WASTE MANAGEMENT PLAN

FOR

STONE CREEK PROJECT

San Diego, California

Project No. 67943

Prepared for:

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1.0 INTRODUCTION

The purpose of this Waste Management Plan (WMP) for the *Stone Creek* project in the City of San Diego is to provide analysis of the solid waste impacts anticipated for the *Stone Creek* project and how these impacts will be mitigated. The goal of this WMP is to divert a minimum 75 percent of the project's grading and construction waste and to divert the project's occupancy waste consistent with AB 939, AB 341, and the City of San Diego's current waste reduction goals and regulations.

The *Stone Creek* project is located in the Mira Mesa community of the City of San Diego (see Figure 1, *Stone Creek Project Location*). Located in the east-central portion of Mira Mesa, *Stone Creek* is situated north of Miramar Road, south of Mira Mesa Boulevard, east of Camino Santa Fe, and west of Black Mountain Road. The project site is bounded on the south by a mix of light industrial and office park uses, on the east by light industrial development and residential communities, on the west by residential and adjacent mining, and on the north by residential neighborhoods.

The proposed project involves mixed-use development within five neighborhoods on the approximately 293-acre site. Phased over a 20- to 30-year period, *Stone Creek* will develop as integrated land uses tied together by a network of parks, trails, and vehicular and pedestrian circulation as described in the *Stone Creek* Master Plan. Ultimate build-out of the *Stone Creek* project will provide up to 4,445 multi-family residential units; approximately 174,000 square feet of retail commercial space; up to 175 hotel rooms; approximately 200,000 square feet of commercial office space; approximately 135,000 square feet of business park uses; approximately 415,000 square feet of light industrial uses; and approximately 300,000 square feet of high technology uses surrounded by more than 37 acres of relandscaped mined slopes. More than 66 acres of parks and recreational amenities will also be provided, including the restored Carroll Canyon Creek and adjacent corridor. (See Figure 2, *Stone Creek Land Use Plan*.) Implementation of *Stone Creek* will require construction of new infrastructure and facilities, as well as improvements to existing infrastructure and facilities. Improvements will be necessary to the circulation network, drainage facilities, utilities (e.g. water, sewer, etc.), and other infrastructure. In addition, streetscape enhancement and pedestrian elements will occur as part of the overall design for *Stone Creek*.

Currently, *Stone Creek* is the location of an on-going resource extraction operation for the mining and processing of sand and gravel, which operates under an approved Conditional Use Permit and Reclamation Plan (CUP 10-315-2). As part of the proposed project, the CUP termination date will be extended to 20 years following project approval. Final reclamation would likely require an additional 2 to 5 years beyond that. Asphalt and concrete processing plants will continue to operate under the CUP until its termination.

Figure 1
Stone Creek Project Location

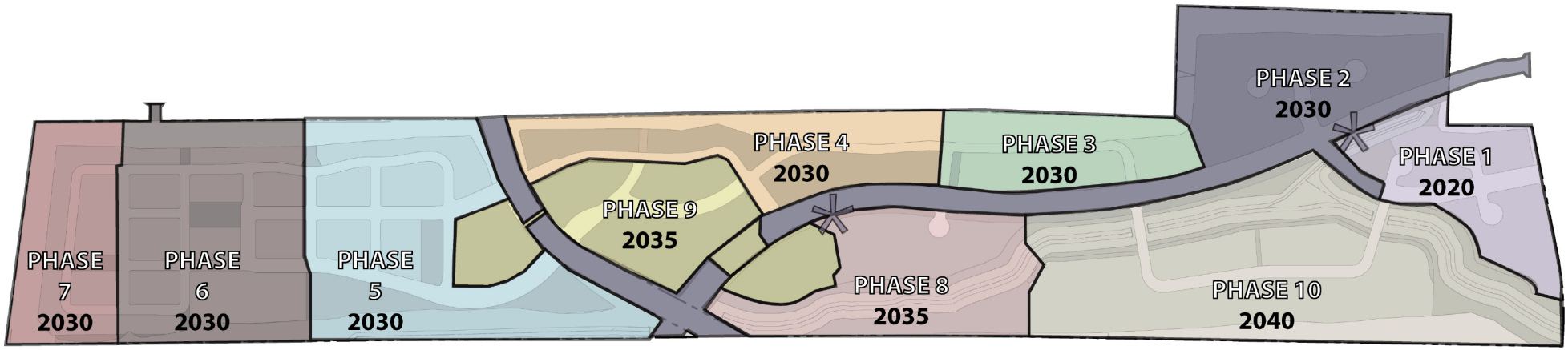
Figure 2
Stone Creek Land Use Plan

As mineral resources become depleted and as incremental reclamation occurs, development will begin in a phased manner. The asphalt and concrete plants will remain in the southeast corner of the project site until the CUP termination date, established as 20 years following project approval. Ideally, phased project development will occur in a counterclockwise manner, commencing with the easternmost neighborhood of Eastside Neighborhood A, and continuing westerly through Eastside Neighborhood B, Parkside Neighborhood, and the westernmost Westside Neighborhood. Development will continue through the central portion of the site with the Village Center, culminating in the eventual development of the Creekside Neighborhood. (See Figure 3, *Stone Creek Phasing Plan*.)

Phase 1 will commence development of *Stone Creek* and will involve the creation of Eastside Neighborhood A and the corresponding approximately 165,000 square feet of light industrial use space, with the potential for auxiliary commercial uses to support employees of the light industrial developments. Public infrastructure improvements will include the completion of Maya Linda Road from Black Mountain Road to Carroll Canyon Road, as well as internal streets required for development of Phase 1. Open space improvements will include the creation of the Carroll Canyon Creek Open Space from the eastern border of *Stone Creek* to the western edge of Phase 1, the Carroll Canyon Creek corridor from the eastern border of *Stone Creek* to Maya Linda Road, and Eastside Park, as well as landscaped slopes on the eastern border of *Stone Creek*, south of Carroll Canyon Road. Additional development includes the reservation of the transit corridor from the eastern edge of *Stone Creek* to the west boundary of Phase 1 and the Eastside transit station. Waste associated with construction of Phase 1 will follow the parameters established in Section 5.0 of this Waste Management Plan. Diversion requirements for the occupancy of this phase of development will be in accordance with Section 6.1.1 of this Waste Management Plan.

Phase 2 of *Stone Creek*'s development will include the construction of Eastside Neighborhood B. Eastside Neighborhood B will develop with approximately 250,000 square feet of light industrial space. Public infrastructure improvements will include the extension of Carroll Canyon Road, from Black Mountain Road to the southern property boundary just west of Camino Ruiz, improvements to Camino Ruiz from the northern property boundary to the southern property boundary, as well as internal streets associated with development within Phase 2. An off-site improvement of the extension of Carroll Canyon Road from Black Mountain Road to Maya Linda Road will also occur during this phase. Open space elements associated with Phase 2 include landscaped slopes along the northern border of *Stone Creek* and the eastern and western edges of Eastside Neighborhood B, the Rim Trail along revegetated slopes within Eastside Neighborhood B, and a trail connection to Rim Trail through Eastside Neighborhood B. Waste associated with construction of Phase 2 will follow the parameters established in Section 5.0 of this Waste Management Plan. Diversion requirements for the occupancy of this phase of development will be in accordance with Section 6.1.1 of this Waste Management Plan.

Figure 3
Stone Creek Phasing Plan



Phase 3 of *Stone Creek*'s development will include the construction of Parkside Neighborhood. Parkside Neighborhood will develop with approximately 135,000 square feet of business park space. Public infrastructure improvements will include the internal streets associated with development within Phase 3. Open space elements associated with Phase 3 include landscaped slopes along the northern border of *Stone Creek* within Parkside Neighborhood, the Rim Trail along revegetated slopes within Parkside Neighborhood, a trail connection to Westonhill, and enhanced trail connection/neighborhood interface through Parkside Neighborhood to Carroll Canyon Road. Waste associated with construction of Phase 3 will follow the parameters established in Section 5.0 of this Waste Management Plan. Diversion requirements for the occupancy of this phase of development will be in accordance with Section 6.1.1 of this Waste Management Plan.

Phase 4 of *Stone Creek*'s development will include the construction of Village Center B and C. Village Center B and C will develop up to 580 multi-family residential units. Public infrastructure improvements will include the internal streets associated with development within Phase 4. Open space elements associated with Phase 4 include landscaped slopes along the northern border of *Stone Creek* within Village Center B and C, the Rim Trail along revegetated slopes within Village Center B and C, and a Class I bike path along slopes within Village Center B and C. Waste associated with construction of Phase 4 will follow the parameters established in Section 5.0 of this Waste Management Plan. Diversion requirements for the occupancy of this phase of development will be in accordance with Section 6.1.2 of this Waste Management Plan.

Phase 5 of *Stone Creek*'s development will create the Westside Neighborhood C, which involves the construction of up to 1,315 multi-family residential units. Public infrastructure improvements associated with this phase of development involve the creation of Westside Neighborhood C's internal street system. Open space improvements include the creation of Westside Gardens, Overlook Terrace, and Westside Terrace Pocket Park; landscaped slopes along the northern border of Westside Neighborhood C; the Rim Trail along the perimeter revegetated slopes of Westside Neighborhood C; and Carroll Canyon Creek Corridor from Camino Ruiz to the boundary of Westside Neighborhood C. Waste associated with construction of Phase 5 will follow the parameters established in Section 5.0 of this Waste Management Plan. Diversion requirements for the occupancy of this phase of development will be in accordance with Section 6.1.2 of this Waste Management Plan.

Phase 6 will develop Westside Neighborhood B. Westside Neighborhood B includes the development of up to 1,285 multi-family residential units and approximately 24,000 square feet of high technology use space. Public infrastructure improvements include internal streets associated with Phase 6. Open space improvements include the creation of Westside Commons, Trailhead Park, landscaped slopes along the northern border of Westside Neighborhood B, Rim Trail along the perimeter revegetated slopes of Westside Neighborhood B, and Carroll Canyon Creek within Westside Neighborhood B from Camino Ruiz to project boundary. Waste associated with construction of Phase 6 will follow the parameters established in Section 5.0 of this Waste Management Plan. Diversion requirements for the occupancy of this phase of development will be in accordance with Sections 6.1.1 and 6.1.2 of this Waste Management Plan.

Phase 7 of *Stone Creek*'s development will create the Westside Neighborhood A, which involves the construction of up to 125 multi-family residential units. Public infrastructure improvements associated with this phase of development involve the creation of Westside Neighborhood A's internal street system. Open space improvements include the creation of Westside Crossing, landscaped slopes along

the northern, western, and southern border of Westside Neighborhood A, and the Rim Trail along the perimeter revegetated slopes of Westside Neighborhood A. Waste associated with construction of Phase 7 will follow the parameters established in Section 5.0 of this Waste Management Plan. Diversion requirements for the occupancy of this phase of development will be in accordance with Section 6.1.2 of this Waste Management Plan.

Phase 8 of *Stone Creek*'s development will create the *Stone Creek* Central Park. Development includes Central Park cul-de-sac, Central Park within the boundaries of Phase 8, the restored/enhanced Carroll Canyon Creek Corridor within Phase 8, the reservation of a transit corridor within Phase 8, and a transit station. Waste associated with construction of Phase 8 will follow the parameters established in Section 5.0 of this Waste Management Plan. Diversion requirements for the occupancy of this phase of development will be in accordance with Section 6.1.1 of this Waste Management Plan.

Phase 9 of *Stone Creek*'s development will create Village Center A, which involves the construction of up to 840 multi-family residential units, up to 175 hotel guest rooms, approximately 150,000 square feet of retail commercial space, and approximately 200,000 square feet of commercial office space. Public infrastructure improvements associated with this phase of development involve the creation of Village Center A's internal street system, a pedestrian overcrossing of Camino Ruiz, and an overcrossing of Carroll Canyon Road. Open space improvements include the creation of the Grand Staircase into Central Park. Waste associated with construction of Phase 9 will follow the parameters established in Section 5.0 of this Waste Management Plan. Diversion requirements for the occupancy of this phase of development will be in accordance with Sections 6.1.1 and 6.1.2 of this Waste Management Plan.

The final phase, Phase 10, of *Stone Creek*'s development will create the Creekside Neighborhood, which involves the construction of up to 300 multi-family residential units and approximately 300,000 square feet of high technology space. Public infrastructure improvements associated with this phase of development involve the creation of Creekside Neighborhood's internal street system and a bridge crossing over Carroll Canyon Creek. Open space improvements include the creation of *Stone Creek* Central Park within Phase 10, a trail connection to Central Park, and the restored/enhanced Carroll Canyon Creek Corridor within Phase 10. Additionally, this phase would include the reservation of a transit corridor within Phase 10. Waste associated with construction of Phase 10 will follow the parameters established in Section 5.0 of this Waste Management Plan. Diversion requirements for the occupancy of this phase of development will be in accordance with Sections 6.1.1 and 6.1.2 of this Waste Management Plan.

As part of reclamation for the CUP, all existing mining facilities and structures will be removed prior to the development occurring in each phase in *Stone Creek*. Therefore, for purposes of this WMP, no demolition will occur as a part of the development phases.

While *Stone Creek* will develop in phases over a period of 20 to 30 years, actual development in each phase is constrained by on-going mining operations. Mining will cease in a portion of the eastern property first, which is anticipated to occur 5 to 10 years following project approvals. The final phase will not occur until at least 2040, as mining of resources continues and the site reclamation work progresses. In order for the western portion of the site to begin development, additional mining and reclamation will take place and the conveyor will need to be dismantled. The last phases of development will occur in the central portion of the site and finally in the southeast. Development in

the final phase (Creekside Neighborhood) will occur after termination of the CUP for operation of asphalt and concrete plants in this area.

This WMP consists of two sections corresponding to the implementation of site development: the *Construction Phase* and the *Occupancy Phase* (post-construction). For both of these phases, this WMP addresses the projected amount of waste that could be generated by the project based on City generation rates and estimates; waste reduction goals; and recommended techniques to achieve the waste reduction goals, such as reducing, reusing, and recycling. At the completion of reclamation activities associated with the on-going mining operations, all facilities would be removed and relocated to other active mining operations. The site is void of permanent structures; as such, the project does not involve a demolition phase. It should also be noted that, due to the lengthy phasing of the project, disposal methods and sites, as well as recycling opportunities, will likely change. Therefore, this WMP includes the following general information known at the time the WMP was prepared:

- Projected waste generation calculations and identification of types of waste materials generated;
- Source separation techniques for waste generated;
- How materials may be re-used on-site;
- Name and location of current recycling, re-use, and landfill facilities where waste will be disposed of if not re-used on-site;
- A "buy recycled" program;
- Measures to be implemented directed at reducing construction debris;
- Method(s) for communicating waste reduction and recycling goals to subcontractors;
- A general time line for construction and development, based on a phased mining, reclamation, and development over a 20- to 30-year period; and
- A list of required progress and inspections by City staff, based on current ordinances.

2.0 BACKGROUND

In 1989, the California Legislature passed State Mandate AB 939: Integrated Waste Management Act, which mandated that all cities reduce waste disposed in landfills from generators within their borders by 50 percent by the year 2000. AB 939 required all local governments to prepare a Source Reduction and Recycling Element, which incorporates waste management policies and programs to achieve the mandated waste reduction. Since 2004, the City has diverted more than 50 percent of its generated waste stream from disposal. Assembly Bill 341 was chaptered in 2011 and sets the new diversion target at 75 percent

The City of San Diego has established a threshold of 40,000 square feet of development as generating sufficient waste (60 tons) to have a potentially cumulative significant impact on solid waste services. According to the City's thresholds, projects that are 1,000,000 square feet or more generating sufficient waste (1,500 tons) have potentially significant direct impacts on solid waste services and facilities. *Stone Creek* as proposed exceeds these thresholds. The purpose of this WMP is to identify measures to reduce these potential impacts to below a level of significance.

Additional local regulation pertaining to solid waste management includes the City of San Diego's Municipal Code Ch.14 Art.2 Div.8: §142.0810, §142.0820, Ch.6 Art.6 Div.7; §66.0706, §66.0709, §66.0710; and Ch.6 Art.6 Div.6; §66.0711, §66.0604, §66.0606. These statues designate refuse and recycling space allocation requirements for on-site refuse and recyclable material storage requirements, diversion of construction and demolition debris regulations, and diversion of recyclable materials generated from residential and commercial facilities. Approval of the *Stone Creek* project is subject to approval of this plan by the ESD.

2.1 Exterior Refuse and Recyclable Material Storage Area Requirements

The *Stone Creek* project will develop in a series of neighborhoods over the next 20 to 30 years. Development will begin with the Eastside Neighborhood, *Stone Creek*'s employment neighborhood comprised of light industrial uses. The Parkside Neighborhood, comprised of business parks uses, will follow. Residential development would begin in the Westside Neighborhood, followed by the mixed-use Village Center, which will provide residential, retail commercial, hotel, and office developments. The final phase in *Stone Creek* will occur within the Creekside Neighborhood, which will provide additional residential development, as well as a high technology center. Because of the variety and mix of uses envisioned for *Stone Creek*, exterior refuse and recyclable material storage areas will differ, as described below.

Table 1 provides the *Minimum Exterior Refuse and Recyclable Material Storage Areas for Multiple Unit Residential Development* in accordance with the City's Land Development Code. Table 2 provides the *Minimum Exterior and Recyclable Material Storage Areas for Commercial and Industrial Development.*

2.2 Exterior Refuse and Recyclable Material Storage Areas for *Stone Creek*

Stone Creek is a master planned, mixed-use development. As such, it will provide an integrated urban development that will include residential, retail commercial, commercial office, hotel, business park, light industrial, and high technology uses. Development within *Stone Creek* will occur in neighborhoods, connected through roadways, trails, and pedestrian and bicycle paths (see Figure 2, *Stone Creek Land Use Plan*, and Figure 3, *Stone Creek Phasing Plan*). *Stone Creek*'s Westside Neighborhood will predominantly feature residential development, with a small amount of neighborhood-serving commercial uses. The Village Center will include residential, retail commercial, commercial office, and hotel uses. The Parkside and Eastside Neighborhoods will provide for business park and light industrial land uses, respectively; and the Creekside Neighborhood will include residential and high technology uses. Table 3, *Minimum Exterior Refuse and Recyclable Material Storage Areas for Multiple Unit Residential Developments within Stone Creek*, and Table 4, *Minimum Exterior and Recyclable Material Storage Areas for Commercial and Industrial Developments within Stone Creek*, show the required amount of refuse and recyclable storage areas *Stone Creek*.

Table 1
Minimum Exterior Refuse and Recyclable Material Storage Areas for Multiple Unit Residential Development

Number of Dwelling Units per Development	Minimum Refuse Storage Area per Development (square feet)	Minimum Recyclable Material Storage Area per Development (square feet)	Total Minimum Storage Area per Development (square feet)
2-6	12	12	24
7-15	24	24	48
16-25	48	48	96
26-50	96	96	192
51-75	144	144	288
76-100	192	192	384
101-125	240	240	480
126-150	288	288	576
151-175	336	336	672
176-200	384	384	768
201+	384 plus 48 square feet for every 25 dwelling units above 201	384 plus 48 square feet for every 25 dwelling units above 201	768 plus 96 square feet for every 25 dwelling units above 201

Source: City of San Diego Municipal Code, Chapter 14, Article 2, Division 8: Refuse and Recyclable Material Storage Regulations, §142.0820, Table 142-08B, effective April 1, 2006.

Table 2
Minimum Exterior Refuse and Recyclable Material Storage Areas for Commercial and Industrial Development

Gross Floor Area per Development (square feet)	Minimum Refuse Storage Area per Development (square feet)	Minimum Recyclable Material Storage Area per Development (square feet)	Total Minimum Storage Area per Development (square feet)
0 – 5,000	12	12	24
5,001 – 10,000	24	24	48
10,001 – 25,0000	48	48	96
25,001 – 50,000	96	96	192
50,001 – 75,000	144	144	288
75,001 – 100,000	192	192	384
101, 000+	192 plus 48 square feet for every 25,000 square feet of building area above 100,001	192 plus 48 square feet for every 25,000 square feet of building area above 100,001	384 plus 96 square feet for every 25,000 square feet of building area above 100,001

Source: City of San Diego Municipal Code, Chapter 14, Article 2, Division 8: Refuse and Recyclable Material Storage Regulations, §142.0830, Table 142-08C, effective January 1, 2000.

3.0 EXISTING CONDITIONS

The approximately 293-acre site is a current mining operation site. Figure 4, *Stone Creek Aerial Photograph*, shows the existing conditions for the *Stone Creek* project site. The proposed project will convert approximately 158 acres of the project site to urban development; approximately 32 acres will be devoted to circulation element roadways and transit reservation; approximately 66 acres will be developed as parks, trails, and open space, and over 37 acres will be revegetated mined slopes.

4.0 PROPOSED CONDITIONS

The proposed development will consist of up to 4,445 multi-family residential units; approximately 174,000 square feet of retail commercial space; up to 175 hotel rooms; approximately 200,000 square feet of commercial office space; approximately 135,000 square feet of business park uses; approximately 415,000 square feet of light industrial uses; and approximately 300,000 square feet of high technology uses surrounded by more than 37 acres of relandscaped mined slopes. More than 66 acres of parks, trails, and open space will also be provided, including the restored Carroll Canyon Creek and adjacent corridor (see Figure 2, *Stone Creek Land Use Plan*). Construction will be completed in a phased manner over 20 to 30 years.

Construction practices will comply with local, state, and federal regulations regarding handling of building materials to ensure waste minimization requirements are met. Based on the *Stone Creek* Vesting Tentative Map, approximately 114.5 acres (39.7 percent) of the site would be graded for development.

5.0 CONSTRUCTION PHASE

Because development of *Stone Creek* is dependent on completion of mining and reclamation, construction for the project will occur over an extended period of time (20 to 30 years). Construction activities would generate packaging materials and unpainted wood, including wood pallets, and other miscellaneous debris. Construction debris would be separated on-site into material-specific containers to facilitate reuse and recycling and to increase the efficiency of waste reclamation. The types of construction waste anticipated to be generated that could be marketable include:

- Inert granule products (asphalt and concrete)
- Wood waste products
- Ferrous metals

In accordance with City WMP requirements, the City's Construction and Demolition Ordinance, the City's current diversion targets, and AB 341, a minimum of 75 percent of construction materials will be diverted. Strategies for material reduction, and reuse would be identified by the contractor prior to the start of work, materials to be recycled would be redirected to appropriate recipients selected from ESD's directory of facilities that recycle construction materials, scrap metal, and yard waste.

To the extent practical, either post-consumer recycled or pre-consumer recycled materials would be used in the construction phase. Recycled content materials reuse waste products that would otherwise be deposited in landfills. Use of local materials supports the local economy and reduces transportation. Use of rapidly renewable materials minimizes natural resource consumption, and use of certified wood improves the stewardship of forests and related ecosystems.

As previously mentioned, the *Stone Creek* project is unique, in that its construction phases will extend over a 20- to 30-year period. The *Stone Creek* project includes a Master Plan, which establishes land uses and provides design guidelines and development standards, Vesting Tentative Map, and Rezones. No construction will occur with approval of the Master Plan and Vesting Tentative Map. Future

development of land uses established by the Master Plan will occur within each of *Stone Creek*'s neighborhoods through the City's Substantial Conformance Review Process Two.

The following are examples of construction waste management strategies that shall be utilized in the design of future projects, as applicable. Because *Stone Creek* is planned to be built out in 2025 to 2040 and beyond, and because each phase of development within *Stone Creek* will have its own unique set of parameters, it is impossible at this time to determine exactly which of the following strategies apply. Actual measures implemented as a part of each future development project will be reviewed by ESD at the preconstruction meeting as required by the project's Mitigation Monitoring and Reporting Program. Accepted measures will then be included in the contractor's construction documents.

- Recycling, salvage, reuse, and disposal options would be determined before each job begins.
- Materials that can be reused would be donated to charities and nonprofit agencies, when practical.
- Advertisements would be placed in local newspapers announcing salvageable and reusable materials for sale or donation.
- Refuse haulers and recycling facilities would be selected based on their responsiveness to the recycling plan, fees, and geographic proximity to the job site.
- Solid waste management coordinator will be responsible for educating contractors and subcontractors regarding waste management plan requirements.
- Recycling areas would be clearly identified with large bilingual signs to ensure contamination rates in bins are below five percent by weight.
- Recycling bins would be placed in areas that would minimize misuse or contamination by employees and the public (location to be approved by ESD staff).
- Reuse building materials, use materials that have recycled content, or use materials that are derived from sustainable or rapidly renewable sources to the extent possible.
- Scheduling time for deconstruction and recycling activities to take place during project construction phase.

5.1 On-Site Preparation

Source separation of construction debris on the project site will facilitate reuse and recycling of materials. The locations of multiple bins or disposal areas and the source separation protocol would be identified on the contractors' construction documents for all future development projects within *Stone Creek*. Three general categories of construction waste that are potentially marketable are inert granule products (asphalt and concrete), wood waste products, and ferrous metals. Reuse of building materials would be utilized to the maximum extent practical. A more clearly defined outline of the recycled material process would be determined with each future development proposal within *Stone Creek*. The implementation of a recycled materials process determined with each development phase will mitigate project impacts. The recycled materials process will be enforced by the general contractor with each phase of development.

Figure 4
Stone Creek Aerial Photograph

5.2 Managing Construction Material

Management of construction material and recycling will adhere to industry standards such that refuse that cannot be reused or recycled is disposed of at appropriate facilities. Provided below is a list of general procedures which would be implemented such that 75 percent of construction waste, in accordance with AB 341 and current City diversion targets for project-specific waste management plans, would be diverted from disposal in landfills in accordance with City requirements.

- ~~Determine~~ Establish recycling, salvage, reuse, and disposal ~~options~~ procedures ~~before the job begins~~based on the requirements presented in this WMP.
- Donate materials that can be reused to charities and nonprofit agencies.
- Choose refuse haulers based on their responsiveness to the projects recycling plan.
- Choose a recycling facility, such as Miramar ~~Landfill~~Recycling Center, based on its fees, geographic proximity to the project site, and diversion rate.
- Solid waste management coordinator will be responsible for educating contractors and subcontractors regarding waste management plan requirements.
- Clearly identify recycling areas with large bilingual signs.
- Place recycling bins in areas that will minimize misuse or contamination by employees and the public.

To facilitate management of construction materials, as individual developments come forward, the developer shall identify one person or agency connected with the proposed development to act as Solid Waste Management Coordinator, whose responsibility it becomes to work with all contractors and subcontractors to ensure material separation and coordinate proper disposal and diversion of waste generated. The Solid Waste Management Coordinator will help to ensure all diversion practices outlined in this Waste Management Plan are upheld and communicate goals to all contractors involved efficiently.

The responsibilities of the Solid Waste Management Coordinator, include, but are not limited to, the following:

- Review the Solid Waste Management Plan including responsibilities of Solid Waste Management Coordinator.
- Work with contractors to estimate quantities of each type of material that will be salvaged, recycled, or disposed of as waste, then assist contractors with documentation.
- Review and update procedures as needed for material separation and verify availability of containers and bins needed to avoid delays.
- Review and update procedures for periodic solid waste collection and transportation to recycling and disposing facilities.

The contractors will perform daily inspections of the construction site to ensure compliance with the requirements of the Waste Management Plan and all other applicable laws and ordinances and report directly to Solid Waste Management Coordinator. Daily inspections will include verifying the

availability and number of dumpsters based on amount of debris being generated, correct labeling of dumpsters, proper sorting and segregation materials, and salvaging of excess materials.
Table 3, *Stone Creek Project Waste Generation – Construction*, is included below to conservatively summarize the types of waste generated, the amount of each waste type diverted, and the overall amount remaining to be disposed of in landfills combined for all phases of the project.

Table 3
Stone Creek Waste Generation – Construction

Material Type	Estimated Waste Quantity (tons)	Handling	Estimated Diversion (tons)	Estimated Disposal (tons)
CONSTRUCTION WASTE				
Asphalt and Concrete	10,043.87	**Vulcan Carroll Canyon Landfill and Recycle Site** 10051 Black Mountain Road San Diego, CA 92126 (100% diversion)	10,043.87	0.00
Brick/Masonry/ Tile	2,869.46	**Vulcan Carroll Canyon Landfill and Recycle Site** 10051 Black Mountain Road San Diego, CA 92126 (100% diversion)	2,869.46	0.00
Cardboard	287.10	**EDCO Station Transfer and Buy Back Center** 8184 Commercial Street La Mesa, CA 91942 (70% diversion)	200.97	86.13
Carpet, Padding/Foam	143.17	**DFS Flooring** 10178 Willow Creek Road San Diego, CA 92131 (100% diversion)	143.17	0.00
Drywall	2,008.17	**EDCO Station Transfer and Buy Back Center** 8184 Commercial Street La Mesa, CA 91942 (70% diversion)	1,405.72	602.45
Landscape Debris	287.10	**Miramar Greenery** 5180 Convoy Street San Diego, CA 92111 (100% diversion)	287.10	0.00
Mixed C&D Debris	8,609.14	**Otay C&D/Inert Debris Processing Facility** 1700 Maxwell Road Chula Vista, CA 91913 (76% diversion)	6,542.95	2,066.19
Roofing Materials	143.17	**LEED Recycling** 8725 Miramar Place San Diego, CA 92121 (100% diversion)	143.17	0.00
Scrap Metal	717.37	**EDCO Station Transfer and Buy Back Center** 8184 Commercial Street La Mesa, CA 91942 (70% diversion)	502.16	215.21
Unpainted Wood & Pallets	3,442.90	**Miramar Greenery** 5180 Convoy Street San Diego, CA 92111 (100% diversion)	3,442.90	0.00
Garbage/Trash	143.17	**Miramar Landfill** 5180 Convoy Street San Diego, CA 92111 (0% diversion)	0.00	143.17
TOTAL	**28,694.62**		**25,581.47**	**3,113.15**

Construction debris will be separated onsite into material-specific containers, corresponding to the materials types in Table 3, to facilitate reuse and recycling and to increase the efficiency of waste reclamation. As shown in Table 3, 89 percent of the construction materials generated are targeted for diversion.

6.0 OCCUPANCY PHASE

While the construction phase for each future development project in *Stone Creek* occurs as a one-time waste generation event with each development, tenant/owner occupancy requires an on-going plan to manage waste disposal to meet the waste reduction goals established by the City and State. Future developments within Stone Creek will comply with the City's Recycling Ordinance.

For the *Stone Creek* project, each dwelling unit will be outfitted with interior refuse and recyclable material storage area pursuant to San Diego Municipal Code §142.0820. All recyclable materials will be delivered to an appropriate recycling facility(s), such as the Miramar Recycling Center, located at 5165 Convoy Street, San Diego, California 92111.

The *Stone Creek* Master Plan has been carefully planned to include a mix of land uses and project features on site that will help to achieve the broad goals of smart growth and sustainable development. In accord with the City's Conservation Element, *Stone Creek* seeks to reduce its "environmental footprint" through an appropriate land use plan that provides a variety of land uses in proximity with one another and connects those land uses in an efficient manner, promoting alternative modes of transportation. Developing the appropriate land use mix and a circulation system that does not solely rely on automobiles are only the beginning of *Stone Creek*'s future as a sustainable development. Future development of individual lots and buildings within *Stone Creek* should also consider opportunities to incorporate sustainable design.

Low Impact Development (LID) principles, guidelines, and best management practices (BMPs) will be utilized during the planning, design, implementation, and maintenance of the public spaces throughout the project. In particular, planting areas within parks, on slopes, and along trails will be designed to incorporate storm water management BMPs to slow, infiltrate, and cleanse storm water as it moves across the landscape. Trails, maintenance access, and other hardscape features within the public realm will be designed of permeable paving materials such as porous concrete, porous asphalt, interlocking pavers, or decomposed granite to promote storm water infiltration and reduce storm water discharges, where appropriate.

Plant material selection will be guided by the macro- and micro-climate characteristics of the project site and surrounding region to encourage long-term sustainability without the excessive use of water, pesticides, and fertilizers. Irrigation of these areas will utilize reclaimed water applied via low precipitation rate spray heads, drip emitters, or other highly efficient systems.

6.1 Implementation

The following two tables express the anticipated refuse and recyclable storage requirements based on Table 142-08C of the City of San Diego Municipal Code. (The figures in these tables assume full build-out of the *Stone Creek* project. If less development occurs, then less solid waste would be generated.)

Table 4
Minimum Exterior Refuse and Recyclable Material Storage Areas for Multiple Unit Residential Developments within Stone Creek

Neighborhood	Number of Dwelling Units	Minimum Refuse Storage Area (square feet)	Minimum Recyclable Material Storage Area (square feet)	Total Minimum Storage Area (square feet)
Westside				
Westside A	125	240	240	480
Westside B	1,285	2,465	2,465	4,931
Westside C	1,315	2,523	2,523	5046
Village Center				
Village Center A	835	1,601	1,601	3,203
Village Center B	285	545	545	1,901
Village Center C	300	574	574	1,148
Creekside				
Creekside A	300	574	574	1,148
TOTAL	**4,445**	**8,523**	**8,523**	**17,046**

Table 5
Minimum Exterior and Recyclable Material Storage Areas for Non-Residential Developments within Stone Creek

Neighborhood	Gross Floor Area	Minimum Refuse Storage Area (square feet)	Minimum Recyclable Material Storage Area (square feet)	Total Minimum Storage Area (square feet)
Westside B				
Commercial	24,000	48	48	96
Village Center A				
Commercial	150,000	288	288	576
Office	200,000	384	384	768
Hotel (175 rooms)	115,000	221	221	442
Parkside				
Business Park	135,000	259	259	518
Eastside (A and B)				
Light Industrial	415,000	797	797	1,594
Creekside B				
High Technology	300,000	576	576	1,152
TOTAL	**1,339,000**	**2,573**	**2,573**	**5,146**

If the project developed at 4,445 multi-family residential units as projected at full build-out, the project would be required to provide a minimum of 8,523 square feet refuse storage area and a minimum of 8,523 square feet recyclable material storage area for a total of approximately 17,046 square feet minimum of exterior refuse and recyclable material storage area for residential developments within *Stone Creek*. Additionally, the project could develop with as much as 1,339,000 square feet of commercial (including retail, office, community, and hotel uses), high technology, and light industrial space. At full build-out, this will require a minimum of 2,573 square feet refuse storage area and a

minimum of 2,573 square feet recyclable material storage area for a total of approximately 5,146 square feet minimum of exterior refuse and recyclable material storage area. For the *Stone Creek* development as a whole, the project would be required to provide a minimum of 11,096 square feet refuse storage area and a minimum of 11,096 square feet recyclable material storage area for a total of approximately 22,192 square feet minimum exterior refuse and recyclable material storage area, if it develops with the maximum development intensity identified in the *Stone Creek* Master Plan.

Table 6, *Refuse and Recyclable Material Storage Areas Requirements for the Stone Creek Project*, specifies the minimum exterior and interior space requirements for refuse and recycling material storage.

Table 6
Refuse and Recyclable Material Storage Areas Requirements for the Stone Creek Project

Use	Intensity	Area Required		
		Refuse Storage Area	Recycle Storage Area	Total Area Required
Residential	4,445 units	8,523 sq. ft.	8,523 sq. ft.	17,046 sq. ft.
Commercial (retail)	174,000 sq. ft.	336 sq. ft.	336 sq. ft.	672 sq. ft.
Commercial (office)	200,000 sq. ft.	384 sq. ft.	384 sq. ft.	768 sq. ft.
Hotel	175 rooms	221 sq. ft.	221 sq. ft.	442 sq. ft.
Business Park	135,000 sq. ft.	259 sq. ft.	259 sq. ft.	518 sq. ft.
Light Industrial	415,000 sq. ft.	797 sq. ft.	797 sq. ft.	1,594 sq. ft.
High Technology	300,000 sq. ft.	576 sq. ft.	576 sq. ft.	1,152 sq. ft.

As shown in Table 7, *Estimated Solid Waste Generation from the Stone Creek Project – Occupancy Phase*, during occupancy, the expected generated waste per year from the *Stone Creek* project when fully occupied would be approximately 9,911 tons.

Table 7
Estimated Solid Waste Generation from the Stone Creek Project – Occupancy Phase

Use	Intensity	Waste Generation Rate	Estimated Waste Generated (tons/year)
Residential	4,445 units	1.2 tons/year/unit	5,334
Commercial – General Retail	174,000 sq. ft.	0.0028 tons/year/sq. ft.	487
Commercial - Office	200,000 sq. ft.	0.0017/tons/year/sq. ft.	340
Hotel	175 rooms	0.0045 tons/year/sq. ft.	518
Business Park	135,000 sq. ft.	0.0017 tons/year/sq. ft.	229
Light Industrial	415,000 sq. ft.	0.0042 tons/year/sq. ft.	1,743
High Technology	300,000 sq. ft.	0.0042 tons/year/sq. ft.	1,260
		TOTAL	**9,911**

6.1.1 Recycling Requirements for Non-Residential Facilities

On-site recycling services shall be provided to all occupants of non-residential facilities within Stone Creek. Occupants of non-residential facilities within *Stone Creek* that receive solid waste collection service shall participate in a recycling program by separating recyclable materials from other solid waste and depositing the recyclable materials in the recycling container provided for the occupants. Recycling services are required by Section 66.0707 of the City of San Diego Land Development Code. Based on current requirements, these services shall include the following:

- Continuous assessment of new technologies for recycling, composting, cogeneration, and disposal to maximize efficient use of resources and environmental protection;
- Collection of recyclable materials as frequently as necessary to meet demand;
- Collection of plastic bottles and jars, paper, newspaper, metal containers, cardboard, and glass containers;
- Collection of other recyclable materials for which markets exist, such as scrap metal, wood pallets
- Collection of food waste for recycling by composting, where available;
- Utilization of recycling receptacles or containers which comply with the standards in the Container and Signage Guidelines established by the City of San Diego Environmental Services Department;
- Designated recycling collection and storage areas; and
- Signage on all recycling receptacles, containers, chutes, and/or enclosures which complies with the standards described in the Container and Signage Guidelines established by the City of San Diego Environmental Services Department

For non-residential facilities within *Stone Creek* (as required by Section 66.0707 of the City of San Diego Land Development Code), the building management or other designated personnel shall ensure that occupants are educated about the recycling services as follows:

- Information, including the types of recyclable materials accepted, the location of recycling containers, and the occupants responsibility to recycle shall be distributed to all occupants annually;
- All new occupants shall be given information and instructions upon occupancy; and
- All occupants shall be given information and instructions upon any change in recycling service to the commercial facility.

Additionally, measures for reducing waste of non-residential facilities include contract stipulations and/or tenant programs. The owner, building manager, or other designated personnel shall consider the following:

- Require vendors to use reusable and/or recyclable food containers/flatware;
- Have vendors work with suppliers to reduce packaging materials;
- Choose preferred products with a high level of post-consumer content;
- Set printers to double-sided;
- Reduce electronic waste;
- Use storm drain filter inserts to collect litter;
- Set a 50-percent food waste diversion goal; and/or
- Other implementation measures.

6.1.2 Recycling Requirements for Residential Facilities

Multi-family residential developments within *Stone Creek* shall provide on-site recycling services and education to occupants. Recycling services are required by Section 66.0706 of the City of San Diego

Land Development Code. Based on current requirements, these services shall include the following:

- Continuous assessment of new technologies for recycling, composting, cogeneration, and disposal to maximize efficient use of resources and environmental protection;
- Collection of recyclable materials at least two times per month;
- Collection of plastic bottles and jars, paper, newspaper, metal containers, cardboard, and glass containers;
- Utilization of recycling receptacles which comply with the standards in the Container and Signage Guidelines established by the City of San Diego Environmental Services Department;
- Designated recycling collection and storage areas; and
- Signage on all recycling receptacles, containers, chutes, and/or enclosures which complies with the standards described in the Container and Signage Guidelines established by the City of San Diego Environmental Services Department.

For multi-family residential developments within *Stone Creek* (as required by Section 66.0706 of the City of San Diego Land Development Code), the building management or other responsible personnel shall ensure that occupants are educated about the recycling services as follows:

- Information, including the types of recyclable materials accepted, the location of recycling containers, and the occupants responsibility to recycle shall be distributed to all occupants annually;
- All new occupants shall be given information and instructions upon occupancy; and
- All occupants shall be given information and instructions upon any change in recycling service to the facility.

6.2 Landscaping and Green Waste Recycling

Plant material selection will be guided by the macro-and micro-climate characteristics of the project site and surrounding region to encourage long-term sustainability without the excessive use of water pesticides and fertilizers. Irrigation of these areas, where practical, will utilize reclaimed water applied via low precipitation rate spray heads, drip emitters, or other highly efficient systems. Landscape maintenance would include the collection of green waste and recycling of green waste at recycling centers that accept green waste. This will help further reduce the waste generated by developments within *Stone Creek* during the occupancy phases.

7.0 CONCLUSION

The City of San Diego Development Services Department is requiring that this WMP be prepared and submitted to the City of San Diego's ESD. This WMP will be implemented to the fullest degree of accuracy and efficiency. Additionally, the project will be required to adhere to City ordinances, including the *Construction and Demolition Debris Diversion Deposit Program*, the City's *Recycling Ordinance*, and the *Refuse and Recyclable Materials Storages Regulations*. The WMP plan for the *Stone Creek* project is designed to implement and adhere to all city ordnance and regulations with regards to waste management. Such adherence would ensure that impacts are mitigated to below a level of significance.

In accordance with this WMP, ESD staff shall attend pre-construction meeting for construction. Project proponent shall schedule the meeting to ensure ESD staff attendance. ESD representatives would verify proper sorting and waste bin signage and use during construction.

7.1 Construction Materials Management

Construction materials management measures are discussed in Section 5.0, *Construction Phase*. They are reprinted below to assist the Waste Management Coordinator.

- Accurately forecast waste materials.
- Properly sort waste materials into bins for disposal and recycling, which will be marked with specific signage labeling which material is to be deposited in which bin. Labeling shall be bilingual. ESD staff will approve location of bins.
- Transport waste materials to facilities with the best diversion rates, tip fees, and/or prices paid for commodities.
- General contractor and Waste Management Coordinator will determine recycling, reuse, and disposal options before the job begins.
- Donate materials that can be reused to charities and nonprofit agencies.
- Choose refuse haulers based on their responsiveness to the project's recycling plan.
- Choose recycling facilities from the City of San Diego's current *Certified Construction & Demolition Recycling Facility Directory* based on diversion rate and fees at the time of project construction, and geographic proximity to the project site.
- Solid waste management coordinator will be responsible for educating contractors and subcontractors regarding waste management plan requirements.
- Clearly identify recycling areas with large signs and provide material-specific bins for necessary segregation.
- Place recycling bins in areas that will minimize misuse or contamination by employees and the public.
- Post-consumer products shall be employed in the design and construction of the new facilities with the goal of achieving 5 percent of post-consumer content. Examples include using green waste as mulch and using products manufactured with post-consumer content. Receipts demonstrating post-consumer content will provided to ESD staff at precons.
- Contractors shall include the anticipated source and quantity of post-consumer products proposed for reuse or purchase in their project bid.
- Minimize bin contamination to one percent by weight.

7.2 Operational Waste Materials Management

On-site recycling and waste management measures are discussed in Section 6.1, *Implementation*. They are reprinted below to assist application.

- Regular inspection to ensure there shall be no more than one percent by weight contamination in recycling bins.
- Collection of recyclable materials as frequently as necessary to meet demand.
- Collection of plastic bottles and jars, paper, newspaper, metal containers, cardboard, and glass

containers.

- Collection of other recyclable materials for which markets exist, such as scrap metal, wood pallets.
- Collection of food waste for recycling by composting, where available. (The future hotel operator(s) will meet with representatives from ESD to ensure that their educational materials and haulers can comply with the requirements for this service).
- Utilization of recycling receptacles or containers which comply with the standards in the Container and Signage Guidelines established by the City of San Diego Environmental Services Department.
- Designated recycling collection and storage areas.
- Signage on all recycling receptacles, containers, and/or enclosures which complies with the standards described in the Container and Signage Guidelines established by the City of San Diego Environmental Services Department.
- Minimize bin contamination to one percent by weight.