four

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

segments in the Nestor Creek – Nestor facility group (Dahlia [Segment 1]), Cerissa [Segment 1], Grove [Segment 1], and 30th St [Segment 1]) were not previously mitigated and there are no conceptual mitigation plans currently in the process of approval for these maintenance areas. Mitigation for impacts in these segments may occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover. All impacts that are limited to developed concrete-lined channel that has been previously engineered for flood control and maintenance would not require mitigation.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-74**  
**Mitigation for Impacts to Jurisdictional Resources within the Nestor Creek – Nestor Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number						City Required Mitigation	
			Cedar_1 (Acres)	Cedar_2 (Acres)	Dahlia_1 (Acres)	Cerissa_1 (Acres)	Grove_1 (Acres)	30th St_1 (Acres)	Mitigation Ratio*	Mitigation Required (Acres) <sup>6</sup>
			Previously Permitted	Previously Permitted	Newly Proposed	Newly Proposed	Newly Proposed	Newly Proposed		
Developed Concrete- lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C / CC	-	0.24	-	-	-	-	2:1	0.00
		A / R / C	-	-	0.46	-	-	0.64	2:1	0.00
Disturbed Wetland (11200)	Disturbed Wetland	A / R / C	-	-	-	0.22	0.43	-	2:1	1.30
Disturbed Wetland (Arundo- Dominated) (65100)	Disturbed Wetland (Invasive) <sup>3</sup>	A / R / C	-	-	-	0.08	-	-	0:1	0.00
		CC / C	<0.01	0.02	-	-	-	-	0:1	0.00
		C	-	-	-	<0.01	-	-	0:1	0.00

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-74**  
**Mitigation for Impacts to Jurisdictional Resources within the Nestor Creek – Nestor Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number						City Required Mitigation	
			Cedar_1 (Acres)	Cedar_2 (Acres)	Dahlia_1 (Acres)	Cerissa_1 (Acres)	Grove_1 (Acres)	30th St_1 (Acres)	Mitigation Ratio*	Mitigation Required (Acres) <sup>6</sup>
			Previously Permitted	Previously Permitted	Newly Proposed	Newly Proposed	Newly Proposed	Newly Proposed		
Disturbed Wetland (Concrete- lined) (11200)	Disturbed Wetland	A / R / C	-	0.05	-	-	-	-	0:1	0.00
Freshwater Marsh (52400)	Freshwater Marsh	A / R / C	-	0.02	-	0.48	-	-	2:1	1.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C / CC	0.03	0.01	-	-	-	-	2:1	0.00
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland	A / R / C	-	-	-	0.91	0.21	0.02	3:1	3.42
		C	-	-	-	-	-	<0.01	3:1	0.01

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-74**  
**Mitigation for Impacts to Jurisdictional Resources within the Nestor Creek – Nestor Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number						City Required Mitigation	
			Cedar_1 (Acres)	Cedar_2 (Acres)	Dahlia_1 (Acres)	Cerissa_1 (Acres)	Grove_1 (Acres)	30th St_1 (Acres)	Mitigation Ratio*	Mitigation Required (Acres) <sup>6</sup>
			Previously Permitted	Previously Permitted	Newly Proposed	Newly Proposed	Newly Proposed	Newly Proposed		
Riparian Forest (Southern Willow Forest, Concrete- Lined) (61320)	Riparian Forest or Woodland	A / R / C	-	-	-	-	-	0.16	3:1	0.48
<b>Total</b>			<b>0.03</b>	<b>0.35</b>	<b>0.46</b>	<b>1.69</b>	<b>0.64</b>	<b>0.82</b>	<b>-</b>	<b>6.21</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = CCC Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

<sup>6</sup> Mitigation required is based on newly proposed impacts only. Proof of mitigation implementation/credit shall be provided in accordance with EP-BIO-1 and no additional mitigation is required for previously permitted impacts (see Appendix F for details).

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

## 5.2.7.2 Nestor Creek – Outer Facility Group

Significant impacts in the Nestor Creek – Outer facility group would occur within two facility segments and mitigation would be required as shown in Table 5-75. These segments have not been previously mitigated and there are no conceptual mitigation plans currently in the process of approval for the maintenance areas. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F.

**Table 5-75**  
**Mitigation for Impacts to Jurisdictional Resources within the**  
**Nestor Creek – Outer Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			Outer_1 (Acres)	Outer_2 (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Newly Proposed	Newly Proposed		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	<0.01	0.01	2:1	0.00
Disturbed Wetland (11200)	Disturbed Wetland	A / R / C	0.13	–	2:1	0.24
<b>Total</b>			<b>0.13</b>	<b>0.01</b>	<b>–</b>	<b>0.24</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

## 5.2.8 TIJUANA RIVER WATERSHED

**Impact BIO-1.7a** Proposed maintenance within the Tijuana River watershed would result in 0.73 acres of newly proposed and 6.42 acres of previously permitted direct impacts to sensitive City wetlands, including jurisdictional aquatic resources under the jurisdiction of the USACE, RWQCB, CDFW, and/or the City.

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

### **5.2.8.1 Tijuana River – Pilot and Smuggler’s Facility Group**

Significant impacts in the Tijuana River – Pilot and Smuggler’s facility group would occur within two facility segments and mitigation would be required as shown in Table 5-76. Impacts within the maintenance area the two segments (Pilot Channel [Segment 1] and Smuggler’s Gulch [Segment 1]) were previously mitigated through a conceptual mitigation plan that has been approved and is under construction (Appendix F). Any maintenance impacts that occur within previously permitted maintenance area would not require additional mitigation under the MWMP. Mitigation for any impacts outside of this area may occur out-of-watershed or at one of the potential mitigation projects identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-76**  
**Mitigation for Impacts to Jurisdictional Resources within the**  
**Tijuana River – Pilot and Smuggler’s Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			Pilot Channel_1 (Acres)	Smuggler's Gulch_1 (Acres)	Mitigation Ratio *	Mitigation Required (Acres)
			Previously Permitted	Previously Permitted		
Developed Concrete- lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	-	0.03	2:1	0.00
Disturbed Riparian Scrub (63000)	Riparian Scrub	A / R / C / CC	-	0.01	2:1	0.00
Natural Flood Channel (64200)	Natural Flood Channel <sup>5</sup>	A / R / C / CC	2.90	1.42	2:1	0.00
Ornamental Plantings (11000)	Ornamental Plantings <sup>3</sup>	A / R / C / CC	<0.01	-	0:1	0.00
Riparian Scrub (Mulefat Scrub) (63310)	Riparian Scrub	C / CC	-	0.08	2:1	0.00
Riparian Scrub (Southern Willow Scrub) (63320)	Riparian Scrub	A / R / C / CC	0.02	-	2:1	0.00

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-76**  
**Mitigation for Impacts to Jurisdictional Resources within the**  
**Tijuana River – Pilot and Smuggler’s Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			Pilot Channel_1 (Acres)	Smuggler's Gulch_1 (Acres)	Mitigation Ratio *	Mitigation Required (Acres)
			Previously Permitted	Previously Permitted		
Total			2.92	1.54	-	0.00

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = CCC Jurisdictional  
Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant and would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

## 5.2.8.2 Tijuana River – Tocayo Facility Group

Significant impacts in the Tijuana River – Tocayo facility group would occur within one facility segment and mitigation would be required as shown in Table 5-77. The segment has not been previously mitigated and there are no conceptual mitigation plans currently in the process of approval for the maintenance area. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-77**  
**Mitigation for Impacts to Jurisdictional Resources within the**  
**Tijuana River – Tocayo Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			<i>Tocayo_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	1.45	2:1	0.00
Riparian Forest (Southern Willow Forest, Concrete-Lined), (61320)	Riparian Forest or Woodland	A / R / C / CC	0.05	3:1	0.15
<b>Total</b>			<b>1.50</b>	<b>-</b>	<b>0.15</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = CCC Jurisdictional  
Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

## 5.2.8.3 Tijuana River – Smythe Facility Group

Significant impacts in the Tijuana River – Smythe facility group would occur within four facility segments and mitigation would be required as shown in Table 5-78. Previously permitted impacts within two of the segments (Smythe [Segment 1] and Via de la Bandola [Segment 1]) are proposed to be mitigated through draft conceptual mitigation plans that are currently awaiting approval from the applicable resource agencies (Appendix F). Any maintenance impacts that occur within previously permitted maintenance areas would not require additional mitigation under the MWMP. The other two segments in the Tijuana River – Smythe facility group (Via Encantadores [Segments 2 and 3]) were not previously mitigated and there are no conceptual mitigation plans currently in the process of approval for these maintenance areas. Mitigation for impacts in these segments may occur out-of-watershed or at one of

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

the potential mitigation sites identified in Appendix F. Impacts to natural flood channel would be mitigated at a ratio of 1:1 off-site through creation and/or restoration and the remaining 1:1 mitigation requirement may be met through on-site enhancement of this land cover.

**Table 5-78**  
**Mitigation for Impacts to Jurisdictional Resources within the Tijuana River –**  
**Smythe Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number					City Required Mitigation	
			<i>Smythe_1 (Acres)<sup>1</sup></i>	<i>Via de la Bandola_1 (Acres)<sup>1</sup></i>	<i>Via Encantadoras_1 (Acres)</i>	<i>Via Encantadoras_2 (Acres)</i>	<i>Via Encantadoras_3 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Previously Permitted</i>	<i>Previously Permitted</i>	<i>Newly Proposed</i>	<i>Newly Proposed</i>	<i>Newly Proposed</i>		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete-Lined) <sup>2</sup>	A / R / C	-	0.23	-	0.67	0.49	2:1	0.00
Disturbed Freshwater Marsh (52400)	Freshwater Marsh	A / R / C / CC	-	-	0.08	-	-	2:1	0.16
Disturbed Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland	A / R / C	-	-	0.02	-	-	3:1	0.06
Natural Flood	Natural Flood Channel <sup>5</sup>	A / R / C	0.30	-	-	-	-	2:1	0.00

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-78**  
**Mitigation for Impacts to Jurisdictional Resources within the Tijuana River –**  
**Smythe Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number					City Required Mitigation	
			Smythe_1 (Acres) <sup>1</sup>	Via de la Bandola_1 (Acres) <sup>1</sup>	Via Encantadoras_1 (Acres)	Via Encantadoras_2 (Acres)	Via Encantadoras_3 (Acres)	Mitigation Ratio*	Mitigation Required (Acres)
			Previously Permitted	Previously Permitted	Newly Proposed	Newly Proposed	Newly Proposed		
Channel (64200)									
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland	A / R / C	-	-	-	-	0.12	3:1	0.37
Riparian Scrub (Southern Willow Scrub) (63320)	Riparian Scrub	A / R / C	0.24	-	-	-	-	2:1	0.00
<b>Total</b>			<b>0.54</b>	<b>0.23</b>	<b>0.11</b>	<b>0.67</b>	<b>0.61</b>	<b>-</b>	<b>0.59</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>1</sup> Impacts are considered significant, but would not require mitigation.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>5</sup> Maintenance area may be eligible for 1:1 enhancement credit.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

### 5.2.8.4 Spring Canyon Creek – Cactus Facility Group

Significant impacts in the Spring Canyon Creek – Cactus facility group would occur within two facility segments and mitigation would be required as shown in Table 5-79. These segments have not been previously mitigated and there are no conceptual mitigation plans currently in the process of approval for the maintenance areas. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F. The City and resource agencies (USACE, RWQCB, and CDFW) have yet to determine if the wetland vegetation within these two segments was artificially installed and does not represent a jurisdictional resource for these agencies. If this vegetation is determined to be an artificial wetland, no mitigation would be required.

**Table 5-79**  
**Mitigation for Impacts to Jurisdictional Resources within the**  
**Spring Canyon Creek – Cactus Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Cactus_1 (Acres)</i>	<i>Cactus_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>	<i>Newly Proposed</i>		
Developed Concrete- lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	A / R / C	0.02	0.30	2:1	0.00
Disturbed Wetland (Concrete- lined) (11200)	Disturbed Wetland	A / R / C	–	0.05	2:1	0.11
Riparian Forest (Southern Willow Forest, Concrete- lined) (61320)	Riparian Forest or Woodland	A / R / C	0.14	0.21	3:1	1.05
Riparian Scrub	Riparian Scrub	A / R / C	–	0.04	2:1	0.08

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-79**  
**Mitigation for Impacts to Jurisdictional Resources within the Spring Canyon Creek – Cactus Facility Group**

MWMP Mapping Vegetation Community (Holland/Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number		City Required Mitigation	
			<i>Cactus_1 (Acres)</i>	<i>Cactus_2 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>	<i>Newly Proposed</i>		
(Concrete-lined) (63000)						
<b>Total</b>			<b>0.16</b>	<b>0.60</b>	<b>–</b>	<b>1.24</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

## 5.2.8.5 Tijuana River – Siempre Viva Facility Group

The City has determined through coordination with the resource agencies that the wetland vegetation within the one segment in the Tijuana River – Siempre Viva facility group was artificially installed and does not represent a jurisdictional resource, as shown in Table 5-80. Therefore, impacts to these vegetation communities would not be significant and no mitigation would be required.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

**Table 5-80**  
**Mitigation for Impacts to Jurisdictional Resources within the**  
**Tijuana River – Siempre Viva Facility Group**

MWMP Mapping Vegetation Community (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			<i>Siempre Viva_1 (Acres)</i>	<i>Mitigation Ratio</i>	<i>Mitigation Required (Acres)</i>
			<i>Previously Permitted</i>		
Developed Concrete-lined Channel (64200)	Disturbed Wetland (Unvegetated Concrete- Lined) <sup>2</sup>	None	0.10	2:1	0.00
Disturbed Freshwater Marsh (52400)	Freshwater Marsh <sup>3</sup>	None	0.08	0:1	0.00
Disturbed Wetland (11200)	Disturbed Wetland <sup>3</sup>	None	0.66	0:1	0.00
Riparian Forest (Southern Willow Forest, Concrete-Lined), (61320)	Riparian Forest or Woodland <sup>3</sup>	None	0.39	0:1	0.00
Riparian Scrub (Southern Willow Scrub) (63320)	Riparian Scrub <sup>3</sup>	None	0.19	0:1	0.00
<b>Total</b>			<b>1.42</b>	<b>–</b>	<b>0.00</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional, CC = CCC Jurisdictional  
Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not  
add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

<sup>2</sup> Impacts are considered significant, but would not require mitigation.

<sup>3</sup> Impacts are not considered significant (because the community has been determined to be a non-  
jurisdictional) and would not require mitigation.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

## **5.2.8.6 Tijuana River – La Media Facility Group**

Significant impacts in the Tijuana River – La Media facility group would occur within one facility segment and mitigation would be required as shown in Table 5-81. The segment has not been previously mitigated and there are no conceptual mitigation plans currently in the process of approval for the maintenance area. Mitigation may potentially occur out-of-watershed or at one of the potential mitigation sites identified in Appendix F.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

**Table 5-81**  
**Mitigation for Impacts to Jurisdictional Resources within the Tijuana River – La Media Facility Group**

General Vegetation Type (Holland/ Oberbauer Code)	City Jurisdictional Wetland Community	Jurisdiction	Facility Segment Name_Number	City Required Mitigation	
			<i>La Media_1 (Acres)</i>	<i>Mitigation Ratio*</i>	<i>Mitigation Required (Acres)</i>
			<i>Newly Proposed</i>		
Freshwater Marsh (52400)	Freshwater Marsh	City	0.02	2:1	0.03
Riparian Forest (Southern Willow Forest) (61320)	Riparian Forest or Woodland	A / R / C	<0.01	3:1	<0.01
<b>Total</b>			<b>0.02</b>	<b>-</b>	<b>0.03</b>

**Notes:** A = USACE Jurisdictional, R = RWQCB Jurisdictional, C = CDFW Jurisdictional

Impact acreages are rounded to the nearest hundredth; therefore, numbers presented in this table may not add up precisely to the totals indicated.

See Table 4-1 for more detail regarding significance thresholds and mitigation requirements.

\* Mitigation ratios are for City requirements only.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 5.3 SENSITIVE PLANT SPECIES

As discussed in more detail in Section 4.1.1, direct impacts to sensitive plant species covered by the MSCP and impacts to non-Covered Species with a CRPR of 2B.1 or 2B.2 would be mitigated to less than significant based on implementation of habitat mitigation (**MM-BIO-1a** and **MM-BIO-1b**), unless those species are identified as MSCP Narrow Endemic Covered Species. For direct impacts to plant species identified as MSCP Narrow Endemics or non-MSCP Covered Species that are state-listed or federally listed, or CRPR 1B.1, 1B.2, species-specific mitigation is required to reduce impacts to less than significant. Impacts to plant species ranked CRPR 4 would not be significant, since any populations identified on site would represent a significant percentage of the population in terms of the ability for the species to persist (i.e., CRPR 4 species are not considered “rare” from a statewide perspective).

**Impact BIO-3** For newly proposed facilities, unavoidable impacts to MSCP Narrow Endemic plant species, non-MSCP covered federally and/or state listed plant species, or non-MSCP covered CRPR 1B.1 or 1B.2 (see Table 4-2a) would be significant absent species-specific mitigation.

**MM-BIO-3 Species-Specific Sensitive Plant Mitigation.** Focused surveys shall be conducted to determine presence/absence for Multiple Species Conservation Program (MSCP) Narrow Endemic plant species, non-MSCP covered federally and/or state listed plant species, or non-MSCP covered California Rare Plant Rank 1B.1 or 1B.2 species (see Table 4-2a, Sensitive Plant Species by Mitigation Type) previously observed or with high or moderate potential to occur within each facility, prior to maintenance. For species that can only be reliably detected during specific blooming periods, focus surveys may need to be conducted during those periods to determine presence/absence. If these species occur within the newly proposed maintenance, access, staging, or stockpiling areas, one of two equally suitable options shall be implemented:

- A) Maintenance areas shall be modified to avoid direct impacts to mapped sensitive plant species.
- B) Implement an approved Conceptual Restoration Plan or acquisition of mitigation credits that provides one or more of the following measures:
  - Impacted plants would be salvaged and relocated;
  - Seeds from impacted plants would be collected for use at an off-site location;
  - Off-site habitat that supports the species impacted shall be enhanced and/or supplemented with seed collected on site; and/or

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

- Comparable habitat supporting the species at an off-site location shall be preserved.

Mitigation that involves relocation, enhancement, or transplanting sensitive plants may be conducted in combination with other habitat mitigation (e.g., wetlands HMMP) and shall include the following:

- Conceptual planting plan, including grading and temporary irrigation if necessary to create appropriate habitat conditions to support the species;
- Planting specifications (e.g., seed source, soil suitability, container size);
- Monitoring program including success criteria (e.g., a minimum number of sensitive plant individuals, a minimum percent cover of native species, a maximum percent cover of non-native species); and
- Long-term maintenance and preservation plan (e.g., sensitive plant monitoring, adaptive management actions, site security from trespass or vandalism).

### **5.4 SENSITIVE WILDLIFE SPECIES**

Per the SDBG, direct impacts to vegetation communities used by wildlife would be conserved or restored through the implementation of **MM-BIO-1a**, **MM-BIO-1b**, and **MM-BIO-2**, which provide mitigation or restoration for impacts to sensitive vegetation as described in Section 5.2. Special consideration should be given to the timing of facility maintenance work. Wildlife is more susceptible to damage or harassment during their growing or breeding season. For most threatened and endangered species, the nesting/breeding season is generally from February 1 through August 31. If possible, maintenance would be planned to avoid this nesting/breeding season.

Maintenance-related direct and indirect noise impacts may occur to breeding wildlife, including the state and federally endangered least Bell's vireo, California least tern, Ridgway's rail, and southwestern willow flycatcher, the federally threatened coastal California gnatcatcher, and the MSCP Covered Species Cooper's hawk, yellow warbler, yellow-breasted chat, and other avian species if maintenance occurs during the breeding seasons below:

- March 1 through August 15 for coastal California gnatcatcher in MHPA (no restrictions outside of MHPA)
- March 15 through September 15 for least Bell's vireo
- April 1 through September 15 for California least tern
- March 15 through August 15 for Ridgway's rail

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

- May 1 through September 1 for southwestern willow flycatcher
- March 1 through August 31 for Cooper's hawk
- January 15 through August 31 for raptors
- February 1 through September 15 for other breeding species

In addition, the following mitigation measures would be implemented to further reduce direct impacts to sensitive wildlife species:

**Impact BIO-4** Direct and indirect impacts to nesting birds, protected under the MBTA (16 USC 703–712) and under California Fish and Game Code (Sections 3503 and 3503.5), may occur during MWMP maintenance activities within facilities that contain suitable habitat for these species, as described in Section 4.

**MM-BIO-4      **Avoidance of Nesting Bird Impacts.**** To avoid any direct impacts to any species identified as a candidate, sensitive, or special-status species in the MSCP or other local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (USFWS), removal of habitat that supports active nests in the proposed area of disturbance shall occur outside of the breeding season of these species (January 15 through September 15), where feasible.

If removal of habitat in the proposed area of disturbance must occur during the breeding season, the Qualified Biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds within the proposed area of disturbance. The pre-construction survey shall be conducted no more than seven calendar days prior to the start of construction activities (including removal of vegetation).

TSW shall submit the results of the pre-construction survey to City Development Services Department for review and approval prior to initiating any construction activities. If nesting birds are detected, a general survey report and an avoidance plan, if applicable, in conformance with the SDBG and applicable state and federal law (e.g., appropriate follow-up surveys, monitoring schedules, and construction barriers/buffers) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs is avoided. The report and/or avoidance plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's Mitigation Monitoring Coordination (MMC) Section and Qualified Biologist shall verify and approve that all

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

measures identified in the report and/or avoidance plan are in place prior to and/or during construction.

**Impact BIO-5** Facility maintenance within 300 feet of any sensitive coastal or riparian areas with suitable habitat may have adverse direct and indirect impacts on least Bell's vireo, Ridgway's rail, California least tern, or southwestern willow flycatcher if construction occurs during the breeding seasons for any of these species:

- March 15 through September 15 for least Bell's vireo and Ridgway's rail;
- April 15 through September 15 for California least tern; and
- May 1 through September 1 for southwestern willow flycatcher).

**MM-BIO-5 Avoidance of Listed Species Take.** Prior to the preconstruction meeting, the Environmental Designee (ED)/MMC shall verify that Multi-Habitat Planning Area (MHPA) boundaries and the requirements regarding the least Bell's vireo, Ridgway's rail, California least tern, and southwestern willow flycatcher as specified below, are shown on the facility maintenance plans.

No clearing, grubbing, grading, or other construction activities shall occur during the least Bell's vireo and Ridgway rail's breeding season (March 15 through September 15), California least tern breeding season (April 15 through September 15), or southwestern willow flycatcher breeding season (May 1 through September 1) until the following requirements have been met to the satisfaction of the ED/MMC:

1. A Qualified Biologist (possessing a valid Endangered Species Act Section 10[a][1][a] Recovery Permit) shall survey those habitat areas within the MHPA that would be subject to construction noise levels exceeding 60 decibels [dB(A)] hourly average for the presence of the least Bell's vireo and southwestern willow flycatcher. Surveys for least Bell's vireo and southwestern willow flycatcher, shall be conducted pursuant to the protocol survey guidelines established by the USFWS within the breeding season prior to the commencement of any construction. If least Bell's vireo or southwestern willow flycatcher are present, then the following conditions must be met:
  - a. March 15 through September 15 for least Bell's vireo and May 1 through September 1 for southwestern willow flycatcher, no clearing, grubbing, or grading of occupied habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a Qualified Biologist; and

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

- b. March 15 through September 15 for least Bell's vireo and May 1 through September 1 for southwestern willow flycatcher, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) hourly average at the edge of occupied habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a Qualified Acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the ED/MMC at least 2 weeks prior to the commencement of construction activities. Prior to the commencement of construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a Qualified Biologist; or
- c. At least 2 weeks prior to the commencement of construction activities, under the direction of a Qualified Acoustician, attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities would not exceed 60 dB(A) hourly average at the edge of habitat occupied by the least Bell's vireo, and/or southwestern willow flycatcher. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring shall be conducted at the edge of the occupied habitat area to ensure that levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the Qualified Acoustician or Biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (September 16). Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the ED/MMC, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

2. If least Bell's vireo and/or southwestern willow flycatcher are not detected during the protocol survey, the Qualified Biologist shall submit substantial evidence to the ED/MMC and applicable resource agencies that demonstrates whether or not mitigation measures such as noise walls are necessary from March 15 through September 15 for least Bell's vireo, and/or May 1 through September 1 for southwestern willow flycatcher, adherence to the following is required:
  - a. If this evidence indicates that the potential is high for least Bell's vireo and/or southwestern willow flycatcher to be present based on historical records or site conditions, then Condition 1(a) shall be adhered to as specified above.

If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.
3. If work is proposed within a facility segment where Ridgway's rail has been identified to have a moderate or high potential to occur (Appendix E), then an agency-approved biologist will perform the following duties prior to the start of maintenance:
  - a. A minimum of three focused pre-construction surveys on separate days, to determine the presence of Ridgway's rails in the facility project impact area outside the rail breeding season. Surveys will begin a maximum of 7 days prior to performing project construction and one survey will be conducted the day immediately prior to performing project construction. Immediately after the facility maintenance area is surveyed by a biologist, a 3- to 5-foot-tall exclusionary fence with 2-inch mesh openings shall be installed at the upstream and downstream limits of the facility to discourage entry of Ridgway's rails into the construction area and to ensure that impact limits are not exceeded;
  - b. Before each day of maintenance begins, a Qualified Biologist shall survey the maintenance area to determine if Ridgway's rails have entered the facility impact area. If any rails are found within this area, the biologist will direct construction personnel to begin in an area away from the rails;
  - c. The biologist will walk ahead of maintenance equipment to flush birds toward areas of the facility that will be avoided. The biologist will also record the number and location of any Ridgway's rails disturbed by project construction.

**Impact BIO-6** Facility maintenance within 300 feet of any areas with suitable nesting habitat for raptors, which are afforded protection by the MBTA and under California Fish and Game Code Section 3503.5, may have adverse direct and indirect impacts on these

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

species if the maintenance occurs during the raptor breeding season (i.e., January 15 through August 31).

**MM-BIO-6      Avoidance of Raptor Breeding Impacts.** If maintenance is planned to occur during the raptor breeding season (January 15 through August 31), a pre-maintenance survey for active raptor nests shall be conducted in areas supporting suitable habitat.

If active raptor nests are found, maintenance shall not occur within:

- 300 feet of a Cooper's hawk nest,
- 900 feet of a northern harrier's nest, or
- 300 feet of any other raptor's nest until the Qualified Biologist determines the nesting cycle is complete (i.e., when fledglings become independent).

If removal of any eucalyptus trees or other trees used by raptors for nesting within a maintenance area is proposed during the raptor breeding season (January 15 through August 31), a Qualified Biologist shall ensure that no raptors are nesting in such trees.

If maintenance occurs during the raptor breeding season, a pre-maintenance survey shall be conducted and no maintenance shall occur within 300 feet of any nesting site of Cooper's hawk or other nesting raptor until the young fledge. Should the biologist determine that raptors are nesting, the trees shall not be removed until after the breeding season.

In addition, if removal of grassland or other habitat appropriate for nesting by northern harriers, a Qualified Biologist shall ensure that no harriers are nesting in such areas. If maintenance occurs during the raptor breeding season, a pre-maintenance survey shall be conducted and no maintenance shall occur within 900 feet of any nesting site of northern harrier until the young fledge.

Noise and other potential disturbance to active raptor nests from maintenance activities shall be minimized in accordance with **MM-BIO-4**.

## **5.5      MITIGATION MEASURES FOR INDIRECT IMPACTS**

As discussed in Sections 4.11 and 5.1, short-term indirect impacts to vegetation communities and jurisdictional aquatic resource and sensitive plant species would be reduced to less than significant through implementation of EPs. Short-term indirect impacts to sensitive wildlife species (**BIO-7**) and long-term indirect impacts related to reduced water quality conditions (**BIO-8**) would be potentially significant absent mitigation, and are discussed in more detail below.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 5.5.1 SENSITIVE WILDLIFE SPECIES

Mitigation for direct impacts to sensitive wildlife described by **MM-BIO-4**, **MM-BIO-5**, and **MM-BIO-6** in Section 5.4 would also be applied to avoid indirect impacts to these wildlife species (e.g., avoidance impacts to active nest sites). In addition to the measures described in Section 5.4, the following mitigation will be applied to minimize and avoid further indirect impacts that may occur from maintenance activities to sensitive wildlife species.

**Impact BIO-7** Noise related to maintenance activities may result in indirect impacts to breeding wildlife, including the federally threatened California gnatcatcher if maintenance occurs within or adjacent to the MHPA and during the breeding season for this species (i.e., March 1 through August 15).

**MM-BIO-7** **Avoidance of California Gnatcatcher Breeding Impacts in MHPA.** Prior to the preconstruction meeting, the ED/MMC shall verify that the MHPA boundaries, and the requirements regarding the coastal California gnatcatcher, as specified below, are shown on the facility maintenance plans.

No clearing, grubbing, grading, or other construction activities shall occur during the coastal California gnatcatcher breeding season (March 1 through August 15 on MHPA lands), until the following requirements have been met to the satisfaction of the ED/MMC:

1. A Qualified Biologist (possessing a valid Endangered Species Act Section 10[a][1][a] Recovery Permit) shall survey those habitat areas within the MHPA that would be subject to construction noise levels exceeding 60 decibels [dB(A)] hourly average for the presence of the coastal California gnatcatcher. Surveys for coastal California gnatcatcher shall be conducted pursuant to the protocol survey guidelines established by USFWS within the breeding season prior to the commencement of any construction.

If coastal California gnatcatchers are present, then the following conditions must be met:

- a. March 1 through August 15 on MHPA lands, no clearing, grubbing, or grading of occupied coastal California gnatcatcher habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a Qualified Biologist; and
- b. March 1 through August 15 on MHPA lands, no construction activities shall occur within any portion of the site where construction activities

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

would result in noise levels exceeding 60 dB(A) hourly average at the edge of occupied coastal California gnatcatcher habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a Qualified Acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the ED/MMC at least 2 weeks prior to the commencement of construction activities. Prior to the commencement of construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a Qualified Biologist; or

- c. At least 2 weeks prior to the commencement of construction activities, under the direction of a Qualified Acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities would not exceed 60 dB(A) hourly average at the edge of habitat occupied by the coastal California gnatcatcher. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the Qualified Acoustician or Biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (August 16). Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the ED/MMC, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.
2. If coastal California gnatcatchers are not detected during the protocol survey, the Qualified Biologist shall submit substantial evidence to the ED/MMC and applicable resource agencies which demonstrates whether or not mitigation

## Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

measures such as noise walls are necessary from March 1 through August 15 on MHPA lands as follows:

- a. If this evidence indicates that the potential is high for coastal California gnatcatcher to be present based on historical records or site conditions, then Condition 1(a) shall be adhered to as specified above.
- b. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.

### 5.5.2 WATER QUALITY

Section 5.12, Water Quality, of the MWMP Environmental Impact Report includes evaluation of long-term impacts that the loss of wetlands functions and services may have on downstream water quality.

**Impact BIO-8** Indirect impacts may include adverse alteration of drainage patterns and reduction in water quality conditions as a result of routine, repeated maintenance and removal of vegetation and sediment.

The water quality analysis includes several factors:

- 1) impacts of routine maintenance of existing wetlands vegetation are mitigated at ratios that provide for no-net-loss of wetlands functions and services within the watershed, and this mitigation provides an offsetting water quality improvement in most situations (**MM-BIO-1a**);
- 2) where construction of compensatory wetlands mitigation is delayed (relative to the occurrence of maintenance), the MWMP includes additional beneficial water quality improvement activities to provide water quality offsets (**MM-WQ-1**); and
- 3) the City is incorporating a holistic management strategy that is expected to reduce the need for maintenance (i.e., vegetation removal) over time through construction of water quality improvement projects such as stream rehabilitation, green infrastructure, and multi-use treatment areas.

Wetlands avoidance and implementation of **MM-BIO-1a**, would reduce the potential for long-term water quality impacts; however, for MWMP activities where implementation of **MM-BIO-1a** is delayed, implementation of **MM-WQ-1** would further reduce the potential for long-term water quality impacts. However, these offsetting water quality benefit features are based on the best available data, which at this time cannot precisely calculate water quality conditions prior to and after maintenance and mitigation due to an extensive set of both site-specific and independent conditions and variables that vary in space and time. Therefore, potential long-term indirect impacts related to potentially reduced water quality conditions would remain **significant and unavoidable** following implementation of **MM-BIO-1a** and **MM-WQ-1**.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

## 6 REFERENCES

- AOU (American Ornithologists' Union). 2016. "Checklist of North and Middle American Birds: List of the 2,127 Bird Species Known from the A.O.U. Check-List Area." Accessed October 14, 2016. <http://checklist.aou.org/>.
- Beason, R.C. 1995. "Horned Lark (*Eremophila alpestris*)." In *The Birds of North America*, No. 195, edited by A. Poole and F. Gill. Philadelphia, Pennsylvania: The Academy of Natural Sciences, and Washington, DC: The American Ornithologists' Union.
- Bent, A.C. 1921. "Life Histories of North American Gulls and Terns." *U.S. Natl. Mus. Bull.* 113. 345pp.
- Brown, L., and D. Amadon. 1968. *Eagles, Hawks and Falcons of the World*. 2 Vols. London, United Kingdom: Country Life Books.
- Calflora. 2018. The Calflora Database: Information on California Plants for Education, Research and Conservation, with Data Contributed by Public and Private Institutions and Individuals. Berkeley, California. Accessed January 2018. <http://www.calflora.org>.
- CDFG (California Department of Fish and Game). 2000. *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities*. December 9, 1983; revised May 8, 2000.
- CDFG. 2010. *List of Vegetation Alliances and Associations: Hierarchical List of Natural Communities with Holland Types*. September 2010. Accessed October 2016. <https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities/List>.
- CDFW (California Department of Fish and Wildlife). 2016a. California Natural Diversity Database (CNDDDB). RareFind Version 4.0 (Commercial Subscription). Sacramento, California: CDFW, Biogeographic Data Branch. <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>.
- CDFW. 2016b. "Special Animals (903 taxa)." California Natural Diversity Database. CDFW, Biogeographic Data Branch. Periodic publication. October 2016. <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.
- CDFW. 2018. Natural Diversity Database. Special Vascular Plants, Bryophytes, and Lichens List. Quarterly publication. November 2018. <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

- City of San Diego. 1984. City of San Diego, California, Council Policy 700-44: Flood Control Measures. Effective March 12, 1984. Accessed July 2018. [http://docs.sandiego.gov/councilpolicies/cpd\\_700-44.pdf](http://docs.sandiego.gov/councilpolicies/cpd_700-44.pdf).
- City of San Diego. 1997. *Multiple Species Conservation Program Subarea Plan*. March 1997. <https://www.sandiego.gov/sites/default/files/legacy/planning/programs/mscp/pdf/subareafullversion.pdf>.
- City of San Diego. 2012. City of San Diego, California, Council Policy 800-04: Drainage Facilities, as amended. Effective July 20, 2012. Accessed June 2017. [http://docs.sandiego.gov/councilpolicies/cpd\\_800-04.pdf](http://docs.sandiego.gov/councilpolicies/cpd_800-04.pdf).
- City of San Diego. 2013a. *Master Storm Water System Maintenance Program*. <https://www.sandiego.gov/stormwater/services/mswsmmp>.
- City of San Diego. 2013b. *Watershed Asset Management Plan. Appendix C Mission Bay Watershed*. Transportation and Storm Water Department - Storm Water Division. July 19, 2013. Task Order #57. DOC ID# CSD-RT-13-URS57-01. <https://www.sandiego.gov/sites/default/files/wampappendixc.pdf>.
- City of San Diego. 2016a. *California Environmental Quality Act: Significance Determination Thresholds*. July 2016.
- City of San Diego. 2016b. *Landscape Standards*. Amended April 5, 2016, by Resolution No. O-20634. [https://www.sandiego.gov/sites/default/files/dsdlc\\_landscapestandards\\_2016-04-05.pdf](https://www.sandiego.gov/sites/default/files/dsdlc_landscapestandards_2016-04-05.pdf).
- City of San Diego. 2018. *Biology Guidelines*. Adopted January 22, 2018, and amended February 1, 2018, by City Council Resolution R-311507. <https://www.sandiego.gov/planning/programs/landdevcode/landdevmanual>.
- CNPS (California Native Plant Society). 2001. *CNPS Botanical Survey Guidelines*. December 9, 1983; revised June 2, 2001. [https://cnps.org/wp-content/uploads/2018/03/cnps\\_survey\\_guidelines.pdf](https://cnps.org/wp-content/uploads/2018/03/cnps_survey_guidelines.pdf).
- CNPS. 2016. Inventory of Rare, Threatened, and Endangered Plants of California (online edition, v8-02). Sacramento, California: CNPS, Rare Plant Program. <http://www.rareplants.cnps.org>.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

- County of Riverside. 2003. "Birds." Volume 2 – The MSHCP Reference Document. *Western Riverside County Multiple Species Habitat Conservation Plan*. County of Riverside Transportation and Land Management Agency (TLMA). Accessed December 1, 2011.  
<http://www.rctlma.org/mshcp/volume2/birds.html>.
- County of San Diego. 1998. *Final Multiple Species Conservation Program (MSCP) Plan*. August 1998.  
<https://www.sandiegocounty.gov/content/dam/sdc/pds/mscp/docs/SCMSCP/FinalMSCPProgramPlan.pdf>.
- Crother, B.I. 2012. *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in our Understanding*, edited by J.J. Moriarty. 7th ed. Society for the Study of Amphibians and Reptiles (SSAR); Herpetological Circular no. 39. August 2012.  
[http://home.gwu.edu/~rpyron/publications/Crother\\_et\\_al\\_2012.pdf](http://home.gwu.edu/~rpyron/publications/Crother_et_al_2012.pdf).
- Cypher, Ellen A. 2002. *General Rare Plant Survey Guidelines*. July 2002.  
[https://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/Documents/rare\\_plant\\_protocol.pdf](https://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/Documents/rare_plant_protocol.pdf).
- Dunk, J.R. 1995. "White-Tailed Kite (*Elanus leucurus*).". In *The Birds of North America Online*, edited by A. Poole. Ithaca, New York: Cornell Lab of Ornithology. Accessed December 2011.  
<http://bna.birds.cornell.edu/bna/species/178>.
- Erichsen, A.L. 1995. "The White-Tailed Kite (*Elanus leucurus*): Nesting Success and Seasonal Habitat Selection in an Agricultural Landscape." Thesis; University of California at Davis.
- Erichsen, A.L., S.K. Smallwood, A.M. Commandatore, B.W. Wilson, and M.D. Fry. 1996. "White-Tailed Kite Movements and Nesting Patterns in an Agricultural Landscape." In *Raptors in Human Landscapes: Adaptations to Built and Cultivated Environments*. (D.M. Bird, D.E. Varland, and J.J. Negro, eds.), pp. 167–176. San Diego, California: Academic Press.
- Eskalen, A., R. Stouthamer, S.C. Lynch, P. Rugman-Jones, M. Twizeyimana, A. Gonzalez, and T. Thibault. 2013. "Host Range of *Fusarium* Dieback and its Ambrosia Beetle (Coleoptera: Scolytinae) Vector in Southern California." *Plant Disease*. In 97:7, 938–951.
- Garrett, K., and J. Dunn. 1981. *Birds of Southern California: Status and Distribution*. Los Angeles, California: Los Angeles Audubon Society.
- Google Earth. 2016. Aerial Photographs. 1:200 scale.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

- Grinnell, J., and A.H. Miller. 1944. "The Distribution of the Birds of California." *Pac. Coast Avifauna* No. 27. 608pp.
- Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Nongame-Heritage Program, California Department of Fish and Game. October 1986.
- Jepson Flora Project. 2016. Jepson eFlora. Berkeley, California: University of California. Accessed October 18, 2016. [http://ucjeps.berkeley.edu/cgi-bin/get\\_JM\\_name\\_data.pl](http://ucjeps.berkeley.edu/cgi-bin/get_JM_name_data.pl).
- Johnston, D.W., and M.E. Foster. 1954. "Interspecific Relations of Breeding Gulls at Honey Lake, California." *Condor* 56:38–42.
- Kus, B.E. 2002. "Least Bell's Vireo (*Vireo bellii pusillus*)." In *The Riparian Bird Conservation Plan: A Strategy for Reversing the Decline of Riparian-Associated Birds in California*. California Partners in Flight and the Riparian Habitat Joint Venture, Version 2.0 (2004). Accessed August 27, 2012. [http://www.prbo.org/calpif/htmldocs/riparian\\_v-2.html](http://www.prbo.org/calpif/htmldocs/riparian_v-2.html).
- Lederer, R.J. 1976. "The Breeding Populations of Piscivorous Birds of Eagle Lake." *Am. Birds* 30:771–772.
- Macwhirter, R.B., and K.L. Bildstein. 2011. "Northern Harrier (*Circus cyaneus*)," revised by K.G. Smith and S.R. Wittenberg. In *The Birds of North America Online*, edited by A. Poole. Ithaca, New York: Cornell Lab of Ornithology. doi: 10.2173/bna.210.
- McCaskie, G., P. De Benedictis, R. Erickson, and J. Morlan. 1979. *Birds of Northern California, An Annotated Field List*. 2nd ed. Berkeley, California: Golden Gate Audubon Society. 84pp.
- Microsoft. 2016. Bing Aerial Imagery.
- Moyle, P.B. 2002. *Inland Fishes of California*. Revised and expanded. Berkeley and Los Angeles, California, and London, England: University of California Press.
- NABA (North American Butterfly Association). 2001. "Checklist of North American Butterflies Occurring North of Mexico." Adapted from *North American Butterfly Association (NABA) Checklist and English Names of North American Butterflies*, eds. B. Cassie, J. Glassberg, A. Swengel, and G. Tudor. 2nd ed. Morristown, New Jersey: NABA. Accessed May 2012. <http://www.naba.org/pubs/enames2.html>.
- Oberbauer, T., M. Kelly, and J. Buegge. 2008. *Draft Vegetation Communities of San Diego County*. March 2008. Accessed September 12, 2012. <http://www.sdcanyonlands.org/canyon-groups/canyon-group-resources/canyon-enhancement-guide/189-canyon-enhancement-planning-guide-materials>.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

- Rigney, T. 1983. "California Gulls Keep Volunteers up Late." *S.F. Bay Observatory Newsletter* 3:2–3.
- Rigney, M., and L. Emery. 1980. California Least Tern Breeding Survey, San Francisco Bay National Wildlife Refuge. U.S. Dep. Inter., Fish and Wild. Serv., San Francisco Bay Natl. Wildl. Refuge Rep. 22pp.
- SanGIS (San Diego Geographic Information Source). 2013. San Diego Geographic Information Source. Accessed October 2013. <http://www.sangis.org/>.
- SANDAG. 2014. Aerial Maps.
- SDNHM (San Diego Natural History Museum). 2002. "Butterflies of San Diego County." Revised September 2002. Accessed May 2012. <http://www.sdnhm.org/archive/research/entomology/sdbutterflies.html>.
- SDRWQCB (San Diego Regional Water Quality Control Board). 2002. "Overview of San Diego Watershed Management Areas."
- Stouthamer, R., P. Rugman-Jones, P.Q. Thu, A. Eskalen, T. Thibault, J. Hulcr, L. Wang, B.H. Jordal, C. Chen, M. Cooperband, C. Lin, N. Kamata, S. Lu, H. Masuya, Z. Mendel, R. Rabaglia, S. Sanguansub, H. Shih, W. Sittichaya, and S. Zong. 2017. "Tracing the Origin of a Cryptic Invader: Phylogeography of the Euwallacea Fornicatus (*Coleoptera: Curculionidae: Scolytinae*) Species Complex." *Agricultural and Forest Entomology*.
- Swickard, D.K. 1971. *The Status of the California Least Tern at Camp Pendleton*. Camp Pendleton Marine Base Rep. 30pp.
- Swickard, D.K. 1972. "Status of the Least Tern at Camp Pendleton, California." *Calif. Birds* 3:49–58.
- Unitt, P., A.E. Klovstad, W.E. Haas, P.J. Mock, et al. 2004. *San Diego County Bird Atlas*. Proceedings of the San Diego Society of Natural History 39. San Diego, California: San Diego Society of Natural History.
- USACE (U.S. Army Corps of Engineers). 1987. *Corps of Engineers Wetlands Delineation Manual*. Wetlands Research Program Technical Report Y-87- 1. Vicksburg, Mississippi: U.S. Army Engineer Waterways Experiment Station. January 1987. [http://www.fedcenter.gov/Bookmarks/index.cfm?id=6403&pge\\_id=1606](http://www.fedcenter.gov/Bookmarks/index.cfm?id=6403&pge_id=1606).
- USACE. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. Environmental Laboratory, ERDC/EL TR-08-28. Vicksburg, Mississippi: U.S. Army Engineer Research and Development Center. September 2008. <http://el.erd.c.usace.army.mil/elpubs/pdf/trel08-28.pdf>.

# Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California

---

- USACE. 2017. *2017 Nationwide Permits, General Conditions, District Engineer's Decision, Further Information, and Definitions*. March 2017. <https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/8593>
- USDA (U.S. Department of Agriculture). 2017a. Web Soil Survey. USDA Natural Resources Conservation Service, Soil Survey Staff. <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.
- USDA. 2017b. PLANTS Database. USDA Natural Resources Conservation Service. <http://plants.usda.gov/java/>.
- US Department of the Interior. 2008. San Diego River Invertebrate Monitoring Program – Final Report. Technical Memorandum No. 86-68220-08-06. [https://www.usbr.gov/research/projects/download\\_product.cfm?id=126](https://www.usbr.gov/research/projects/download_product.cfm?id=126).
- USFWS (U.S. Fish and Wildlife Service). 2000. *Southwestern Willow Flycatcher Protocol Revision 2000*. Accessed November 4, 2016. <https://www.fws.gov/pacific/ecoservices/endangered/recovery/documents/SWWFlycatcher.2000.protocol.pdf>.
- USFWS. 2001. *Least Bell's Vireo Survey Guidelines*. Carlsbad Fish and Wildlife Office, Carlsbad, California. January 19, 2001. Accessed November 4, 2016. <https://www.fws.gov/pacific/ecoservices/endangered/covery/documents/LBVireo.2001.protocol.pdf>.
- USFWS. 2004. *Endangered Species Glossary*. September 2004. Accessed May 17, 2019. <https://www.fws.gov/nc-es/fish/glossary.pdf>.
- USFWS. 2016a. "Critical Habitat and Occurrence Data" [map]. Accessed August 2016. <http://www.fws.gov/data>.
- USFWS. 2016b. "NWI Wetlands for California" [Shapefiles]. National Wetlands Inventory. Data last updated March 5, 2013. Accessed September 2016. <http://www.fws.gov/wetlands/Data/State-Downloads.html>.
- USGS (U.S. Geological Survey). 2016. National Hydrography Dataset.
- Wilbur, S.R. 1974. "The Literature of the California Black Rail." U.S. Dep. Inter., Fish and Wildl. Serv., Portland, OR. *Spec. Sci. Rep. Wildl.* No. 179. 17pp.
- Wilson, D.E., and D.M. Reeder, eds. 2005. *Mammal Species of the World: A Taxonomic and Geographic Reference*. 3rd ed. Baltimore, Maryland: Johns Hopkins University Press.

## **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

Zack, W. 2017. "RE: City of San Diego - Siempre Viva & Bristow (Otay Mesa)." Personal communication (email) from Winston Zack (USACE) to Antoinette Gibbs (City of San Diego) and Lisa Honma (Waterboards). November 15, 2017.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988–1990. *California's Wildlife*. Vol. I–III. California Department of Fish and Game, Sacramento, California.

Zeiner, D.C., W.F. Laudenslayer Jr., K.E. Mayer, and M. White. 1990. *California's Wildlife*, Vol. 3. *Mammals*. California Statewide Wildlife Habitat Relationships System. Sacramento, California: State of California Department of Fish and Game. April 1990.

# **Biological Resources Technical Report for the Municipal Waterways Maintenance Plan, City of San Diego, California**

---

THIS PAGE INTENTIONALLY LEFT BLANK FOR DOUBLE-SIDED PRINTING