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INITIAL ENVIRONMENTAL STUDY

MERCED SUBBASIN GROUNDWATER SUSTAINABILITY AGENCY Sandy Mush Mutual Water Company Reservoir Storage Project

May 3, 2023

A. BACKGROUND

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Project Title:	Sandy Mush Mutual Water Company Reservoir Storage Project
Project Location:	West of Highway 59, between Dickenson Ferry and McNamara roads in Merced
	County, California
Assessor Parcel	065-110-032
No.(s):	
Project Sponsor's	Sandy Mush Mutual Water Company
Name and Address:	3341 M Street
	Merced Ca 95340
General Plan	
Designation:	Agriculture (Merced County)
Zoning Designation:	A-1 (General Agricultural Zone)
Project Description:	The Project will build a storage reservoir on approximately 30-acres of land that is
	currently farmed in dairy feed crops. The reservoir will store up to 750 AFY of
	flood flows diverted from existing diversions on Mariposa and Owens Creeks.
	The stored water we be used for Flood-MAR and direct irrigation and benefit
	approximately 2,100-acres of productive farmland. The water right and diversion
	facilities are existing and there will be no disturbance to the Creeks or riparian
	habitat.
Surrounding Land	
-	The reservoir site is surrounded by cultivated agriculture.
Uses:	The reservoir site is surrounded by cultivated agriculture.

B. PROJECT DESCRIPTION:

The Project will build a storage reservoir on approximately 30-acres of land that is currently farmed in dairy feed crops. *See* Figure 1. The reservoir will store up to 750 acre feet annually (AFA) of flood flows diverted from existing irrigation diversions on Mariposa and Owens Creeks and store it for later use to meet crop demand irrigation. The reservoir will tie into existing pipelines, thus not creating any new points of diversions or other disturbances in the Creek or on the surrounding property. The stored water we be used for Flood-MAR and direct irrigation and benefit approximately 2,100-acres of productive farmland. The water right and diversion facilities are existing, and there will be no disturbance to the Creeks or riparian habitat. The reservoir design will necessitate the construction of levees, control structures, and tie-ins to the existing pipeline and pumping facilities to divert the flow into the reservoirs, and to allow water to be re-diverted, as required, back into the existing irrigation delivery pipelines.

It is estimated the reservoir would be filled three times per year for an estimated yield of 750 AFA. Project would permanently fallow 30-acres of productive farmland that has a crop demand of 150 AFA. The total project yield is 900 AFA. Decreasing flood risk through reducing runoff

rate and volume directly aligns with the Merced Stormwater Resources Plan (SWRP) objectives to address flood risk while augmenting local water supply. Additionally, the benefit aligns with the Merced Integrated Regional Water Management Plan (IRWMP) objectives to "manage flood flows and stormwater runoff (including those caused by climate change) for public safety, water supply, recharge, and natural resource management." The project Component will reduce flood risk at Highway 59 by reducing flood volume in Mariposa Creek and using the supplies for groundwater recharge in the El Nido area to augment local supply. The Project is partially funded by Prop. 68 and Prop. 1 grants.

Project Elements

- *Flood Storage Reservoir*: The proposed project includes the construction of one reservoir that will collect flood flows from Mariposa and Owens Creeks. The reservoir will occupy approximately 30 acres and shall have an estimated capacity of 750 acre feet. The reservoir will be operated automatically; allowing inflow and discharge according to system demand through a series of pump stations and valves.
- *Construction Elements*: Reservoir construction will consist of excavation of material and the compaction of earthen embankment for the construction of reservoir levees. Reinforced concrete inlet/outlet structures (pre-cast or cast-in-place), pump stations, and flow control structures will be placed to control the flow into and out of the reservoirs.

Identification of Environmental Effects

An environmental checklist was utilized as a guideline to evaluate the environmental impact of the proposed Project. The checklist also contains explanations of all the "Potentially Significant Impact," "Less Than Significant with Mitigation Incorporated," "Less Than Significant Impact," and "No Impact" responses provided in the checklist.

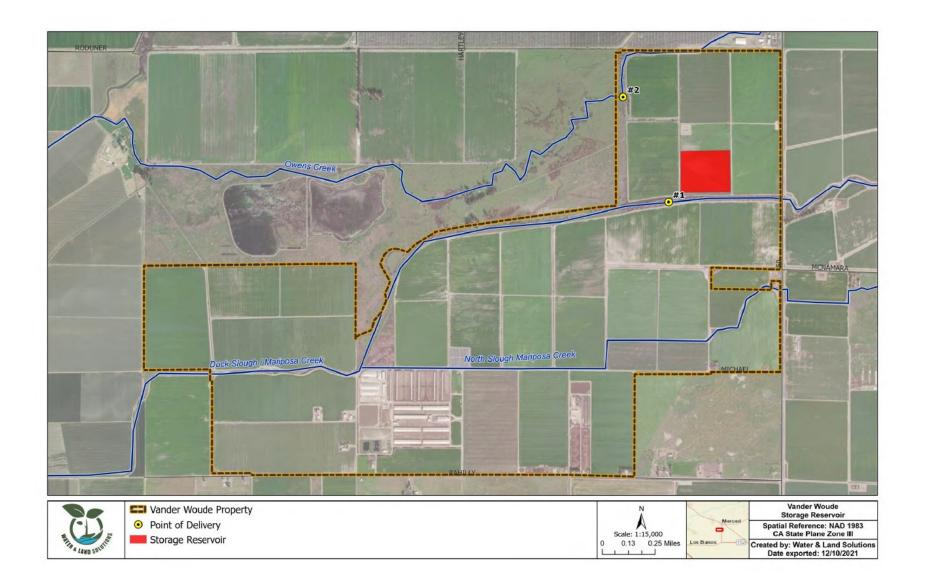


Figure 1

Merced Subbasin Groundwater Sustainability Agency Sandy Mush Mutual Water Company Reservoir Storage Project CEQA Initial Study

C: ADDITIONAL DATA:

Site Description

The proposed project is in Merced County West of Highway 59, between Dickenson Ferry and McNamara roads in Merced County, California. The reservoir will be connected to existing diversion facilities in Mariposa and Owens Creek, and will discharge into existing irrigation facilities on the surrounding properties.

The project region ranges in elevation from 90' to approximately 70' above mean sea level, and slopes uniformly to the northeast, towards the San Joaquin River.

The climate for the area is typical for the San Joaquin Valley: hot, dry summers, mild spring and fall, and cool winters. Average annual precipitation is approximately 10 inches, most of which falls between November and March.

Water Source

Mariposa Creek

Mariposa Creek is a creek that has its source in Mariposa County, California. It flows through the town of Mariposa then southwest through the Sierra foothills, into and across the San Joaquin Valley in Merced County, and empties the sloughs of the San Joaquin River south of the city of Merced.

Owens Creek

Owens Creek also originates in Mariposa County, flows west through central Merced County until it reaches its confluence at the East Side Canal Bypass of the San Joaquin River.

Both Mariposa Creek and Owens creek have flood control dams built in the 1950's, and are part of a group of four dams called the Merced Stream Group. The dams were designed to control foothill and mountain drainage and have ungated outlets, meaning flood control operations are automatic. During a flooding event, controlled or modified releases aren't possible - when these dams reach their maximum capacity they start using their bypass channel to release more water and keep the dams intact.

D. MITIGATION

Based on the attached Initial Environmental Study, the proposed Project poses no significant effect on the environment. Therefore, there is no need to require mitigation measures as a result of this project.

E. ENVIRONMENTAL CHECKLIST

Issues:		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I.	AESTHETICS: Would the project:				
a)	Have a substantial adverse effect on a scenic vista?				\boxtimes
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?				\boxtimes
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				\boxtimes

Discussion: The proposed project would not adversely affect the regional character of the surrounding area which is rural and underdeveloped nor alter its scenic quality. The terrain is flat and the foreground/middle ground views (3-5 miles) are of irrigated agriculture. The proposed reservoir will be near or slightly above natural grade and be visible, however their features will be compatible with the existing surroundings.

II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of conservation as an optional model to use in assessing impacts on agriculture and farmland.

Issues:		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would t	he project:		0		
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?			\boxtimes	

c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use?

Discussion:

a) The proposed project would convert approximately 30 acres of existing agricultural land into a agricultural water storage reservoir. The reservoir will improve irrigation water supply flexibility and support local agricultural practices. This is not a significant impact.

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b) The land at the proposed project site is presently under a Williamson Act Contract. The proposed project is compatible with and/or enhances land within the agricultural preserve pursuant to Government Code section 51293(d)(3) because the improvements to be constructed on the property are for the primary benefit of the lands within the preserve. The proposed project will not conflict with a Williamson Act Contract, and will actually enhance the surrounding Williamson Act lands.

c) The proposed project will function as a water management project providing a supplemental water supply for agricultural purposes and is consistent with agricultural land use.

III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Issues:		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would t	he project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?				\boxtimes
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			\boxtimes	
c)	Result in a cumulatively considerable net Increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				
d)	Expose sensitive receptors to substantial pollutant concentrations?				\boxtimes
e)	Create objectionable odors affecting a substantial number of people?				\boxtimes

a) Execution of the proposed project will not obstruct the implementation of any applicable air quality plan.

b) During construction of the proposed reservoir there may be a local increase in dust emissions. Best Management Practices will be incorporated in the work for graded and excavated areas to keep this from being a significant impact.

- c) Following construction of the proposed project, there will be no net increase of any criteria pollutants.
- d) There will be no exposure to any sensitive receptors of substantial pollutant concentrations.
- e) Implementation of the proposed project will not create any objectionable odors.

IV. BIOLOGICAL RESOURCES:

Mitigation	Impact	
8		

e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		\boxtimes
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat		

conservation plan?

a) The proposed project will not have an adverse effect on any candidate sensitive or special status species.

b) There is no native or riparian habitat on the property. All land within the proposed project is farmland that has been worked regularly.

- c) The project site contains no wetlands.
- d) The proposed project will not interfere with the migratory pattern of any species.
- e) The proposed project does not conflict with any local policies or ordinances.
- f) The proposed project does not conflict with any conservation plans.

CULTURAL RESOURCES: V.

Issues:

Issues: Would th	ne project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a)	Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?				\boxtimes
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?				\boxtimes
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				\boxtimes
d)	Disturb any human remains, including those interred outside of formal cemeteries?				\boxtimes

There are no known historical, cultural, or paleontological resources within the project region. Given the long history of agricultural use within the proposed project area, it is unlikely that any of the listed resources exist.

VI. GEOLOGY AND SOILS:

Issues:			Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the second	he proj	ect:				
a)	subst	ose people or structures to potential tantial adverse effects, including the of loss, injury, or death involving:				
	i)	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?				
	ii)	Strong seismic ground shaking?				\boxtimes
	iii)	Seismic-related ground failure, including liquefaction?				\boxtimes
	iv)	Landslides?				\boxtimes
b)		It in substantial soil erosion or the of topsoil?				\boxtimes
c)	unsta as a i resul	ocated on a geologic unit or soil that is able, or that would become unstable result of the project, and potentially it in on- or off-site landslide, lateral ading, subsidence, liquefaction or collapse?				
d)	Tabl (199	ocated on expansive soil, as defined in e 18-1-B of the Uniform Building Code 4), creating substantial risks to life operty?				
e)	supp	e soils incapable of adequately orting the use of septic tanks ternative waste water disposal				
Merced S	ubbasi	n Groundwater Sustainability Agency				

systems where sewers are not available for the disposal of waste water?

Discussion:

No residential, commercial, or industrial structures or support facilities for such structures are to be constructed as part of the proposed project. Existing and proposed slopes and soil types are not of a condition that would create a soil erosion hazard.

VII. HAZARDS AND HAZARDOUS MATERIALS:

Issues:		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would the	he project:		miguton		
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				

g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?		
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?		

The proposed project will not make use of any hazardous materials during construction nor be used for the disposal of hazardous materials and is not located near any airport, airstrip, wildland or other hazardous site.

VIII. HYDROLOGY AND WATER QUALITY

Issues:		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would th	e project:		0		
a)	Violate any water quality standards or waste discharge requirements?				\boxtimes
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				

e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?		
f)	Otherwise substantially degrade water quality?		\boxtimes
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?		
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?		\boxtimes
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?		
j)	Inundation by seiche, tsunami, or mudflow?		\boxtimes

- a) The intent of the proposed project is to capture stormwater for flood benefits, recharge the water and utilize the water for agricultural irrigation.
- b) The proposed project may potentially increase recharge to the local groundwater aquifer.
- c) No alterations of the existing drainage pattern will occur.
- d) No alteration of the existing drainage pattern will occur.
- e) The proposed project will not contribute to stormwater runoff.
- f) The project is being proposed as a mean to improve flood control, increase groundwater recharge, and decrease the use of groundwater for irrigation. There will be no discharge of water into natural watercourses.
- g) No housing is proposed as part of this project.
- h) No structures are proposed as part of this project.
- i) The proposed project would not increase risk to listed hazards.

IX. LAND USE AND PLANNING:

Issues		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would	the project:		0		
a)	Physically divide an established community?				\boxtimes
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?				\boxtimes

Discussion:

The proposed project is not part of any conservation plans and would not physically divide a community.

X. MINERAL RESOURCES:

Issues	:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would	the project:				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				\boxtimes
b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				

Discussion:

No know mineral resources will be lost due to the proposed project.

XI. NOISE:

Issues:		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would	the project result in:				
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				\boxtimes
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				\boxtimes
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				

Discussion:

Construction of the proposed reservoir may result in noise levels normally associated with the operation of construction equipment. However, these levels will not be significantly different than those associated with the operation of agricultural equipment.

XII. POPULATION AND HOUSING:

Issues		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a)	the project: Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				

Discussion:

The proposed project will have no impact on population or housing.

XIII. PUBLIC SERVICES

Issues:		Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a)	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
	Fire protection?				\boxtimes
	Police protection?				\boxtimes
	Schools?				\boxtimes

Parks?		\boxtimes
Other public facilities?		\boxtimes

The proposed project will not result in new residents, industrial/commercial facilities, or increase the need for any public facilities or services.

XIV. RECREATION

Issues:

- a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Significant with Significant No Impact Impact Mitigation Impact e use of Impact Impact gional parks Impact Impact such that Impact Impact ion of the Impact Impact elerated? Impact Impact wational Impact Impact uction or Impact Impact

Potentially

Less Than

Significant

Less Than

Discussion:

The proposed project would not include or increase the use or deterioration of a recreational facility.

XV. TRANSPORTATION/TRAFFIC:

Issues : Would	the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a)	Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				
b)	Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				

c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?		
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?		
e)	Result in inadequate emergency access?		\boxtimes
f)	Result in inadequate parking capacity?		\boxtimes
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?		

The proposed project would not result in an increase in traffic or affect transportation facilities.

XVI. UTILITIES AND SERVICE SYSTEM:

Issues	:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Would	the project:				
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				\boxtimes
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				

e)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?		
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?		
g)	Comply with federal, state, and local statutes and regulations related to solid waste?		\boxtimes

The proposed project would not require the construction of new conveyance or treatment facilities. Sources of water for the project are solely flood flows. No additional growth in population or employment is associated to the project, so no additional demand on local landfills is expected.

XVII MANDATORY FINDINGS OF SIGNIFICANCE

Issues:

- a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?
- b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effec of probable future projects)?

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
				\boxtimes
				\boxtimes
fects				

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Discussion:

- a) The proposed project will not adversely affect any of the listed resources.
- b) No cumulative adverse impacts will result from the proposed project's incremental impacts.
- c) The proposed project should not have any adverse effects on human beings.

LIST OF PREPARERS

The persons who have participated in the preparation of this initial environmental study are as follows:

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