5.0 Alternatives Analysis

The California Environmental Quality Act (CEQA), Section 15126.6, requires an Environmental Impact Report (EIR) to describe a reasonable range of alternatives to a project or to the location of a project which could feasibly attain its basic objectives and evaluate the comparative merits of the alternatives. This section discusses a range of alternatives to the proposed Project, including the "No Project Alternative." Criteria used to evaluate the range of alternatives and remove certain alternatives from further consideration are addressed. State CEQA Guidelines Section 15126.6 provides direction for the discussion of alternatives to the proposed Project. This section requires:

A description of "...a range of reasonable alternatives to the project, or to the location of a project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." [15126.6(a)]

A setting forth of alternatives that "...shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project." [15126.6(f)]

A discussion of the "No Project" alternative, and "...If the environmentally superior alternative is the "No Project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives" [15126.6(e)(2)], even if the proposed project is the next environmentally preferable option.

A discussion and analysis of alternative locations "…that would substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR." [15126.6(f)(2)(B)]. An alternative location is not feasible for this project, as site remediation is a major project activity.

This document has used an alternative screening analysis to select the alternatives evaluated in detail in the EIR. The alternative screening analysis provides the detailed explanation of why some of the alternatives were rejected from further analysis and assures that only the environmentally preferred alternatives are evaluated and compared in the EIR.

This screening methodology also uses the *"rule of reason"* approach to alternatives as discussed in State CEQA Guidelines (Section 15126.6(f)). The rule of reason approach has been defined to require that EIRs address a range of feasible alternatives that have the potential to diminish or avoid adverse environmental impacts. The State CEQA Guidelines state:

The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effect of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. (Section 15126.6(f))

In defining feasibility of alternatives the State CEQA Guidelines state:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site. (Section 15126.6(f)(1))

If an alternative was found to be technically infeasible, then it was dropped from further consideration. This was the primary feasibility factor that was used to eliminate an alternative without further screening analysis. In addition, CEQA states that alternatives should "…*attain most of the basic objectives of the project* ..." (Section 15126.6(a)). If an alternative was found to not obtain the basic objective, then it was also eliminated.

The use of a screening analysis for the alternatives ensures that the full spectrum of environmental concerns is adequately represented, and that a reasonable choice of alternatives is selected for evaluation in the EIR. The screening criteria are discussed in the Alternatives Screening Analysis section.

Given the CEQA mandates listed above, the remainder of this chapter covers: (1) a brief description of a range of reasonable alternatives to the proposed Project; (2) a screening analysis that summarizes and compares the environmental effects of each alternative; (3) an environmental analysis of the alternatives that were selected for further consideration in the EIR; and (4) a discussion of the environmentally superior alternative.

5.1 Description of Alternatives

The screening analysis considered a variety of alternatives to both the remediation and development portions of the Project, as well as a number of transportation alternatives that addressed road configurations. The alternatives have been divided into five different groups, each containing individual specific alternatives, which are:

- No Project Alternative
- Remediation Alternatives
  - Mass Excavation
  - Replace Remedial Caps with Excavation
  - Institutional Controls and Long-Term Monitoring Only
- Development Alternatives
  - Open Space
  - Residential Development
  - Development Consistent with AASP
  - Development Consistent with County General Plan
  - Reduced City Development Plan

- Reduced County Development Plan

- Transportation Alternatives
  - Unocal Collector Road
  - Prado Road Extension

- Other County Development Alternatives
  - City Water
  - City Sewer

The following sections summarize alternatives within each of these groups.

5.1.1 No Project Alternative

CEQA requires that the specific alternative of the "No Project" be evaluated along with its impacts as part of the EIR (State CEQA Guidelines Section 15126.6(e) (1)). For projects that are other than a land use or regulatory plan, the No Project alternative is the circumstances under which the project does not proceed. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal for another project, this No Project consequence should be discussed (State CEQA Guidelines Section 15126.6(e)(3)(B)). The State CEQA Guidelines go on to say that the Lead Agency should analyze the impacts of the No Project Alternative by projecting what would reasonably be expected to occur in the foreseeable future if the proposed Project was not approved (Guidelines Section 15126.6(e)(3)(C)).

The Applicant's proposed Project is to conduct remediation of the Project Site consistent with the proposed Remedial Action Plan (RAP) that has been submitted to the Regional Water Quality Control Board (RWQCB), and then to develop the portions of the Project Site with a mix of commercial and business park development. With the No Project Alternative, the development of the site would not occur, and the Project Site would remain undeveloped. However, it is likely that the RWQCB and/or CDFW would still require some level of remediation of the site even with no development to assure protection of human health and ecological receptors.

For the purposes of the EIR, it has been assumed that the remediation and restoration of the Project Site under the No Project Alternative would be similar to the proposed Project. The major change would be that the remediation portion of the Project would not include the construction of the rough pads for the proposed development. Instead, the areas that are proposed for development would be returned to their natural grade and revegetated. None of the proposed infrastructure improvements associated with roads would occur as part of the No Project Alternative. Only the storm water management improvements needed to support the remediation and restoration effort would be constructed on-site. The reader is referred to Section 2.3 of the EIR for a detailed description of the remediation and restoration activities that would occur under the No Project Alternative.

Table 5-1 provides an estimate of the area grading and earthwork quantities associated with the remediation for the No Project Alternative. These are essentially the same numbers as for the proposed Project, but with a reduction the overall amount of fill needed.

Table 5-1 Area Grading and Earthwork Quantities – No Project Alternative

	Grading Area (acres)	Work Area (acres)	Estimated Affected Soil (cubic yards)	Common Fill (cubic yards)	Structural Fill (cubic yards)	Gravel (cubic yards)	Topsoil (cubic yards)
OU #1- Northwest Area	6.4	6.4	-	41,400		-	-
OU #2 -Reservoir 5	7.8	10.4	15,300	12,500	-	20,100	12,600
OU #2 -Reservoir 7	6.8	8.0	11,000	24,500	-	39,000	11,000
OU #3- Reservoir 4	52.6	52.6	-	100,000		-	29,000
OU #4- North Marsh Area	13.3	15.6	75,300	53,800	-	-	21,500
OU #4- Reservoir 3	6.9	13.3	26,700	5,100	-	10,500	11,100
OU #4 -Remaining Petroleum Expressions	5.9	3.6	28,700	19,200	-	-	9,500
OU #4 -Arsenic	1.0	1.3	2,675	3,300			1,650
Access Roads	4.7	4.7				3,800	
Nursery	2.3	2.3				4,300	
Contactor Staging Area	4	4				4,300	
Total	**123.8**	**134.3**	**159,675[a]**	**259,800**		**82,000**	**96,350**
With 25 percent contingency			**196,250**				

a. The 2,675 cubic yards from OU #4, Arsenic will be placed under caps onsite, leaving 157,000 cubic yard of NHIS to be hauled offsite. The Applicant has requested a 25% contingency be added to this offsite hauling number to account for the uncertainties associated with estimating impacted soil volumes for remediation projects. This would increase the number to 196,250 cubic yards.

b. No structural fill is included in the No Project Alternative since no development would occur under this alternative.

c. Estimated volumes were calculated based on what is assumed to be a minimum required remediation effort at the site as was determined in the Feasibility Study (2007).

d. Estimated affected soil is assumed to be approximately 80 percent of the total soil excavated for all individual locations with the exception of arsenic impacted areas in OU #4 which is assumed to be 100 percent affected.

Note: Under the No Project Alternative the amount of borrow material would be reduced compared to the proposed Project to account for the reduction in the amount of structural fill needed.

The need for structural fill would be eliminated since the rough pads for the development would not be constructed. The amount of common fill would increase to account for a portion of the loss of structural fill. Use of material from the Flower Mound would still be needed as part of remediation as common fill for the excavations. With the No Project Alternative no backfill material would need to be imported to the site.

Under the No Project Alternative, none of the proposed improvements to public roads (Tank Farm Road or Santa Fe Road) would occur. Other regional development-related improvements would not occur with the exception of storm water management improvements needed to support the remediation and restoration effort. In addition, none of the airport safety improvements such as grading work for Reservoir 2 or reserve areas would occur. Without development, the Project Site would not be available for public access.

5.1.2 Remediation/Restoration Alternatives

Petroleum released as a result of the 1926 fire, and prior and subsequent Project Site operations have affected the soil and groundwater underlying the Project Site. The Applicant, along with its predecessors, conducted several investigations over the course of nearly two decades to study the soil, groundwater, and surface water conditions at the Project Site to assess the nature and distribution of hydrocarbons in the soil and groundwater.

The Applicant's characterization of the contamination has included, in addition to their identification and delineation, an evaluation of its importance relative to human and ecological health and the need for its remediation. In order to validate the characterization process, the Applicant entered into two cooperative programs intended to foster regulatory participation and third-party expert review: the Remediation Technology Panel (RTP) and the Surface Evaluation, Remediation, and Restoration Team (SERRT).

The first of these collaborative processes, the RTP, was established through a cooperative agreement between the Applicant and the RWQCB. The RTP consisted of three experts drawn from academia with expertise in the characterization and remediation of petroleum-affected sites, whose purview focused on soil- and groundwater-related issues. They identified data gaps within the existing site characterization, guided and reviewed subsequent characterization activities, and published a report summarizing their consensus understanding of subsurface issues at the Project Site (RTP 2006).

The second of the cooperative efforts, the SERRT, was established in 2002 at the suggestion of staff at the RWQCB. This action was suggested in recognition of findings of studies which detailed the extent of sensitive resources on the Project Site, and the subsequent desire to consider a risk-based remediation program for the site. As part of the SERRT process the Applicant, regulatory agencies, and local municipalities have agreed on the risk assessment methodology, reviewed data, evaluated assessments, identified data gaps, established the risk associated with a given contamination source, and determined the extent of the remediation required for this Project Site.

The SERRT formed two subgroups, the Human Health Risk Working Group (HHRWG) and the Ecological Risk Working Group (ERWG). Both groups included the Applicant, its

representatives and consultants, and the RWQCB. In addition, the HHRWG included representatives from the California Office of Environmental Health Hazard Assessment, the San Luis Obispo County Environmental Health Division, and the San Luis Obispo County Air Pollution Control District (SLOCAPCD). The ERWG in addition included representatives from the City, the County Planning Department, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers.

The culmination of the Applicant's characterization efforts was the Risk Management Summary, which identified contamination at the Project Site requiring remediation as agreed by the SERRT. The Risk Management Summary provided recommendations on treatment strategies based on levels and types of contamination, the potential ecological risks, and the potential impacts of clean-up. The result of the SERRT process was the development of the RAP. The RAP provides regulatory agencies, the municipalities with jurisdiction over the site, and other stakeholders detailed information on how the Applicant will implement the remedial actions agreed to by the SERT and proposed by the Applicant.

As part of the EIR process a number of alternatives to the RAP were evaluated. Some of these alternatives were discussed as part of the SERRT process and rejected. They have been included here to assure full disclosure as required by CEQA.

5.1.2.1 Mass Excavation

With this alternative the areas impacted by benzene, toluene, ethyl benzene, and total xylenes (BTEX), low-density non-aqueous phase liquid (LNAPL), former crude oil, pliable crude oil, and total petroleum hydrocarbons (TPH) in soil greater than 1,000 mg/kg would be excavated. The 1,000 mg/kg was chosen since this is a cleanup level that has been established by the RWQCB for other excavation projects. In addition, soil with elevated arsenic concentrations would be removed.[1] This approach does not include any capping.

Figure 5-1 shows the areal extent (approximately 122 acres) of excavation under this alternative. This alternative assumes that all of the contaminants listed above that are located above groundwater would be removed. Where the contamination is below the water table, excavation would be conducted to a depth approximately five feet below the historic low groundwater elevation. Table 5-2 provides an estimate of the area grading and earthwork quantities associated with the remediation for this alternative.

It is estimated that the volume of excavation within the limits shown on Figure 5-1 would be approximately 2,528,000 cubic yards. Assuming that 80 percent of the excavated soil is impacted (i.e., 20 percent or 400,000 cubic yards can be salvaged and reused), approximately 2,000,000 cubic yards of the excavated soil would be affected. For the purpose of evaluating offsite hauling impacts, the same 25 percent contingency used in the Applicant's proposed project will be applied to this alternative, increasing the affected soil transported to an offsite facility to almost 2,500,000 cubic yards.

[1] The arsenic concentrations identified on the Site do not exceed state or federal hazardous waste thresholds; however, they are considered to be elevated because they equal or exceed project site-specific background levels established for the Human Health Risk Assessment (HHRA).

Figure 5-1 Mass Excavation Areas

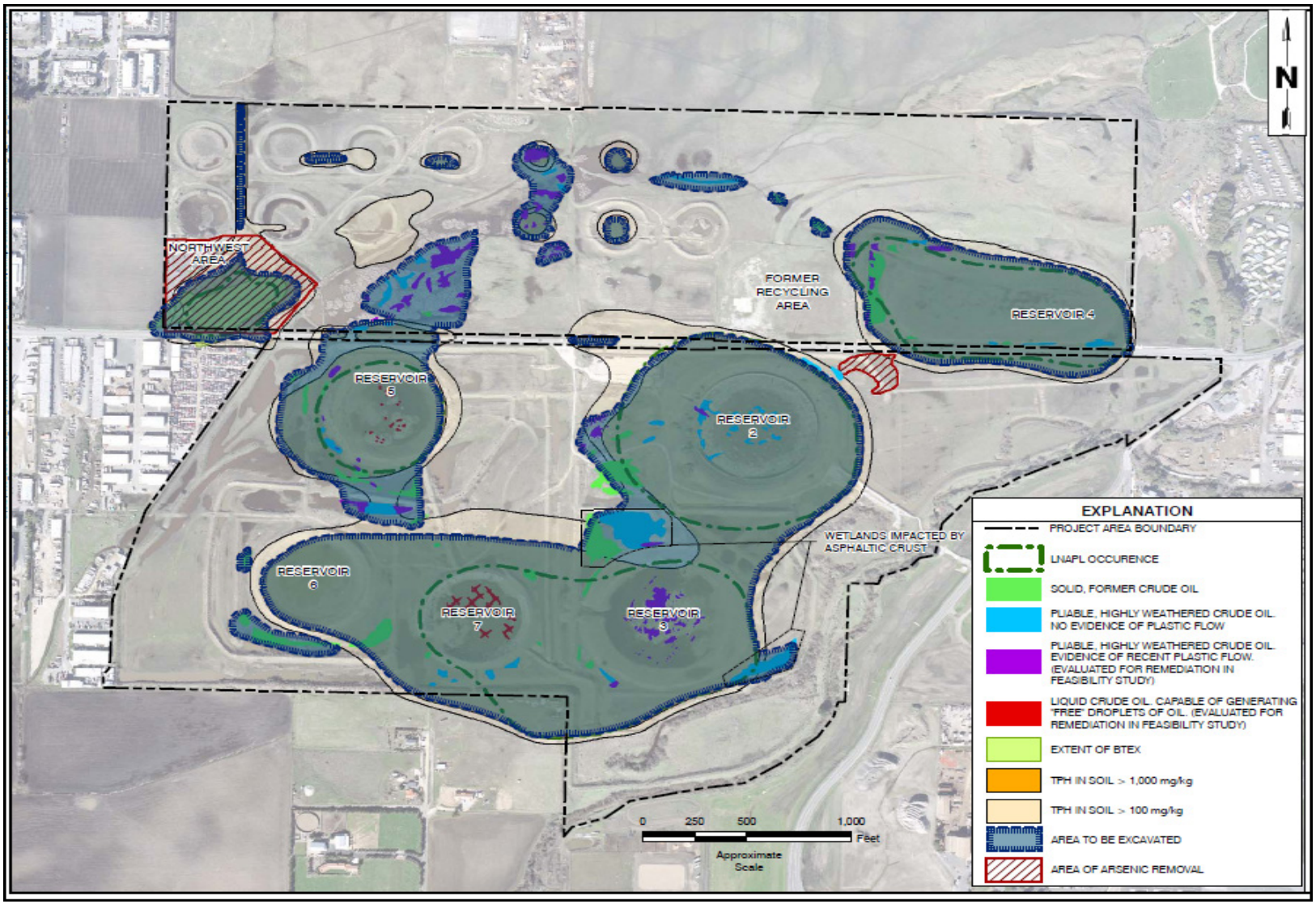


Table 5-2 Area Grading and Earthwork Quantities – Mass Excavation

Area	Grading Area (acres)	Work Area (acres)	Estimated Affected Soil (cubic yards)[e]	Common Fill (cubic yards)	Structural Fill (cubic yards)	Gravel (cubic yards)	Topsoil (cubic yards)
OU #1- Northwest Area	6.4	6.4	104,944	131,180	53,400	-	-
OU #2 -Reservoir 5	15.7	16.5	344,000	430,000	-	-	25,400
OU #2 -Reservoirs 6&7	25.7	28.0	584,160	730,200	-	-	41,500
OU #3- Reservoir 4	52.6	52.6	93,200	116,500	262,800	-	-
OU #4- North Marsh Area	7.2	8.0	32,400	23,200	-	-	11,600
OU #4- Reservoir 3	20.3	22.0	445,200	556,500	-	-	32,800
OU #4 -Remaining Petroleum Expressions	4.8	4.8	25,000	25,000	-	-	7,750
OU#4- Arsenic[f]	5.4 [g]	5.7 [g]	25,950	3,300 [h]	-	-	1,650
Reservoir 2 [a]	25.9	28.0	368,000	460,000	-	-	41,800
Borrow Area #2[c]	12.1	12.1	-	-	57,900	-	-
Access Roads	4.7	4.7	-	-	-	3,800	-
Nursery	2.3	2.3	-	-	-	4,300	-
Contactor Staging Area	4.0	4.0	-	-	-	4,300	-
Total[d]	**187.3**	**195.3**	**2,022,854[b]**	**2,475,880**	**374,100**	**12,400**	**162,500**
With 25 percent contingency			**~2,500,000**				

a. Grading will involve approximately 38,000 cubic yards of berm material, with the anticipation that no or minimal materials will be imported or exported relative to this activity.
b. A 25% contingency will be added to this number to account for the uncertainties associated with estimating impacted soil volumes for remediation projects.
c. Borrow Area #2 is defined as potential topsoil borrow source located on the eastern portion of the site, south of Tank Farm Road.
d. Estimated volumes were calculated based on the lateral extent of excavation shown in Figure 5-1 to depths as described in the excavation alternative of the Feasibility Study (2007).
e. Estimated affected soil is assumed to be approximately 80 percent of the total soil excavated for all individual locations with the exception of arsenic impacted areas in OU #4 which is assumed to be 100 percent affected.
f. Arsenic removal addresses the upper 2 feet of the Northwest Operations Area and the upper 2 feet of soil in an isolated area adjacent to Reservoir 2.
g. The areas listed here the total area impacted by arsenic adjacent to Reservoir 2, and the incremental area impacted by arsenic (i.e., not already accounted for in the TPH excavation) in the Northwest Operations Area (Figure 5-1).
h. Arsenic related backfill includes only the area adjacent to Reservoir 2. Backfill for the Northwest Operations Area is accounted for in a separate line item.

Note: Under the mass excavation alternative the amount of fill material needed would be increased over the proposed Project. This additional fill material would be trucked to the site from an off-site source.

This alternative includes offsite removal of soils impacted by arsenic. The areas of arsenic impact are the upper two feet of soil within the Northwest Operations Area, and the upper two feet of soil over an isolated area adjacent to Reservoir 2. The total volume of arsenic impacted soil is estimated to be 25,950 cubic yards, which is considered to be included in the contingency of the total excavation and offsite hauling volume of 2.5 million cubic yards.

This alternative assumes that most of this material would be trucked to the Santa Maria Landfill for use in the closure of landfill cells as part of the Landfill's Non-Hazardous Hydrocarbon Impacted Soil (NHIS) program. It is possible that some of the material, particularly the arsenic-impacted soil, would not meet the acceptance criteria for that program and would need to be transported to another disposal facility such as Buttonwillow in Kern County or Kettlemen Hills in Kings County, if it did not meet the NHIS criteria for the Santa Maria Landfill.

For this alternative, it is anticipated that the development areas would be graded as shown in the Applicant's proposed project and the open space areas would be graded to an elevation that blends with surrounding topography and promotes drainage. It is estimated that requirements for fill would be approximately 3,000,000 cubic yards. As with the Applicant's proposed project, approximately 626,000 cubic yards of material can be obtained from onsite borrow areas for backfilling. With the onsite borrow areas and the approximate 400,000 cubic yards assumed to be salvaged for reuse, an estimated 2,000,000 cubic yards of fill material would have to be imported.

This would require about 156,000 truck trips to remove the impacted soil and about 125,000 truck trips to bring in additional fill material. It is likely that this level of excavation would take eight to ten years to complete and would result in an average of between 110 and 140 truck trips per work day.

For the excavations below groundwater, additional construction activities would be needed to stabilize and dewater the excavation area. This would require the installation of sheet pile around the excavations, a dewatering system (wells and pumps), and water treatment facilities which would be delivered to the site via truck.

Sheet pile drivers would be used to install the sheet pile. As groundwater appeared in the excavation area it would be pumped out and processed in the water treatment facility located on site. The treated water would then be sprayed on areas of the Project Site, discharged on site to one of the creeks, or sent to the City of San Luis Obispo sewer system. Any discharge of excavation water would require a Waste Discharge Requirement (WDR) permit from the RWQCB. Under this alternative it is likely that up to 168,000,000 gallons2 of groundwater would be generated. It is possible that some of the recovered groundwater would not be suitable for discharge even after treatment, primarily due to exposure to contaminants in the soil during excavation. Any water that could not be discharged consistent with the requirements of the WDR would have to be trucked from the site using vacuum trucks, and hauled to an approved facility for disposal or recycling.

[2] Calculation of estimated dewatering volume is based on an assumed typical excavation rate of 800 cubic yards per day with dewatering wells placed at intervals of 10 feet and pumping rates of 2 gallons per minute (Feasibility Study, 2007) . This assumes approximately 43 gallons per square foot of excavation.

As shown in Figure 5-1, affected soil is located under Tank Farm Road in four discrete sections for a total length of about 1,300 feet. It is estimated that the volume of affected soil beneath Tank Farm Road is approximately 30,000 cubic yards. The work involving Tank Farm Road would require road closures for road removal, soil excavation and rebuilding of the road.

Approximately 74,000 lineal feet of pipeline is estimated to currently exist at the site (Appendix L, Remedial Action Plan, 2007). The Mass Excavation alternative will require removal of approximately 30,600 lineal feet, or roughly 40 percent, of that pipeline

This alternative would result in direct impacts from remediation, restoration and development activities to about 45 acres of wetland habitat, of which approximately 21 acres is Vernal Pool Fairy Shrimp (VPFS) habitat. The remainder of the impacted acreage contains various types of vegetation including a number of rare plant species and other sensitive habitat.

Once the excavations were completed, the sites would be backfilled as described above. For areas where there is planned development, rough graded pads would be constructed. In other areas the sites would be recontoured back to natural grade to promote drainage and then revegetated and restored. As part of the restoration, new wetland areas would be created, some with VPFS habitat.

5.1.2.2 Replace Remedial Caps with Excavation

This alternative is similar to the Applicant's Proposed Project except areas designated for remedial capping would be excavated and then backfilled. In addition, soil with elevated arsenic concentrations will be removed and transported offsite for disposal. Figure 5-2 shows the location of the areas that would be excavated under this alternative.

This alternative assumes that most of the excavated material would be trucked to the Santa Maria Landfill for use in the closure of landfill cells as part of the Landfill's Non-Hazardous Hydrocarbon Impacted Soil (NHIS) program. It is possible that some of the excavated material, particularly the arsenic-impacted soil, would not meet the acceptance criteria for that program and would need to be transported to another disposal facility such as Buttonwillow in Kern County or Kettlemen Hills in Kings County, if it did not meet the NHIS criteria for the Santa Maria Landfill.

Table 5-3 provides an estimate of the area grading and earthwork quantities associated with the remediation for this alternative. It is estimated that the volume of excavation within the limits shown on Figure 5-2 would be about 557,000 cubic yards. Assuming that 80 percent of the excavated soil is impacted (i.e., 20 percent or 111,000 cubic yards can be salvaged and reused), approximately 446,000 cubic yards of affected soil would be transported to an offsite facility. For the purpose of evaluating offsite hauling impacts, the same 25 percent contingency used in the Applicant's proposed project will be applied to this alternative, increasing the affected soil transported to an offsite facility to 558,000 cubic yards.

This alternative includes offsite removal of soils impacted by arsenic. The areas of arsenic impact are the upper two feet of soil within the Northwest Operations Area, and the upper two feet of soil over an isolated area adjacent to Reservoir 2. The total volume of arsenic impacted

soil is estimated to be 25,950 cubic yards, which is considered to be included in the contingency of the total excavation volume of 558,000 cubic yards.

This alternative assumes that most of this material would be trucked to the Santa Maria Landfill for use in the closure of landfill cells as part of the Landfill's NHIS program. It is possible that some of the material, particularly the arsenic-impacted soil, would not meet the acceptance criteria for that program and would need to be transported to another disposal facility such as Buttonwillow in Kern County or Kettlemen Hills in Kings County, if it did not meet the NHIS criteria for the Santa Maria Landfill.

Under this alternative, total demand for fill will be approximately 963,000 cubic yards. As with the Applicant's proposed project, approximately 626,000 cubic yards of material for backfilling will be available onsite. Salvaged excavated soil will provide another 111,000 cubic yards of fill material, so an estimated 226,000 cubic yards of material would need to be imported to the Project Site. This would require about 35,000 truck trips to remove the impacted soil and 14,000 truck trips to bring in additional fill material. It is likely that this level of excavation would take three to six years to complete and would result in an average of between 32 to 65 truck trips per work day.

For the excavations extending below groundwater, additional construction activities would be needed to stabilize and dewater the excavation area. This would require the installation of sheet pile, a dewatering system (wells and pumps), and water treatment facilities which would be delivered to the site via truck. Sheet pile drivers would be used to install the sheet pile.

As groundwater appeared in the excavation area it would be pumped out and processed in a water treatment facility that would need to be constructed on site. The treated water would then be sprayed on areas of the Project Site, discharged to on site to one of the creeks or sent to the City of San Luis Obispo sewer system. Any discharge of excavation water would require a WDR permit from the RWQCB. Under this alternative it is likely that up to 29,000,000 gallons[3] of groundwater would be generated. It is possible that some of the recovered groundwater would not be suitable for discharge even after treatment, primarily due to exposure to contaminants in the soil during excavation. Any water that could not be discharged consistent with the requirements of the WDR would have to be trucked from the site using vacuum trucks, and hauled to an approved facility for disposal or recycling.

As can be seen on Figure 5-2, this alternative involves excavation of affected soil located under approximately 300 feet of Tank Farm Road. It is estimated that the volume of affected soil beneath the relevant portions of Tank Farm Road is approximately 6,700 cubic yards. The work involving Tank Farm Road would require road closures for road removal, soil excavation and rebuilding of the road. This alternative will require removal of approximately 11,700 lineal feet, or 16 percent, of the abandoned facility pipelines.

[3] Calculation of estimated dewatering volume is based on an assumed typical excavation rate of 800 cubic yards per day with dewatering wells placed at intervals of 10 feet and pumping rates of 2 gallons per minute (Feasibility Study, 2007) . This assumes approximately 43 gallons per square foot of excavation.

Figure 5-2 Excavation Areas for Remedial Cap Replacement with Excavation

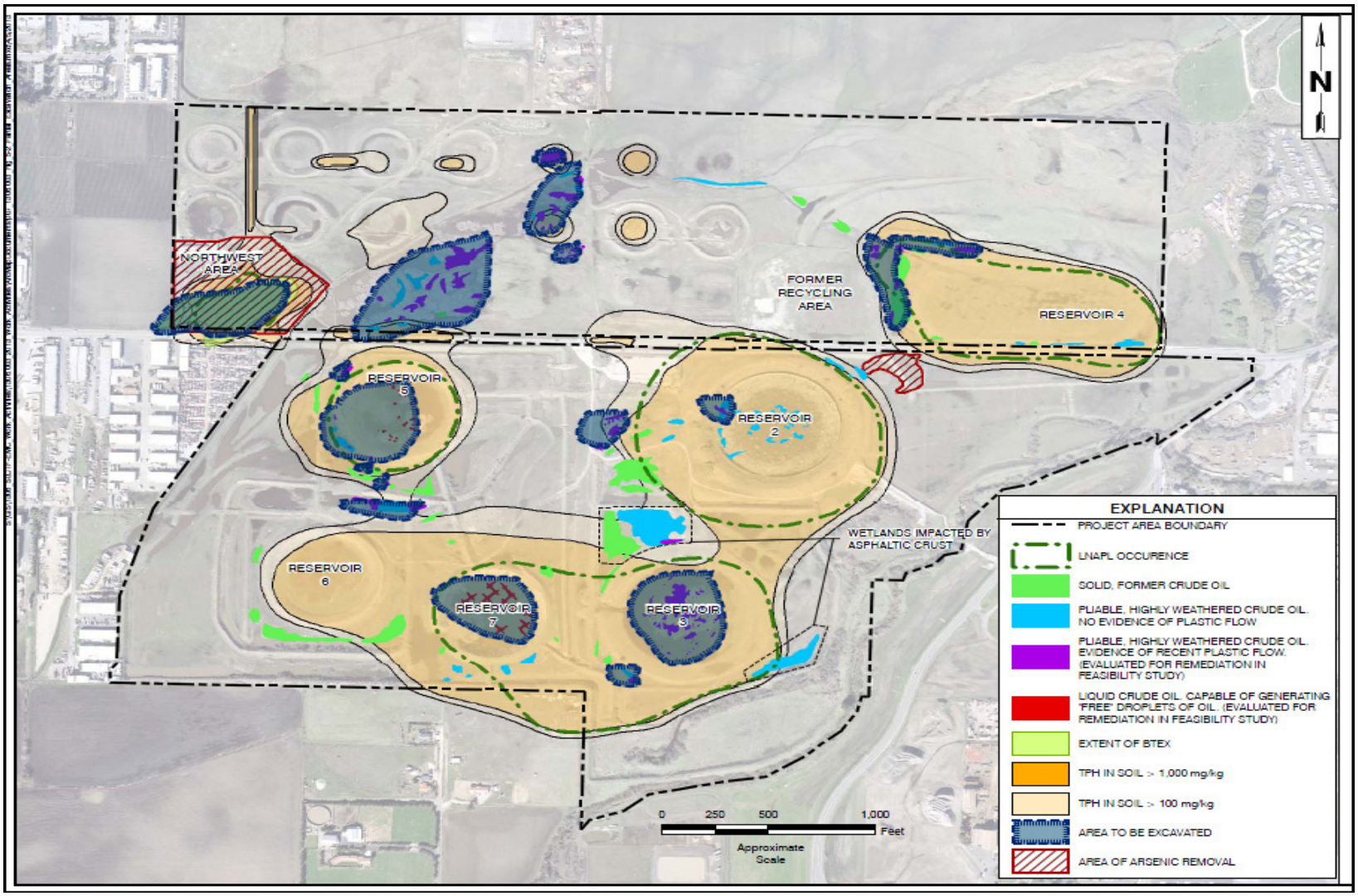


Table 5-3 Area Grading and Earthwork Quantities – Replace Remedial caps with Excavation

	Grading Area (acres)	Work Area (acres)	Estimated Affected Soil (cubic yards)	Common Fill (cubic yards)	Structural Fill (cubic yards)	Gravel (cubic yards)	Topsoil (cubic yards)
OU #1- Northwest Area	6.4	6.4	74,000	92,500	53,400	-	-
OU #2 -Reservoir 5	7.8	10.4	90,000	109,700	-	20,100	12,600
OU #2 -Reservoir 7	6.8	8	74,400	106,500	-	39,000	11,000
OU #3- and Flower Mound Borrow Area Reservoir 4	52.6	52.6	12,000	15,000	262,800	-	-
OU #4- North Marsh Area	13.3	15.6	37,400	25,200	-	-	21,500
OU #4- Reservoir 3	15	20	108,300	103,700	-	10,500	24,000
OU #4 -Remaining Petroleum Expressions	5.9	3.6	17,200	12,000	-	-	9,500
OU#4 – Arsenic[f]	5.4[g]	5.7[g]	25.950	3,300[h]	-	-	1,650
Reservoir 2 [a]	11.9	11.9	7,200	9,000	-	-	19,200
Borrow Area #2 [c]	12.1	12.1	-	-	57,900	-	-
Access Roads	4.7	4.7				3,800	
Nursery	2.3	2.3				4,300	
Contactor Staging Area	4	4				4,300	
Total[d]	**148.4**	**159.9**	**446,450[b]**	**476,900**	**374,100**	**82,000**	**99,450**
With 25 percent contingency			**558,000**				

a. Grading will involve approximately 38,000 cubic yards of berm material, with the anticipation that no or minimal materials will be imported or exported relative to this activity. Some small areas of petroleum expressions within the grading boundaries will be excavated; volume is included in OU#4.
b. A 25% contingency be added to this number to account for the uncertainties associated with estimating impacted soil volumes for remediation projects. This would increase the number to 529,000 cubic yards.
c. Borrow Area #2 is defined as potential topsoil borrow source located on the eastern portion of the site, south of Tank Farm Road.
d. Estimated volumes were calculated based on the lateral extent of excavation shown in Figure 5-2 to depths as described in the excavation alternative of the Feasibility Study (2007).
e. Estimated affected soil is assumed to be approximately 80 percent of the total soil excavated with the exception of arsenic impacted areas in OU #4 which is assumed to be 100 percent affected.
f. Arsenic removal addresses the upper 2 feet of the Northwest Operations Area and the upper 2 feet of soil in an isolated area adjacent to Reservoir 2
g. The areas listed here the total area impacted by arsenic adjacent to Reservoir 2, and the incremental area impacted by arsenic (i.e., not already accounted for in the TPH excavation) in the Northwest Operations Area (Figure 5-1).
h. Arsenic related backfill includes only the area adjacent to Reservoir 2. Backfill for the Northwest Operations Area is accounted for in a separate line item.

Note: Under this alternative the amount of fill material would be increased over the proposed Project. This additional fill material would be trucked to the site.

This alternative would result in direct impacts from remediation, restoration and development activities similar to the Applicant's proposed project to restore wetlands, VPFS habitat and other rare plants and sensitive habitat

Once the excavations were completed, the sites would be backfilled as described above. The backfill material would come from onsite borrow locations and material trucked to the site. For areas where there is planned development, rough graded pads would be constructed. In other areas the sites would be recontoured back to their natural grade and then revegetated and restored. In addition, new wetland areas would need to be created that included VPFS habitat.

5.1.2.3 Institutional Controls and Long-Term Monitoring Only

This alternative would not have any remediation activities, but would only involve the implementation of institutional controls and long-term monitoring. Those institutional controls would include deed restrictions and use covenants limiting land use in areas of the site and some offsite areas, a soil management plan implemented in the event contaminated soils are disturbed subsequent to development, and prohibition on water wells within affected areas. Specific institutional controls would depend partially on the degree of public access and development, but are expected to include fencing, signs, awareness programs, and similar active measures to manage the site. Other institutional controls could include deed restrictions and other covenants as needed to manage the Project Site. Long-term monitoring would include periodic inspections and maintenance as needed to ensure that the institutional controls remain effective.

5.1.3 Development Alternatives

The EIR has evaluated five alternatives to the proposed development. Each of these alternatives is discussed below.

5.1.3.1 Open Space

This development alternative is the same as the No Project Alternative. Under this alternative no development would occur, but the site would be remediated and restored and the property would remain as open space. Without development, none of the Class I trails on the site would be constructed for public access. As such, none of the site would be available for public access. Since this is the same as the No Project Alternative, it is not discussed further in the EIR.

5.1.3.2 Residential Development

With this alternative the property would be remediated as described for the proposed Project and then residential homes would be developed on the Project Site. This would require the City or County to rezone the property for residential use or to allow clustering in the current Residential zoning. The entire Project Site is within the Airport runway safety zones. The Airport Land Use Plan (ALUP) limits residential development within the S-1b and S-1c safety zones to 0.2 dwelling units per acre. The total Project Site acreage is 332 acres. Per the ALUP a maximum of 66 single family homes could be built on the Project Site. Assuming one-quarter acre lots for each home a total of about 25 acres would be needed, including the acreage for roads and other infrastructure.

It is likely that if residential homes were built on the Project Site, they would be located in the northeast corner of the site. This area has no hydrocarbon contamination, minimal wetlands, and is outside of the 100-year flood plain and the airport protection zone. No development would occur south of Tank Farm Road or on the western edge of the Project Site. As part of the residential development it is assumed that Tank Farm Road would be widened, and the extension of Santa Fe Road would be built north of Tank Farm Road into the Project Site, which would provide access the residential homes.

Table 5-4 provides an estimate of the traffic, water uses and wastewater that would be generated from the residential development.

Table 5-4 Estimated Traffic, Water Use and Wastewater for Residential Development

Traffic				Water Use		Wastewater		
Trip Generation per du, weekday	Trip Generation per du, weekend	Total Trips, Weekday	Total Trips, Weekend	Water Use Factor per du (AFY)	Water Use (AFY)	% Indoor Use (% total water)	Wastewater Generated (AFY)	Wastewater Generated (gals/day)
9.57	10.12	632	668	0.62	40.7	70	28.5	25,456

1. Water use factor based upon 551 gallons per day per du.
2. Trip generation rates from Trip Generation, (8th edition), published by the Institute of Transportation Engineers
3. du – dwelling unit.
4. Assumes a total of 66 detached single family homes.

Under a City plan the residential development would connect with City utilities to provide water and sewer. Under the County plan water would be provide by onsite groundwater wells and wastewater would be treated in an onsite wastewater treatment facility.

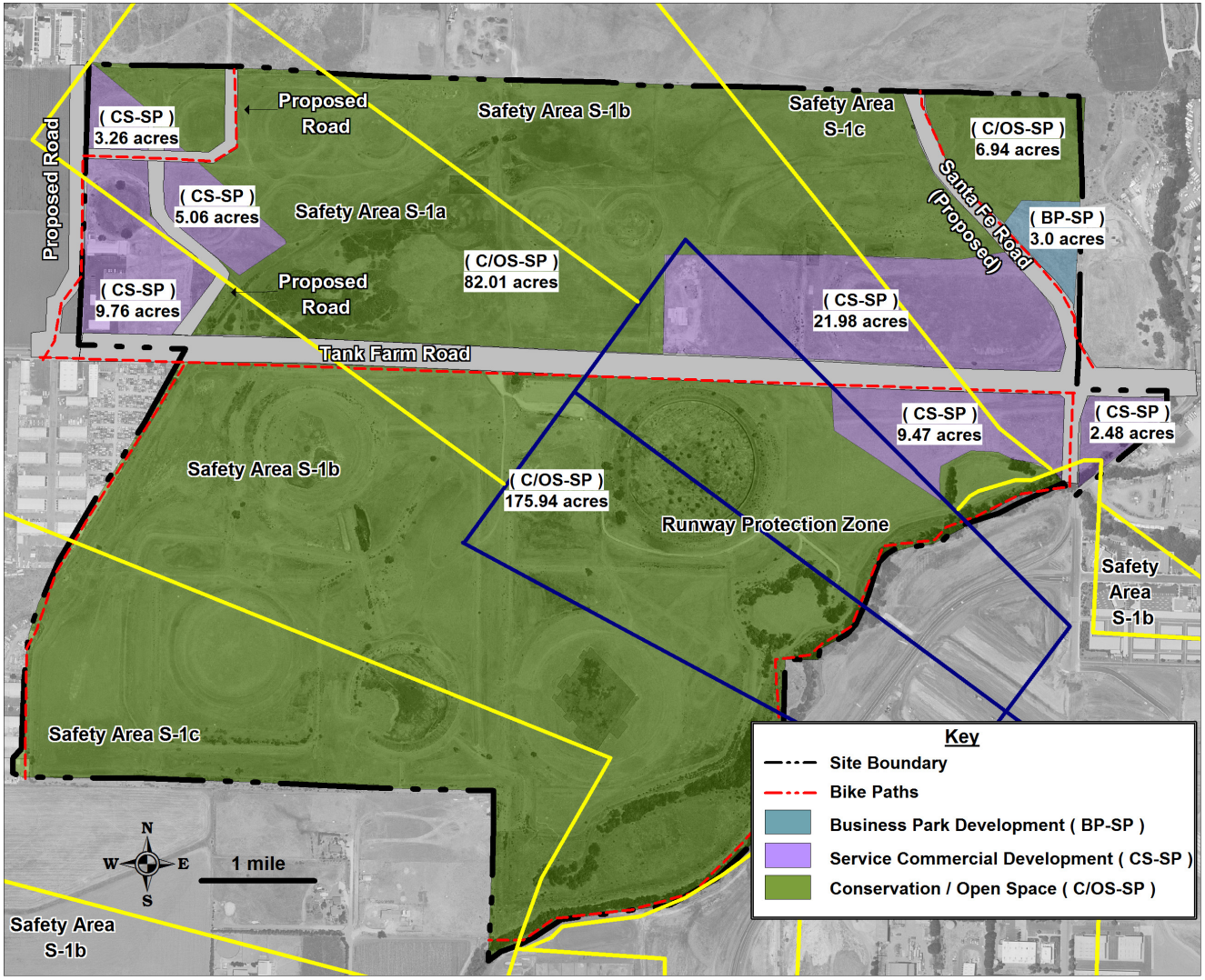
5.1.3.3 Development Consistent with Current City Airport Area Specific Plan (AASP)

The current Airport Area Specific Plan (AASP) developed and approved by the City of San Luis Obispo, included development of the Project Site. Under the AASP the Project Site has the following designations:

- Business Park (BP-SP): 3.0 acres for business park land, located at the northeastern portion the Project Site. Access would be from the proposed extension of Santa Fe Road.
- Service-Commercial (C-S-SP): 52.01 acres for Service Commercial uses located along the western edge of the Project Site, north of Tank Farm Road, and along the eastern edge of the Project Site on both sides of Tank Farm Road. Access to the western Service and Manufacturing areas would be from Tank Farm Road and a new access road along the western edge of the Project Site and new local roads. Services and Manufacturing uses to the east would be accessed from Tank Farm Road, Santa Fe Road, and new local roads.
- Conservation/Open Space (C/OS-SP): 257.95 acres designated as open space on both sides of Tank Farm Road that would serve as Airport Reserve Spaces.

Figure 5-3 shows the location of the development for this alternative.

Figure 5-3 Development Plan Consistent with City Airport Area Specific Plan



With this alternative, remediation would be essentially the same as for the proposed Project. The major difference would be the location of some of the grading and placement of structural fill. With this alternative a considerable amount of additional grading would be required in the northwest corner of the Project Site to accommodate development in this area. Less grading and less structural fill would be needed in the north east corner of the Project Site since no development would occur in this area.

About 18 acres of the development of the northwest corner of the property would occur within the 100-year flood plain and elevation of the area would have to be increased by about 8-10 feet. This would require about 260,000 cubic yards of structural fill to be placed in the northwest area of the Project Site.

This would also impact about an additional eight acres of wetland habitat and about an additional 3.5 acres of VPFS habitat in the northwest areas of the Project Site. With this alternative there would be a reduction of about 30,000 cubic yards of structural fill in the northeast area of the Project Site as compared to the proposed Project.

Development would be phased over a 25-year period. The City would provide water, sewer, and public services such as police and fire. The City recently installed a sewer trunk line in Tank Farm Road along the property's frontage (July 2009). The potable and recycled water mains and utilities would be extended to the developable areas.

Specific land uses for the various zoning designations are unknown as this time since the development would be built over a 25-year period. Economic and market forces would drive the type of land uses that could be built in each of the zoning designations. The AASP provides a list of allowable land uses for each of the zoning designations. In addition, the ALUP provides guidance on what types of land uses are allowed within each airport safety zones. As part of the EIR process, the City, County, and Applicant developed a possible list of land uses that could be developed on the site taking into account the allowable land uses specified in the AASP and ALUP. Table 5-5 provides the list of possible land uses for each zoning designation.

Table 5-5 Possible Development Land Use Mix- City AASP Development

Zoning Designation	Possible Land Use	Square Footage
Business Park	Business Park (Offices)	50,000
Service-Commercial	Light Manufacturing	350,000
	Industrial Research and Development	250,000
	General Retail	15,000
	Vehicle Services Repair and Maintenance -Major	20,000
	Veterinary Clinic/Hospital, Boarding, Large Animals	5,000
	Photo and Film Processing Lab	10,000
	Warehousing, Indoor Storage	50,000
	Wholesaling and Distribution	50,000
Total		**800,000**

The land uses were selected to represent a wide range of possible uses that would generate a reasonable worst case level of traffic and other issue area impacts. Since the tenants have not yet

been established, there is a potential variation on types and size of each of these uses. However, the parameters provided in Table 5-5 are anticipated to encompass most development scenarios. The land uses have been selected as conservative estimates and are likely the most intensive uses for the Project Site in order to evaluate a scenario that produces the highest level of impact to be analyzed in this environmental document. Under this alternative there would be no recreational fields.

Once this alternative is completely built-out, there would be an increase in traffic associated with the development and an increase in water use and wastewater generated. Traffic levels are estimated based on the Institute of Traffic Engineers Trip Generation Manual, 8th Edition. Water use rates are based on water use factors provided by the City Utilities Department. Table 5-6 shows the estimated water use, wastewater, and the traffic generated for this alternative at build-out in an estimated 25 years.

Table 5-6 Estimated Traffic, Water Use and Wastewater for City AASP Development

Development Type	Floor Area (square feet)	Weekday Average Daily OW Trips	Weekend Average Daily OW Trips	Water Use (af/year)	Wastewater (gals/day)
Business Park (Offices)	50,000	571	82	3.3	2,062
Light Manufacturing	350,000	1,337	522	24.9	19,965
Industrial Research and Development	250,000	2,028	475	25.0	15,622
General Retail	15,000	644	750	0.1	96
Vehicle Services Repair and Maintenance -Major	20,000	632	317	0.6	375
Veterinary Clinic/Hospital, Boarding, Large Animals	5,000	220	440	1.0	803
Photo and Film Processing Lab	10,000	70	13	0.7	444
Warehousing, Indoor Storage	50,000	125	117	1.5	1,036
Wholesaling and Distribution	50,000	349	66	1.5	1,036

1. Water Use and Wastewater factors based on City of SLO Utilities Department.
2. Trip Generation Rates from ITE 8th Edition.

OW-One-Way; af-acre-feet

5.1.3.4 Development Consistent with Current County General Plan

The current County General Plan developed and approved by the County of San Luis Obispo, included development of the Project Site. Under the General Plan the Project Site has the following designations:

- Commercial Service (CS): 16.24 acres for commercial service uses, located at the northeast corner of the Project Site. Access would be from the proposed extension of Santa Fe Road and new local roads.
- Industrial (I): 41.19 acres for Industrial uses located along the western edge of the Project Site, north of Tank Farm Road, and along the eastern edge of the Project Site on the north side of Tank Farm Road. Access to the western Industrial areas would be from Tank Farm Road and a new access road along the western edge of the Project Site and new local roads.

Industrial uses to the east would be accessed from Tank Farm Road, Santa Fe Road, and new local roads.

- Recreation (REC): 246.75 acres designated as recreation on both sides of Tank Farm Road that would be open space.
- Agricultural (AG): 14 acres designated as agricultural land located on the southern section of the Project Site.

Figure 5-4 shows the location of the development for this alternative.

With this alternative, remediation would be essentially the same as for the proposed Project. The major difference would be the location of some of the grading and placement of structural fill. With this alternative a considerable amount of additional grading would be required in the northwest corner of the Project Site to accommodate development in this area.

About 24 acres of the development of the northwest corner of the property would occur within the 100-year flood plain and elevation of the area would have to be increased by about 8-10 feet. This would require about 350,000 cubic yards of structural fill to be placed in the northwest area of the Project Site. This would also impact about an additional nine acres of wetland habitat and about an additional four acres of VPFS habitat in the northwest areas of the Project Site.

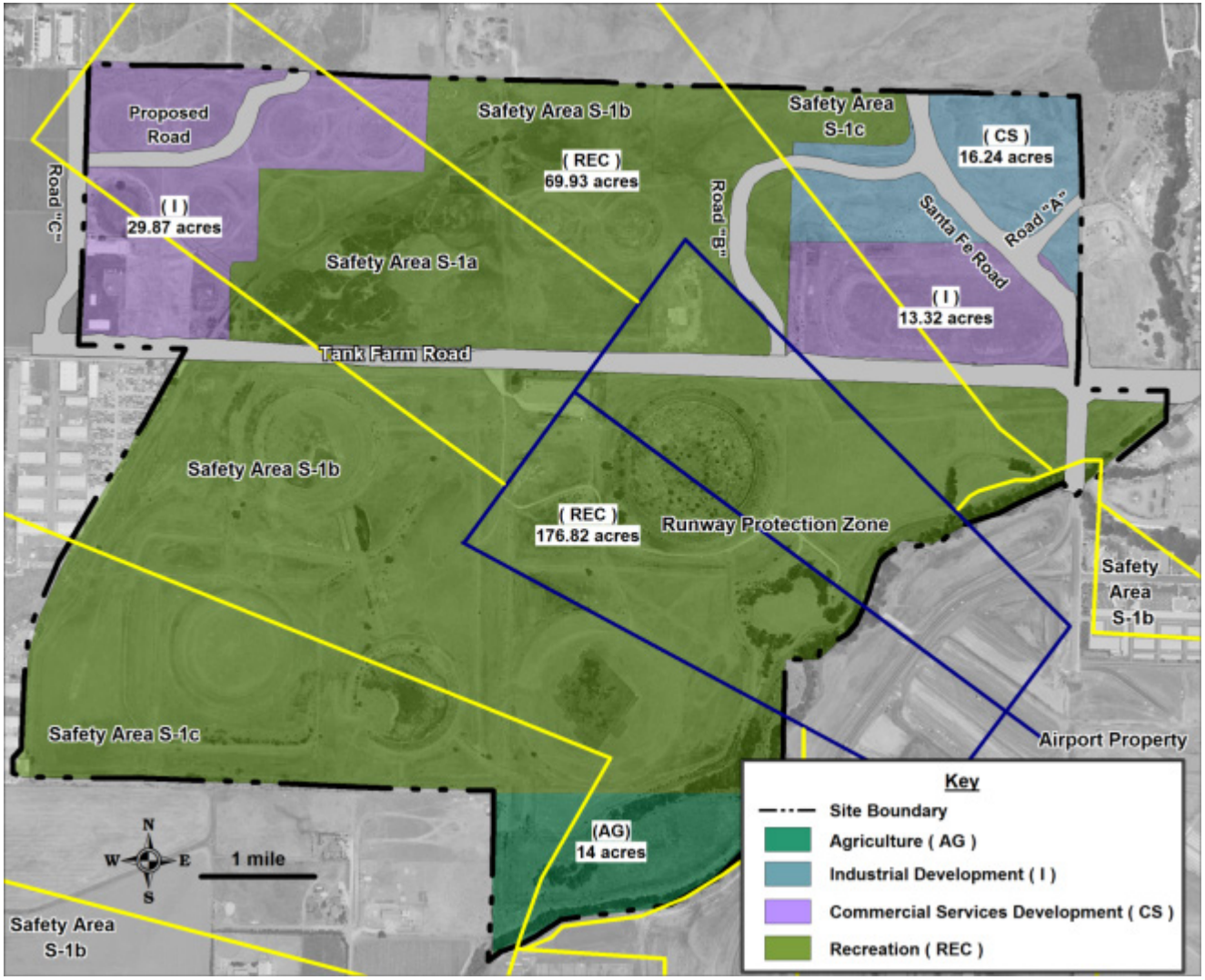
Development would be phased over a 25-year period. This alternative would have a wastewater treatment facility, and onsite wells to provide sewer and water, respectively, to the development. The proposed wastewater treatment design would be similar to that for the Proposed City Development Plan (see Section 2.5.2.1).

Specific land uses for the various zoning designations are unknown as this time since the development would be built over a 25-year period. Economic and market forces would drive the type of land uses that could be built in each the zoning designations. The ALUP provides guidance on what types of land uses are allowed within each airport safety zones. Table 5-7 provides the list of possible land uses for each zoning designation.

Table 5-7 Possible Development Land Use Mix- County General Plan Development

Zoning Designation	Possible Land Use	Square Footage
Business Park	Business Park (Offices)	240,000
	General Retail	15,000
Service-Commercial	Light Manufacturing	200,000
	Industrial Research and Development	210,000
	Vehicle Services Repair and Maintenance -Major	20,000
	Veterinary Clinic/Hospital, Boarding, Large Animals	5,000
	Photo and Film Processing Lab	10,000
	Warehousing, Indoor Storage	50,000
	Wholesaling and Distribution	50,000
Total		**800,000**

Figure 5-4 Development Plan Consistent with County General Plan



The land uses were selected to represent a wide range of possible uses that would generate a reasonable worst case level of traffic and other issue area impacts. Since the tenants have not yet been established, there is a potential variation on types and size of each of these uses. However, the parameters provided in Table 5-7 are anticipated to encompass most development scenarios. The land uses have been selected as conservative estimates and are likely the most intensive uses for the Project Site in order to evaluate a scenario that produces the highest level of impact to be analyzed in this environmental document. Under this alternative there would be no recreational fields.

Once this alternative is completely built-out, there would be an increase in traffic associated with the development and an increase in water use and wastewater generated. Traffic levels are estimated based on the Institute of Traffic Engineers Trip Generation Manual, 8th Edition. Water use rates are based on water use factors provided by the City Utilities Department. Table 5-8 shows the estimated water use, wastewater, and the traffic generated for this alternative at build-out in an estimated 25 years.

Table 5-8 Estimated Traffic, Water Use and Wastewater for County General Plan Development

Development Type	Floor Area (square feet)	Weekday Average Daily One Way Trips	Weekend Average Daily One Way Trips	Water Use (af/year)	Wastewater (gals/day)
Business Park (Offices)	240,000	2,741	394	15.8	9,898
Light Manufacturing	200,000	764	298	14.2	11,408
Industrial Research and Development	210,000	1,703	399	21.0	13,122
General Retail	15,000	644	750	0.1	96
Vehicle Services Repair and Maintenance -Major	20,000	632	317	0.6	375
Veterinary Clinic/Hospital, Boarding, Large Animals	5,000	220	440	1.0	803
Photo and Film Processing Lab	10,000	70	13	0.7	444
Warehousing, Indoor Storage	50,000	125	117	1.5	1,036
Wholesaling and Distribution	50,000	349	66	1.5	1,036

1. Water Use and Wastewater factors based on City of SLO Utilities Department.
2. Trip Generation Rates from ITE 8th Edition.

af-acre-feet

5.1.3.5 Reduced Development

This alternative would be very similar to the proposed Project, but less development would occur on the Project Site. With the reduced development alternative development would be limited to 562,000 square feet of building space. No development would occur on the western portion of the site just north of Tank Farm Road. This is the area of the former Northwest Operations Area, and is the location of the highest level of contamination. Under this alternative, remediation in this area would be the same as for the proposed Project, but development pads would not be constructed. This would reduce the need for structural fill in this area by about 25,000 cubic

yards. The Northwest Operations Area would be recontoured to a natural grade and then revegetated. All of the other remediation restoration activities associated with the proposed Project would remain the same under this alternative. This would be the case for both reduced development in the City or the County.

An evaluation of the significant Class I impacts for the Development Project showed that the diesel PM impact could be reduced to less than significant with a 30% reduction in building square footage. Given that the significant traffic impact under the full City build out scenario was already significant without the project, only the No Project Alternative would eliminate this impact. This served as the basis for establishing the reduced development alternative at 562,000 square feet of building space.

Reduced City Development Plan

Under the City Development Plan the reduced development alternative would consist of the following:

- Business Park (BP-SP): 27.85 acres for business park land, located at the northeastern portion the Project Site. Access would be from the proposed extension of Santa Fe Road. It is envisioned that this area would be developed with a campus-like business park.
- Service-Commercial (C-S-SP): 19.93 acres for Service Commercial uses located mostly within the Tank Farm Road Corridor on the eastern edge of the Project Site. Services and Commercial uses would be accessed from Tank Farm Road, Santa Fe Road, and a new local road.
- Conservation/Open Space (C/OS-SP): 255.92 acres designated as open space on both sides of Tank Farm Road that would serve as Airport Reserve Spaces. This area would include a number of off-road bike trails along the perimeter of the open space.
- Public Facilities (PF-SP): 15.05 acres located immediately west of the 26-acre area proposed for Service-Commercial may be used as active sports fields or other public use.

Figure 5-5 shows the location of the City development for this alternative.

Development would be phased over a 25-year period. The City would provide water, sewer, and public services such as police and fire. The City recently installed a sewer trunk line in Tank Farm Road along the property's frontage (July 2009). The potable and recycled water mains and utilities would be extended to the developable areas.

Specific land uses for the various zoning designations are unknown as this time since the development would be built over a 25-year period. Economic and market forces would drive the type of land uses that could be built in each of the zoning designations. The AASP provides a list of allowable land uses for each of the zoning designations. In addition, the ALUP provides guidance on what types of land uses are allowed within each airport safety zones. As part of the EIR process, the City, County, and Applicant developed a possible list of land uses that could be developed on the site taking into account the allowable land uses specified in the AASP and ALUP. Table 5-9 provides the list of possible land uses for each zoning designation.

Figure 5-5 Reduced City Development Plan

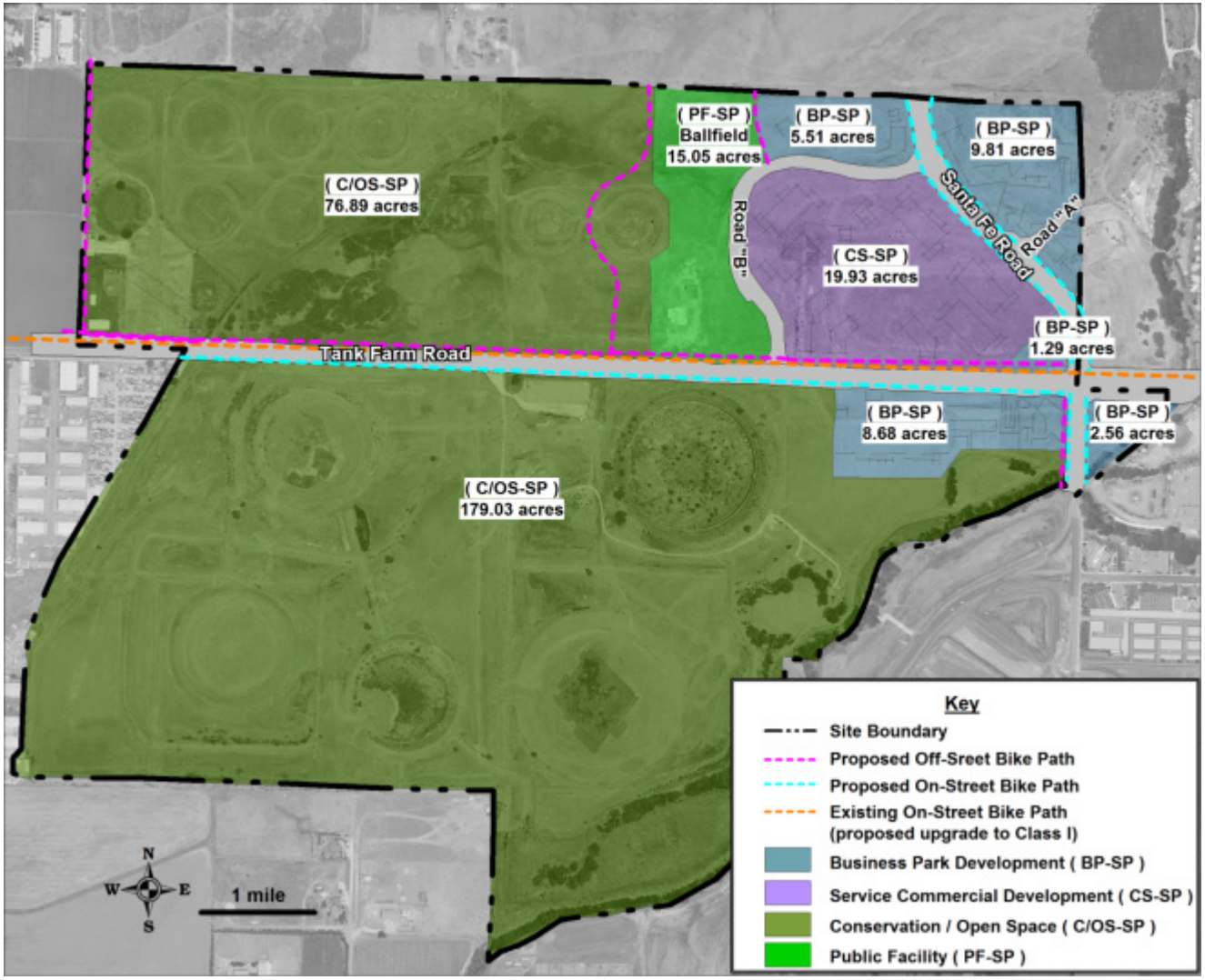


Table 5-9 Possible Development Land Use Mix - Reduced City Development Plan

Zoning Designation	Possible Land Use	Square Footage
Business Park	Business Park (Offices)	234,000
	Printing and Publishing	10,000
	Hotel (115 rooms)	70,000
	Specialized Education /Training Facility	5,000
Service-Commercial	Light Manufacturing	50,000
	Industrial Research and Development	50,000
	General Retail	15,000
	Vehicle Services Repair and Maintenance -Major	10,000
	Veterinary Clinic/Hospital, Boarding, Large Animals	5,000
	Photo and Film Processing Lab	10,000
	Warehousing, Indoor Storage	40,000
	Wholesaling and Distribution	48,000
Public -Facility	Public Transit maintenance and Storage Facility	10,000
	Public Fire Station and Training Facility	5,000
	Recreational Fields	15 acres
Total		**562,000**

The land uses were selected to represent a wide range of possible uses that would generate a reasonable worst case level of traffic and other issue area impacts. Since the tenants have not yet been established, there is a potential variation on types and size of each of these uses. However, the parameters provided in Table 5-9 are anticipated to encompass most development scenarios. The land uses have been selected as conservative estimates and are likely the most intensive uses for the Project Site in order to evaluate a scenario that produces the highest level of impact to be analyzed in this environmental document.

Once this alternative is completely built-out, there would be an increase in traffic associated with the development and an increase in water use and wastewater generated. Traffic levels are estimated based on the Institute of Traffic Engineers Trip Generation Manual, 8th Edition. Water use rates are based on water use factors provided by the City Utilities Department. Table 5-10 shows the estimated water use, wastewater, and the traffic generated for this alternative at build-out in an estimated 25 years.

Table 5-10 Estimated Traffic, Water Use and Wastewater - Reduced City Development Plan

Development Type	Floor Area (square feet)	Weekday Average Daily One Way Trips	Weekend Average Daily One Way Trips	Water Use (af/year)	Wastewater (gals/day)
Business Park (Offices)	234,000	2,672	384	15.4	9,651
Printing and Publishing	10,000	70	13	0.7	570
Hotel (115 room)	70,000	572	573	49.5	30,900
Specialized Education /Training Facility	5,000	137	56	0.3	206
Light Manufacturing	50,000	191	75	3.6	2,852
Industrial Research and Development	50,000	406	95	5.0	3,124

Table 5-10 Estimated Traffic, Water Use and Wastewater - Reduced City Development Plan

Development Type	Floor Area (square feet)	Weekday Average Daily One Way Trips	Weekend Average Daily One Way Trips	Water Use (af/year)	Wastewater (gals/day)
General Retail	15,000	644	750	0.1	96
Vehicle Services Repair and Maintenance -Major	10,000	316	159	0.3	187
Veterinary Clinic/Hospital, Boarding, Large Animals	5,000	220	440	1.0	803
Photo and Film Processing Lab	10,000	70	13	0.7	444
Warehousing, Indoor Storage	40,000	100	93	1.2	828
Wholesaling and Distribution	48,000	335	63	1.4	994
Public Transit maintenance and Storage Facility	10,000	45	11	0.2	144
Public Fire Station and Training Facility	5,000	80	27	0.3	200
Recreational Fields	15 acres	69	867	21.0	937

1. Recreational Fields area numbers are in acres.
2. Trip Generation Rates from ITE 8th Edition except Specialized Education from San Diego Association of Governments Rates.
3. Recreational field traffic numbers based upon 90 persons per weekday and 1,300 persons per weekend.
4. Water Use and Wastewater factors based on City of SLO Utilities Department.

af-acre-feet

Reduced County Development Plan

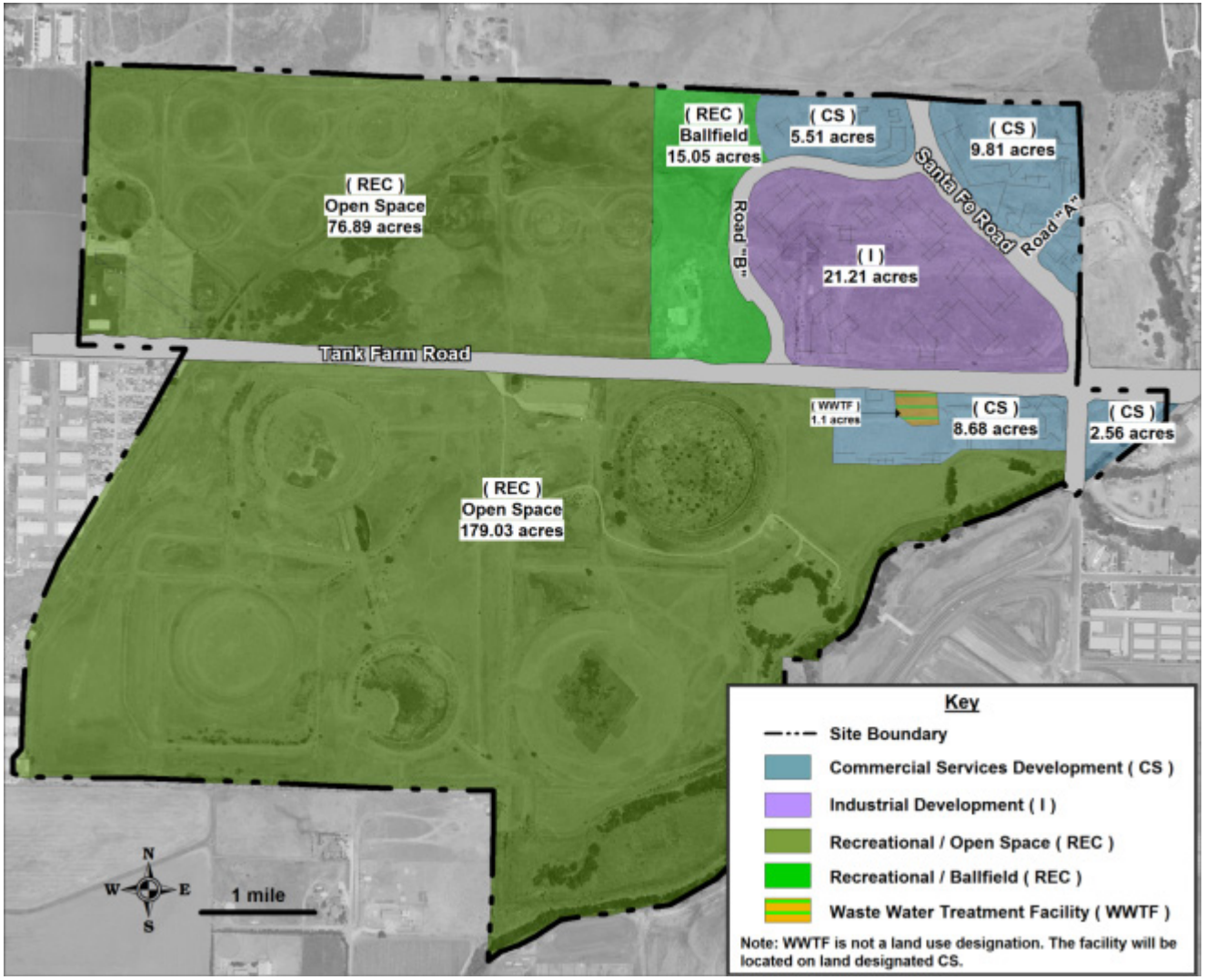
Under the County Development Plan the reduced development alternative would consist of the following:

- Commercial Service (CS): 16.24 acres for commercial service uses, located at the northeast corner of the Project Site. Access would be from the proposed extension of Santa Fe Road and new local roads.
- Industrial (I): 35.11 acres for Industrial uses located along the eastern edge of the Project Site. Industrial uses to the east would be accessed from Tank Farm Road, Santa Fe Road, and new local roads.
- Recreation (REC): 252.83 acres designated as recreation on both sides of Tank Farm Road that would be open space.

Figure 5-6 shows the location of the development for this alternative.

Development would be phased over a 25-year period. The building square footage would be the same as discussed above for the City reduced development alternative (562,000 square feet). This alternative would have a wastewater treatment facility, and onsite wells to provide sewer and water, respectively, to the development. The proposed wastewater treatment design would be similar to that for the County Development Plan component of the Project (see Section 2.5.2.1).

Figure 5-6 Reduced County Development Plan



Specific land uses for the various zoning designations are unknown as this time since the development would be built over a 25-year period. Economic and market forces would drive the type of land uses that could be built in each the zoning designations. The ALUP provides guidance on what types of land uses are allowed within each of the airport safety zones.

As part of the EIR process, the City, County, and Applicant developed a possible list of land uses that could be developed on the Project Site taking into account the allowable land uses specified in the AASP and ALUP. Table 5-11 provides the list of possible land uses for each zoning designation.

Table 5-11 Possible Development Land Use Mix - Reduced County Development Plan

Zoning Designation	Possible Land Use	Square Footage
Commercial Service	Business Park (Offices)	249,000
	General Retail	15,000
	Hotel (115 rooms)	70,000
	Wastewater Treatment Facility	1 acre
Industrial	Light Manufacturing	50,000
	Industrial Research and Development	50,000
	Printing and Publishing	10,000
	Vehicle Services Repair and Maintenance -Major	10,000
	Veterinary Clinic/Hospital, Boarding, Large Animals	5,000
	Photo and Film Processing Lab	10,000
	Warehousing, Indoor Storage	40,000
	Wholesaling and Distribution	48,000
	Specialized Education/Training Facility	5,000
Recreation	Recreational Fields	15 acres
Total		**562,000**

The land uses were selected to represent a wide range of possible uses that would generate a reasonable worst case level of traffic and other issue area impacts. Since the tenants have not yet been established, there is a potential variation on types and size of each of these uses. However, the parameters provided in Table 5-10 are anticipated to encompass most development scenarios. The land uses have been selected as conservative estimates and are likely the most intensive uses for the Project Site in order to evaluate a scenario that produces the highest level of impact to be analyzed in this environmental document.

Once this alternative is completely built-out, there would be an increase in traffic associated with the development and an increase in water use and wastewater generated. Traffic levels are estimated based on the Institute of Traffic Engineers Trip Generation Manual, 8th Edition. Water use rates are based on water use factors provided by the City Utilities Department. Table 5-12 shows the estimated water use, wastewater, and the traffic generated for this alternative at build-out in an estimated 25 years.

Table 5-12 Estimated Traffic, Water Use and Wastewater - County Development Plan

Development Type	Floor Area (square feet)	Weekday Average Daily One Way Trips	Weekend Average Daily One Way Trips	Water Use (af/year)	Wastewater (gals/day)
Business Park (Offices)	249,000	2,844	408	16.4	10,269
Printing and Publishing	10,000	70	13	0.7	570
Hotel (115 room)	70,000	572	573	49.5	30,900
Specialized Education /Training Facility	5,000	137	56	0.3	206
Light Manufacturing	50,000	191	75	3.6	2,852
Industrial Research and Development	50,000	406	95	5.0	3,124
General Retail	15,000	644	750	0.1	96
Vehicle Services Repair and Maintenance -Major	10,000	316	159	0.3	187
Veterinary Clinic/Hospital, Boarding, Large Animals	5,000	220	440	1.0	803
Photo and Film Processing Lab	10,000	70	13	0.7	444
Warehousing, Indoor Storage	40,000	100	93	1.2	828
Wholesaling and Distribution	48,000	335	63	1.4	994
Wastewater Treatment	1 acres	27	14	1.4	62
Recreational Fields	15 acres	69	867	21.0	937

5. Recreational Fields and Wastewater Treatment facility area numbers are in acres.
6. Trip Generation Rates from ITE 8th Edition except Specialized Education from San Diego Association of Governments Rates.
7. Recreational field traffic numbers based upon 90 persons per weekday and 1,300 persons per weekend.
8. Water Use and Wastewater factors based on City of SLO Utilities Department.

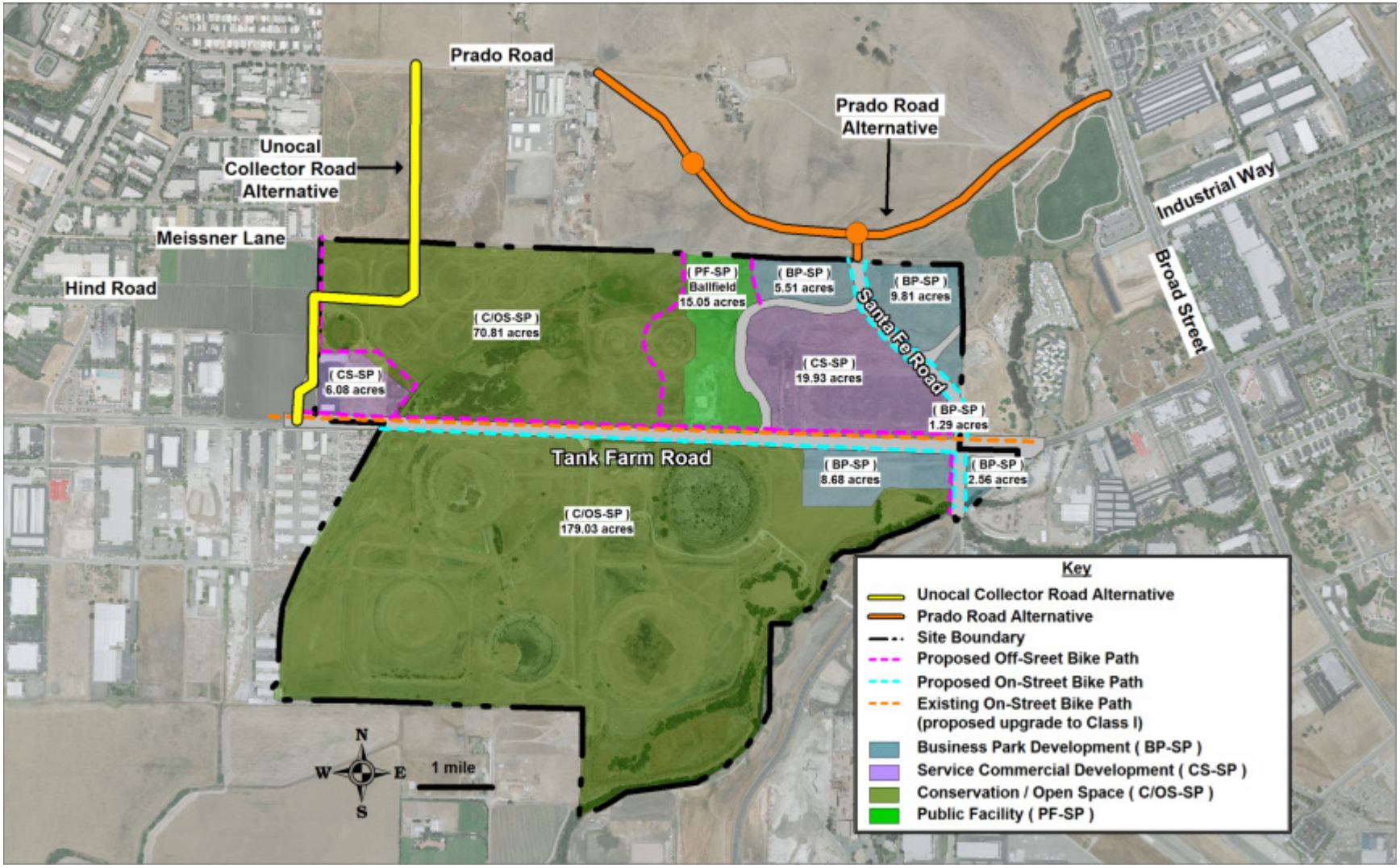
af-acre-feet

5.1.4 Transportation Alternatives

The AASP, which was adopted by the City of San Luis Obispo to guide development in the area around the San Luis Obispo Airport, includes a number of roads to serve future development on the Project Site. Under the full City build out of the Airport and Margarita areas, the project would contribute to an existing significant unavoidable traffic impact. The transportation alternatives discussed below were evaluated to determine if they could reduce the level of severity of the significant traffic impact.

The Unocal Collector Road would have passed through the northwestern portion of the Project Site and was intended to serve development in this portion of the Project Site. The location of the Unocal Collector Road is shown in Figure 5-7. The AASP assumed that a considerable amount of development would occur in the northwest corner of the Project Site (see Figure 5-3). However, the development Project proposed by the Applicant has substantially less development on the western portion of the Project Site. The Applicant reduced the development in the northwestern potions of the site since the majority of this area is within the 100-year flood plain, and contains large areas of sensitive wetlands including VPFS habitat, which is a federally endangered species.

Figure 5-7 Location of Transportation Alternatives



Given the limited development on the western portion of the Project Site, the Applicant has not proposed to construct the Unocal Collector Road as part of the proposed Project. Given that this road is part of the AASP, the EIR has included construction of this road as an alternative.

The other major road in the AASP is the extension of Prado Road from its current terminus east to the intersection with Broad Street, along with the completion of Santa Fe Road north to the intersection with Prado Road. Figure 5-7 shows the location of these two roads.

The proposed Project includes extending Santa Fe Road north from Tank Farm Road as far as the northern Project Site boundary. This portion of Santa Fe Road would be used by the proposed development to access Tank Farm Road. The Applicant is not proposing to extend Santa Fe Road north of the Project Site.

The extension of Prado Road is a major transportation goal of the City. Completion of this road is critical to the development of the Margarita Area, and is part of the Margarita Area Specific Plan (MASP). Prado Road would provide the primary access to the Margarita area from other parts of the city, and would connect the southeastern and southwestern parts of the city (MASP, 2004). The City Circulation Element designates Prado Road as a "highway/regional route."

A basic concept of the neighborhood design for the Margarita area would have most of the vehicle traffic between the southeastern and southwestern parts of the community, as well as trips to and from the neighborhood, carried by Prado Road as a "regional route," with design features of a "parkway arterial" (MASP, 2004).

As discussed in the MASP, the Prado Road improvements and a portion of the cost of Prado Interchange, and intersection improvements at Prado and South Higuera would be allocated to future development in the Margarita Area since this area would benefit from these improvements. Improvements to Tank Farm Road, the Unocal Collector, Santa Fe Road, and the Buckley Extension would be allocated to future development in the Airport Area since this area primarily would benefit from them (MASP, 2004). Given the importance of the Prado Road extension to the development in the Margarita and Airport areas it has been evaluated for inclusion as an alternative in this EIR.

Each of these transportation alternatives is discussed below.

5.1.4.1 Unocal Collector Road

This alternative would involve the installation of the Unocal Collector Road from Tank Farm Road to Prado Road with two (2) lanes, consistent with the AASP. As part of this alternative, a roundabout would be installed where the Unocal Collector Road intersects with Prado Road. This road would be about 0.65 miles in length, of which about 0.35 miles would be on or bordering the Project Site. The remainder of the Road would be on property that is not owned by the Applicant, north of the Project Site.

This alternative would require approximately 15 feet of engineered fill in the northwest corner of the Project Site to get the Unocal Collector Road above the 100-year flood plain. The amount of structural fill required has been estimated at about 50,000 cubic yards. This assumes a road width of 59 feet. The remainder of the road would need about 15,000 cubic yards of engineered fill. A

number of large box culverts would need to be installed under the road to allow for the flow of surface waters in the northwest area of the Project Site. Construction of the road would impact about three acres of wetland on the Project Site, of which about two acres would be VPFS habitat. In addition, about 0.25 miles of the road would pass through land that is currently used for grazing and row crops. All other aspects of the proposed remediation and development Project would remain the same as the proposed Project under this alternative.

5.1.4.2 Prado Road Extension

This alternative would involve extension of Prado Road from its current terminus to Broad Street with two (2) lanes (about 0.5 miles), completion of Santa Fe Road from Tank Farm Road to Prado Road with two (2) lanes (the majority of the Santa Fe extension is part of the proposed Project (see Figure 5-7), and the installation of a roundabout at the intersection of Santa Fe and Prado Road. More information on the construction of Prado Road can be found in the MASP.

Under this alternative, the Applicant would participate in funding the Prado Road extension along with other property owners along the Prado Road alignment in lieu of widening Tank Farm Road to four lanes west of Santa Fe as part of earlier phases. The remainder of Tank Farm Road would not be widened until Phase 3 of the development Project. Building of the extension of Prado Road would allow reduce traffic on Tank Farm Road, which would eliminate the need to complete the widening of Tank Farm Road prior to Phase 3 of the development.

The City's plan for the Prado Road extension is to build it concurrently with development of the Margarita Area. The respective properties would dedicate all right-of-way for the road in fee and also dedicate access control at the time of development. During initial development of the Margarita Area, the developers would construct or fund the construction of the two lanes of roadway, one bike path, and one sidewalk with street lighting. Because the City could only ask for "fair share" funding from the Applicant for this Project, it is not entirely clear that funding from the Margarita Area developers would be available in a timeframe that would allow this alternative to be implemented as part of the Phase I Project development. This alternative would only be feasible if Prado Road could be completed prior to the start of the Phase I development.

5.1.5 Other County Development Alternatives

Two alternatives were identified that would apply to the County Development Plan only. Each one is discussed below.

City Water

Water for the proposed County Development Plan would be provided by a number of onsite groundwater wells. An alternative would be for the Applicant to contract with the City of San Luis Obispo Utility Department to provide water from the City. This would be the source of water for the City Development Plan. With this alternative, all water for the County development would be provided by the City

City Sewer

Wastewater for the proposed County Development Plan would be handled by a new onsite wastewater treatment facility. An alternative would be for the Applicant to contract with the City

of San Luis Obispo Utility Department to provide sewer service from the City. This would be the same method of handling wastewater for the City Development Plan. With this alternative, all wastewater for the County development would be sent to the City sewer system, and no onsite wastewater treatment facility would need to be built.

5.2 Alternatives Screening Analysis

This section presents a screening analysis of the alternatives. The screening analysis has been used to determine which of the alternatives discussed above could meet the following criteria and be carried forward for further analysis in the EIR.

- The alternative is technically feasible;
- The alternative would lessen the potentially significant impacts of the proposed project or substantially reduce other environmental impacts of the proposed project; and
- The alternative would attain most of the basic objectives of the project.

The following sections discuss the screening analysis for each of these groups of alternatives.

5.2.1 Remediation Alternatives

Table 5-13 (which is just before end of Section 5.2.1) summarizes the screening analysis for the remediation alternatives and identifies the issue areas where impacts would increase or decrease relative to the proposed Project. The ratings of the various alternatives provided in Table 5-13 were developed based upon a review of the alternative description information provided above, and an assessment of the level of impacts that would occur if these alternatives were implemented. The impacts identified for each of the alternatives were then compared to the proposed Project to determine if the impact was greater or less than the proposed Project. The information in Table 5-13 was used as part of the screening analysis to determine which alternatives should be carried forward for further analysis in the EIR. The following sections summarize the results of this screening analysis for each of the remediation alternatives.

Mass Excavation

This alternative would not eliminate or reduce any of the significant impacts identified for the proposed Project. As discussed in Table 5-13, this alternative would substantially increase the impacts associated with remediation in almost all issue areas due to an increase in excavation quantities from approximately 196,000 cubic yards to approximately 2,500,000 cubic yards of affected soil. In addition, the grading surface area would increase from about 135 acres to about 187 acres, and the amount of fill that would need to be imported would increase from about 82,000 cubic yards to about 2,000,000 cubic yards.

The air emissions would be expected to increase by at least a factor of ten when compared to the proposed Project, which would be a significant unavoidable (Class I) impact.

The biggest increase in impacts would be to biological resources. Mass excavation would impact over 50 percent of all of the wetlands at the site, and most of the VPFS habitat. These would be significant unavoidable (Class I) impacts. This amount of excavation would likely result in the

permanent loss of on-site biological functions of wetlands, native grasslands habitats for rare plants and animals, and other biotic communities considered sensitive by federal, state, or local policies, statutes, and regulations. The amount of disturbance created by this alternative most likely would preclude the on-site re-establishment of native populations of some plants and animals.

Trucking impacts would be substantially greater with this alternative. Large amounts of hydrocarbon impacted material would need to be trucked from the site. In addition, large quantities of clean fill would need to be brought to the site via truck for backfilling the excavations. It is estimated that well over one million cubic yards of material would need to be trucked to or from the site. This would likely result in significant unavoidable impacts to traffic and circulation along Tank Farm Road.

Mass excavation would require dewatering since most of the excavations would be deep enough to encounter groundwater. In order to complete the excavations, the groundwater would need to be removed from the excavations. This alternative would require the treatment and disposal of the water that would be removed from the excavation areas as part of the dewatering operations.

This would increase the potential for impacts to surface water and groundwater quality due to the potential release of water contaminated as part of the excavation process. The proposed excavation project has been designed to avoid the need for dewatering operations. With mass excavation as much as 168,000,000 gallons of water would need to be handled and treated as part of the dewatering operations.

This alternative would result in the removal of most of the hydrocarbon impacted material from the site, which would eliminate most of the human health and ecological risk. However, the remedial caps and vapor barriers, which are part of the proposed Project, would serve to reduce most of the human health and ecological risk for the site. As such, the mass excavation alternative would not substantially reduce the human health and ecological risk when compared to the proposed Project. However, with this alternative a considerable portion of the sensitive ecological and historical resources would be eliminated.

As discussed in the Hazards and Hazardous Materials Section of the EIR (Section 4.11), the proposed remediation activities would reduce the level of human and ecological risk to acceptable levels. The remediation approach was developed to reduce these levels of risk without the significant ecological impacts associated with the mass excavation alternative. The goal of any Remediation Project that is occurring in sensitive habitat should be to minimize environmental impact to the extent feasible, while assuring that after remediation, the site is protective of human health and the ecology.

Given that the mass excavation alternative would increase the severity of most of the remediation impacts identified for the proposed Project (e.g., air quality, biological resources, transportation and circulation, water resource, etc.), and would result in some additional significant unavoidable impacts, it has been dropped from further consideration in the EIR as a result of this screening analysis.

Remedial Cap Replacement with Excavation

This alternative would not eliminate or reduce any of the significant impacts identified for the proposed Project. As discussed in Table 5-13, this alternative would increase the impacts associated with remediation in most issue areas because it would increase in excavation quantities from approximately 196,000 cubic yards to approximately 558,000 cubic yards of affected soil. In addition, the grading surface area would increase from about 135 acres to about 148 acres, and the amount of fill that would need to be imported would increase from about 82,000 cubic yards to about 226,000 cubic yards.

Total air emissions would be expected to increase by about 80% when compared to the proposed Project, because of the increase excavation quantities, which would be a significant unavoidable (Class I) impact.

There would be an increase in impacts to biological resources. Partial excavation increase impacts to wetlands at the Project Site by about two acres. Impacts to VPFS habitat would increase by about one acre.

Trucking impacts would be greater with this alternative than for the proposed Project. Increased quantities of NHIS would need to be removed from the site during excavation and trucked to the Santa Maria Landfill. In addition, clean fill would need to be brought to the site via truck for backfilling the excavations. It is estimated that about 784,000 cubic yards of material would need to be trucked to or from the site, compared with 278,000 cubic yards for the proposed Project. This would increase traffic and circulation impacts along Tank Farm Road compared to the proposed Project.

Remedial cap replacement with excavation would require dewatering since some of the excavations would be deep enough to encounter groundwater. In order to complete the excavations the groundwater would need to be removed from the excavations. Approximately 29,000,000 gallons of water would need to be removed, and this water would have to be treated and disposal of at the site. This would increase the potential for impacts to surface water and groundwater quality due to potential releases of water that has been contaminated as part of the excavation process. The proposed excavation Project has been designed to avoid the need for dewatering operations.

This alternative would result in the removal of more of the hydrocarbon impacted material from the site than the proposed Project. However, the level of human health and ecological risk would remain essentially the same as for the proposed Project. The main reason for this is that with the proposed Project these areas would be capped with clean soil/gravel and vapor barriers would be installed. These remedial methods would provide essentially the same levels of protection and risk reduction as excavation based upon the type of contamination at the Project Site (mainly crude oil components, and arsenic).

This alternative is another approach to meeting the cleanup goals of the proposed project. It is also an alternative that has been raised as part of the EIR scoping process, over concerns with the level of remediation associated with the proposed Project. For these reasons, this alternative has been selected for further evaluation in the EIR.

Table 5-13 Comparison of Remediation Alternatives with the Proposed Project

Issue Area	Impacts Compared to Proposed Project			Comments
	Mass Excavation	Remedial Cap Replacement with Excavation	IC and Monitoring	
	Alternative Lessens or Avoids Impacts (–), Result in Increased or Additional Impacts (+) or Remain About the Same (0) when compared to the Proposed Project.			
Aesthetics/Visual	+	+	-	The remediation activities associated with the mass excavation and replacement of remedial caps with excavation alternatives would be considerably longer in duration and would involve substantially more excavations and moving of material, and construction equipment on the site. This would increase the impacts to visual character or quality of the site and its surroundings. With institutional controls and long-term monitoring essentially no remediation activities would occur as the site and the duration of the activities would be considerably less than the proposed Project. This would reduce the impacts to visual character or quality of the site and its surroundings.
Air Quality	+	+	-	Both the mass excavation and replacement of remedial caps with excavation alternatives would generate substantially more air emissions than the proposed Project. This would include all types of emissions including GHG emissions, and toxic air emissions. With institutional controls and long-term monitoring considerably less emissions would be generated since less construction equipment and activities would occur.
Agricultural	-	0	+	With mass excavation most of the impacted material at the site would be removed, but some would still remain. This might reduce the potential for future impact to surrounding agricultural uses over the proposed Project as a result of contamination migration via groundwater. However, long-term groundwater monitoring at the site indicates that the contamination is not migrating via groundwater. With the remedial cap replacement with excavation alternative impacted material would still remain on site that could impact surrounding agricultural uses. This alternative would not be substantially different that the propose Project. With institutional controls and long-term monitoring essentially no impacted material would be removed from the site. This might increase the potential for

Table 5-13 Comparison of Remediation Alternatives with the Proposed Project

Issue Area	Impacts Compared to Proposed Project			Comments
	Mass Excavation	Remedial Cap Replacement with Excavation	IC and Monitoring	
	Alternative Lessens or Avoids Impacts (–), Result in Increased or Additional Impacts (+) or Remain About the Same (0) when compared to the Proposed Project.			
				future impact to surrounding agricultural uses over the proposed Project as a result of contamination migration via groundwater. However, long-term groundwater monitoring at the site indicates that the contamination is not migrating via groundwater.
Biological Resources	+ (construction) 0 (ecological risk)	+ (construction) 0 (ecological risk)	- (construction) + (ecological risk)	Both mass excavation and replacement of remedial caps with excavation would have greater impacts to wetlands and habitat for listed, special and endangered species that the proposed Project. Mass excavation would impact more than half of all the wetlands at the site and would impact major portions of VPFS habitat. Both of these alternatives would result in permanent loss of biological functions of wetlands, native grasslands habitats for rare plants and animals, and other biotic communities considered sensitive by federal, state, or local policies, statutes, and regulations. The amount of disturbance created by these two alternatives could preclude the on-site re-establishment of native populations of plants and animals. Both the mass excavation and remedial cap replacement with excavation alternatives would result in the similar ecological risk as the proposed Project since the combination of excavations and capping associated with the proposed Project eliminate most of this risk. With institutional controls and long-term monitoring essentially no remediation activities would occur as the site and there would be minimal impacts to wetlands and habitat for listed, special and endangered species. The ecological risk would be greater for this alternative since no excavation or capping of impacted areas would occur.
Cultural Resources	+	+	-	The impacts to historic resources would be greater with the mass excavation alternative than the proposed Project. Most of the historic resources at the site would be severely impacted with mass excavation. The potential for encountering unknown cultural resources during mass excavation would be greater due to the increased amount of ground disturbance. The potential for encountering unknown archaeological resources during excavation in place of remedial caps would be greater since there would be

Table 5-13 Comparison of Remediation Alternatives with the Proposed Project

Issue Area	Impacts Compared to Proposed Project			Comments
	Mass Excavation	Remedial Cap Replacement with Excavation	IC and Monitoring	
	Alternative Lessens or Avoids Impacts (–), Result in Increased or Additional Impacts (+) or Remain About the Same (0) when compared to the Proposed Project.			
				more ground disturbance. There would be no impacts to historic or cultural resources with the institutional controls and long-term monitoring alternative since no earth moving would occur as part of this alternative.
Geological and Soil Resources	+	+	-	The potential for erosion-induced siltation of nearby creeks would be increase with both the mass excavation and replacement of remedial caps with excavation alternatives when compared to the proposed Project since more excavations and earthmoving activities would occur. The potential for erosion-induced siltation of nearby creeks would be substantially less with the institutional controls and long-term monitoring alternative when compared to the proposed Project since there would be no earthmoving activities.
Hazards/ Hazardous Materials	0 (health risk) + (traffic risk)	0 (health risk) + (traffic risk)	+ (health risk) - (traffic risk)	The residual heath risk remaining after site remediation would be similar to the proposed Project with the mass excavation and remedial cap replacement with excavation alternatives. The main reason for this is that with the proposed Project areas would be capped with clean soil/gravel and vapor barriers would be installed. These remedial methods would provide essentially the same levels of protection and risk reduction as excavation based upon the type of contamination at the Project Site (mainly crude oil components, and arsenic). Truck traffic risks would increase with mass excavation and remedial cap replacement with excavation alternatives due to the increase in truck traffic associated with transporting impacted and clean material to and from the site. The human health risk would be greater for the institutional controls alternative since no excavation or capping of impacted areas would occur thereby increasing the potential for exposure. Truck traffic risks would be much less for this alternative since no remediation activities would occur.
Noise/Vibration	+	+	-	The noise and vibration levels associated with the full and remedial cap

Table 5-13 Comparison of Remediation Alternatives with the Proposed Project

Issue Area	Impacts Compared to Proposed Project			Comments
	Mass Excavation	Remedial Cap Replacement with Excavation	IC and Monitoring	
	Alternative Lessens or Avoids Impacts (–), Result in Increased or Additional Impacts (+) or Remain About the Same (0) when compared to the Proposed Project.			
				replacement with excavation alternatives would be greater than for the proposed Project due to increase in construction related equipment. In particular, sheet pile drivers would be needed to conduct most of the excavations, which are major noise generators. In both cases the noise and vibration associated with the blasting of the flower mound would still occur. The noise and vibration levels would be considerably less with the institutional controls and long-term monitoring alternative no earth moving would occur as part of this alternative.
Population and Housing	0	0	-	While the mass excavation and remedial cap replacement with excavation alternatives would require more workers, the population and housing impacts for these alternatives would be similar to the proposed Project. No construction workers would be required for the institutional controls and long-term monitoring alternative since no remediation activities would occur.
Public Services/Utilities	+	+	-	Both the mass excavation and replacement of remedial caps with excavation alternatives would use considerably more nonrenewable energy than the proposed Project due to the increase number of diesel construction equipment required. The increased traffic associated with the increase truck transport of impacted material and fill to and from the site would increase the potential for interference with emergency and fire protection services along Tank Farm Road. Both of the excavation alternatives would increase the amount of material that would have to be disposed of in landfills due to the increased removal of impacted material from the Project Site. The institutional controls and long-term monitoring alternative would reduce the amount of nonrenewable energy, traffic, and landfill disposal compared to the proposed Project because there would be no remedial activities associated with the alternative.
Recreation	0	0	-	While the mass excavation and replacement of remedial caps with excavation alternatives would require more workers, the recreational impacts for these

Table 5-13 Comparison of Remediation Alternatives with the Proposed Project

Issue Area	Impacts Compared to Proposed Project			Comments
	Mass Excavation	Remedial Cap Replacement with Excavation	IC and Monitoring	
	Alternative Lessens or Avoids Impacts (–), Result in Increased or Additional Impacts (+) or Remain About the Same (0) when compared to the Proposed Project.			
				alternatives would be similar to the proposed Project. No construction workers would be required for the institutional controls and long-term monitoring alternative since no remediation activities would occur.
Transportation/ Circulation	+	+	-	Truck traffic associated with the mass excavation alternative would be substantially greater than for the proposed Project due to the large amount of impacted material and fill that would need to be transported to and from the Project Site. This increased truck traffic would impact Tank Farm Road, as well as all the roads associated with the route to the Santa Maria Landfill. With the remedial cap replacement with excavation alternative there would be an increase in truck traffic over the proposed Project since more impacted material and fill would have to be transported to and from the Project Site. This would primarily impact Tank Farm Road. The institutional controls and long-term monitoring alternative would not generate much in the way of truck traffic since no remedial activities would occur. The only traffic would be associated with monitoring activities. As such, the impacts would be less than the proposed Project.
Water Resources	+	+	-	The potential for pollution runoff would be greater than the proposed Project for both the mass excavation and replacement of remedial caps with excavation alternatives. In both cases, the excavations would involve the handling of contaminated groundwater as well as large quantities of impacted soil. This increase in handling of affected material would increase the potential for pollution runoff. The amount of water needed for dust control and other remediation activities would increase over the proposed Project for both the excavation alternatives. This would increase the potential to interfere with local groundwater recharge. With the mass excavation alternative, massive grading would be needed that could affect surface water flows thereby increasing surface water runoff. This impact could be greater with mass excavation than with the proposed Project just do to the amount of grading that

Table 5-13 Comparison of Remediation Alternatives with the Proposed Project

Issue Area	Impacts Compared to Proposed Project			Comments
	Mass Excavation	Remedial Cap Replacement with Excavation	IC and Monitoring	
	Alternative Lessens or Avoids Impacts (–), Result in Increased or Additional Impacts (+) or Remain About the Same (0) when compared to the Proposed Project.			
				would be needed as part of the excavation process. The institutional controls and long-term monitoring alternative would not have much of an effect on water resources since no remedial activities would occur. As such, the impacts would be less than the proposed Project.
Wastewater	+	+	-	The mass excavation and replacement of remedial caps with excavation alternatives would generate much larger quantities of wastewater that the proposed Project due to the need to dewater the excavation areas. The proposed Project has been designed to avoid the need to dewater as part of the remediation process. The wastewater from dewatering would have to be treated prior to discharge. However, given the large volume of water that would have to be treated there would be an increase risk of releases of contaminated water that could impact surface and groundwater quality. The institutional controls and long-term monitoring alternative would have minimal impact on wastewater since no remedial activities would occur. Some limited amount of wastewater could be generated from the monitoring activities that would occur at the site.

Institutional Controls and Long-Term Monitoring Only

This alternative would result in no remediation activities, which would substantially reduce or eliminate most of the environmental impacts associated with the proposed Remediation Project. However, the level of human health and ecological risk would not be reduced to acceptable levels under this alternative. The development portion of the Project would not be able to proceed due to unacceptable levels of human health and ecological risk. In addition, the Surface Evaluation, Remediation, and Restoration Team (SERRT), which include a number of governmental agencies, rejected this type of remediation for the Project Site. This alternative would also not meet any of the objectives of the proposed Project.

Given that this level of remediation would not be acceptable to the RWQCB and other governmental agencies, and that it would not meet any of the objectives of the Project, it has been dropped from further consideration in the EIR.

5.2.2 Development Alternatives

Table 5-14 (which is before the end of Section 5.2.2) summarizes the screening analysis for the development alternatives and identifies the issue areas where impacts would increase or decrease relative to the proposed Project. The ratings of the various alternatives provided in Table 5-14 were developed based upon a review of the alternative description information provided above, and an assessment of the level of impacts that would occur if these alternatives were implemented. The impacts identified for each of the alternatives were then compared to the proposed Project to determine if the impact was greater or less than the proposed Project. The information in Table 5-14 was used as part of the screening analysis to determine which alternatives should be carried forward for further analysis in the EIR. The following sections summarize the results of this screening analysis for each of the development alternatives.

Residential Development

This alternative would reduce a number of the environmental impacts associated with the Project, including the Class I development impacts associated with air emission and traffic at a number of intersections. However, impacts associated with noise and hazards would increase due to the proximity of the residential development to the Airport. In addition, residential development of this site would not be consistent with the AASP or the County General Plan, both of which have this area zoned for commercial service and business type development. Residential development would also not meet any of the development objectives of the Project. In addition, given the very limited residential development that would be allowed by the ALUP (66 single family homes on the entire Project Site), it is likely that this type of development would not be economically feasible. For these reasons, this alternative has been dropped from further consideration in the EIR.

Development Consistent with AASP

This alternative would not reduce the severity or eliminate any of the impacts of the proposed Project. This alternative would result in the development of a very similar amount of building square footage, and land use mix as the proposed Project. The main difference would be the location of the development on the Project Site.

With this alternative a large portion of the development would be shifted from the northeast corner to the northwest corner of the Project Site. The northwest corner of the site is within the 100-year flood plain and contains wetland and VPFS habitat, as well as other sensitive biological resources. Placing development on this portion of the site would result in an increase in impacts to air quality, biological resources, water resources, and historic resources. As shown in Figure 4-3, portions of the areas zoned for development would be within the Runway Protection Zone (RPZ). The ALUP would prohibit development of structures in this area,

At the time the AASP was developed by the City, many of the biological and hydrological field studies of the site were not available. Had these studies been available, it is likely that development would not have been proposed for this northwest area of the site. In developing their Project, the Applicant had an extensive amount of field data and was able to place development in areas of the site that would avoid impacts to sensitive biological resources.

Given that this alternative would not reduce or eliminate any of the impacts of the proposed Project, and would result in increased impacts in a number of issue areas, it has been dropped from further consideration in the EIR.

Development Consistent with County General Plan

This alternative would not reduce the severity or eliminate any of the impacts of the proposed Project. This alternative would result in the development of a very similar amount of building square footage, and land use mix as the proposed Project. The main difference would be the location of the development on the Project Site. With this alternative a large portion of the development would be shifted from the southeast corner to the northwest corner of the Project Site. The northwest corner of the site is within the 100-year flood plain and contains wetland and VPFS habitat, as well as other sensitive biological resources. Placing development on this portion of the site would result in an increase in impacts to air quality, biological resources, water resources, and historic resources.

At the time the General Plan was developed by the County, many of the biological and hydrological field studies of the site were not available. Had these studies been available, it is likely that development would not have been proposed for this northwest area of the site. In developing their Project, the Applicant had an extensive amount of field data and was able to place development in areas of the site that would avoid impacts to sensitive biological resources.

Given that this alternative would not reduce or eliminate any of the impact of the proposed Project, and would result in increased impacts in a number of issue areas, it has been dropped from further consideration in the EIR.

Reduced Development

This alternative would reduce the severity of a number of the impacts of the proposed Project; however it would only eliminate one of the significant (Class I) impacts associated with the Project. This alternative was designed to reduce the Diesel PM Class I impact to a level of insignificance with mitigation (Class II).

Table 5-14 Comparison of Development Alternatives with the Proposed Project

Issue Area	Impacts Compared to Proposed Project				Comments
	Residential Development	AASP Development	General Plan Development	Reduced Development	
	Alternative Lessens or Avoids Impacts (–), Result in Increased or Additional Impacts (+) or Remain About the Same (0) when compared to the Proposed Project.				
Aesthetics/Visual	-	0	0	-	With the residential development alternative only about 25 acres of the property would be developed. This would reduce the level of impacts to visual character or quality of the site and its surroundings compared to the proposed Project. Also, typically residential homes are not as large as commercial and business park facilities, which would serve to further reduce the impacts to visual character or quality of the site and its surroundings. With the AASP and General Plan development alternatives, the amount of development would be very close to the proposed Project. As such, the impacts to the visual character or quality of the site and its surroundings would essentially be the same as for the proposed Project. With the reduced development alternative, about 30 % less square footage of building space would be constructed, and no development would occur on the western portion of the Project Site. This would result in a slight reduction in the impacts to visual character or quality of the site and its surroundings compared to the proposed Project.
Air Quality	-	+ (construction) 0 (development)	+ (construction) 0 (development)	-	The air emissions associated with pad grading would be less with the residential development than the proposed Project since few areas of development would occur. The air emissions associated with the operation of the residential development would be less than for the proposed Project. If one assumes an average of three persons per household, then the total occupation would be less than 100 people, which is significantly less than for the proposed Project. This lower occupancy coupled with the lower level of square footage development would significantly reduce operational air emissions compared to the proposed Project.

Table 5-14 Comparison of Development Alternatives with the Proposed Project

Issue Area	Impacts Compared to Proposed Project				Comments
	Residential Development	AASP Development	General Plan Development	Reduced Development	
	Alternative Lessens or Avoids Impacts (–), Result in Increased or Additional Impacts (+) or Remain About the Same (0) when compared to the Proposed Project.				
					Both the AASP and the General Plan development alternatives would require substantial grading and pad development in the northwest corner of the site due the fact that this area is within the 100-year flood plan. This would increase construction air emissions over what is projected for the proposed Project. With the AASP and General Plan development alternatives, the amount of development would be very close to the proposed Project. As such, the impacts to air quality from operations would essentially be the same as for the proposed Project. With the reduced development alternative, the amount of building square footage would be reduced by about 30%. This would reduce the overall air emissions associated with operations by about 30%. While the development pad on the west side of the property would not be built, this change would not affect the peak day or peak quarter air emissions for remediation.
Agricultural	0	0	0	0	The impacts to agricultural resources are primarily due to the remediation activities and not related to the development. As such, the impacts to agricultural resources would be expected to be the same for all of the development alternatives.
Biological Resources	0	+	+	0	The impacts to biological resources are primarily due to the remediation activities and not related to the development. With the residential and reduced development alternatives the level of biological impacts would remain the same as for the proposed Project. With the AASP and General Plan development alternatives additional grading that would be needed in the northwest portion of the site. This area is currently within the 100-year

Table 5-14 Comparison of Development Alternatives with the Proposed Project

Issue Area	Impacts Compared to Proposed Project				Comments
	Residential Development	AASP Development	General Plan Development	Reduced Development	
	Alternative Lessens or Avoids Impacts (–), Result in Increased or Additional Impacts (+) or Remain About the Same (0) when compared to the Proposed Project.				
					flood plain and would require substantial fill to allow for development. This fill and grading would impact additional wetlands, VPFS habitat, and sensitive plant species habitat. This would increase biological impacts for these alternatives over the proposed Project.
Cultural Resources	0	+	+	0	The impacts to cultural and historic resources are primarily due to the remediation activities and not related to the development. However, with the AASP and General Plan development alternatives a number of historic sites associated with past oil operations would have to be removed due to the increased development in the Northwest corner of the site. This would increase the impacts to historic resources compared to the proposed Project.
Geological and Soil Resources	0	0	0	0	The geological impacts of development are primarily associated with impacts due to inadequate design of fill areas and pads that would be used for development. These same impacts would apply to all of the development alternatives and the level of impact would be similar to that for the proposed Project.
Hazards/ Hazardous Materials	+	0	0	0	The residential development would place homes within the airport safety zones. While limited residential development is allowed in these safety zones, they would subject homes to increase risk of airport hazards. In addition, while the homes would be placed on areas of the site that do not have contamination, there would still be an increase in exposure risk for the residential properties. The AASP, General Plan and reduced development alternatives would be expected to have similar hazard and hazardous material impacts as the proposed Project since they would all involve developing similar total acreage at the site. With the AASP and General Plan alternatives the recreational ball fields would not be built, which could reduce the potential for aircraft

Table 5-14 Comparison of Development Alternatives with the Proposed Project

Issue Area	Impacts Compared to Proposed Project				Comments
	Residential Development	AASP Development	General Plan Development	Reduced Development	
	Alternative Lessens or Avoids Impacts (–), Result in Increased or Additional Impacts (+) or Remain About the Same (0) when compared to the Proposed Project.				
					wildlife strikes when compared to the proposed Project. However, this would be a minor reduction compared to that associated with the increase in wetland acreage that would result as part of the Remediation Project.
Noise/Vibration	+	0	0	0	The residential development alternative would subject homes to increase levels of noise from aircraft operations at the airport. This would be considered a more severe impact than for the proposed Project since the development would be residential. Peak hourly construction noise would be similar to the proposed project, but the duration of the construction noise would be less since it would take less time to build the residential development than the proposed Project. The AASP, General Plan and reduced development alternatives would be expected to have similar noise impacts as the proposed Project since they would all involve developing similar total acreage at the site, and the types of development would be similar. With the reduced development alternative, the duration of the construction noise would be less since it would take less time to build out this smaller development. However, the peak hourly noise levels from construction would be the same for this alternative as the proposed Project, so the construction noise impacts would be similar to the proposed Project.
Population and Housing	-	0	0	0	The residential development alternative would not include any new business development and therefore, would not induce growth in the labor market that would increase demand for housing. This alternative would provide additional housing. The AASP and General Plan development alternatives would be expected to have similar population and housing impacts as the

Table 5-14 Comparison of Development Alternatives with the Proposed Project

Issue Area	Impacts Compared to Proposed Project				Comments
	Residential Development	AASP Development	General Plan Development	Reduced Development	
	Alternative Lessens or Avoids Impacts (–), Result in Increased or Additional Impacts (+) or Remain About the Same (0) when compared to the Proposed Project.				
					proposed Project since they would all involve developing similar total building square footage at the site, and the types of development would be similar. While the amount of building square footage would be less with the reduced development alternative, the potential for impacts to growth of jobs would be expected to be similar to the proposed Project.
Public Services/Utilities	-	0	0	-	With the residential development alternative fewer people would occupy the site. This would result in a substantial reduction in water use, energy use, and solid waste generation compared to the proposed Project even though the homes would be used 24-hrs per day. The population difference between the proposed Project and the residential development alternative is more than an order of magnitude. The AASP and General Plan development alternatives would be expected to have similar public services and utility impacts as the proposed Project since they would all involve developing similar total building square footage at the site, and the types of development would be similar. The amount of building square footage would be about 30% less with the reduced development alternative. This would reduce the water use, energy use, and solid waste generation by about the same percentages compared to the proposed Project.
Recreation	+	+	+	0	With the residential, AASP, and General Plan development alternatives, the recreational ball fields would not be constructed. This would eliminate the beneficial recreational impacts associated with the proposed Project. The reduced development alternative would include the

Table 5-14 Comparison of Development Alternatives with the Proposed Project

Issue Area	Impacts Compared to Proposed Project				Comments
	Residential Development	AASP Development	General Plan Development	Reduced Development	
	Alternative Lessens or Avoids Impacts (–), Result in Increased or Additional Impacts (+) or Remain About the Same (0) when compared to the Proposed Project.				
					recreational ball fields so the recreational impacts would be the same as for the proposed Project.
Transportation/ Circulation	-	0	0	-	The residential development would generate lower traffic volumes as compared to the proposed Project. This would reduce the severity of traffic impacts associated with the proposed development. The AASP and General Plan development alternatives would involve developing similar total building square footage at the site, as well as a similar mix of land use types. This would mean that these alternatives would generate a similar level and mix of traffic. However, more of the traffic would be on the northwest side of the site which would make construction of the Unocal Collector Road to Prado Road critical to avoiding additional impacts to Tank Farm Road. The reduced development alternative would result in a reduction of traffic volumes by about 30% over the proposed Project. This would reduce severity of traffic impacts when compared to the proposed Project.
Water Resources	-	+ (construction) 0 (development)	+ (construction) 0 (development)	-	Water use for residential development under the City Plan would use water from the City Utilities. The amount of water used would be reduced by on an order of magnitudes compared to the proposed Project due to fewer people and less development areas. Water use for the residential development under the County plan would be provided by onsite groundwater wells. The amount of water needed would be reduced by over an order of magnitude compared to the proposed Project. This reduction in groundwater use would also reduce the potential for migration of hydrocarbons from the shallow ground water to the deep

Table 5-14 Comparison of Development Alternatives with the Proposed Project

Issue Area	Impacts Compared to Proposed Project				Comments
	Residential Development	AASP Development	General Plan Development	Reduced Development	
	Alternative Lessens or Avoids Impacts (–), Result in Increased or Additional Impacts (+) or Remain About the Same (0) when compared to the Proposed Project.				
					groundwater wells compared to the proposed Project. The AASP and General Plan development alternatives would result in development within the northwest corner of the Project Site. This area is within the 100-year flood plain and would require substantial amounts of fill to allow for the development of buildings. The change in contour of this area would affect the overall hydrology of the site. This northwest marsh area is a critical holding area for surface water runoff. Development in this area could result in limiting the ability to manage the surface water on site during large storm events. This would increase the potential surface water runoff impacts compared to the proposed Project. Water use of the AASP and General Plan development alternatives would b similar to that for the proposed Project since the development square footage would be about the same. Water use for the reduced development alternative under the County plan would be provided by onsite groundwater wells. The amount of water needed would be reduced by about 30%. This reduction in groundwater use would provide a slight reduction in the impacts to groundwater when compared to the proposed Project.
Wastewater	-	0	0	-	Wastewater from the residential development under the County plan would be provided by an onsite wastewater treatment facility. The amount of wastewater generated would be reduced by over an order of magnitude compared to the proposed Project since few people would be occupying the site. This reduction in wastewater would reduce the wastewater impacts over that for the proposed Project.

Table 5-14 Comparison of Development Alternatives with the Proposed Project

Issue Area	Impacts Compared to Proposed Project				Comments
	Residential Development	AASP Development	General Plan Development	Reduced Development	
	Alternative Lessens or Avoids Impacts (–), Result in Increased or Additional Impacts (+) or Remain About the Same (0) when compared to the Proposed Project.				
					The AASP and General Plan development alternatives would be expected to have similar wastewater impacts as the proposed Project since they would all involve developing similar total building square footage at the site, and the types of development would be very similar. The amount of building square footage would be about 30% less with the reduced development alternative. This would reduce the wastewater generation by the Project by about the same percentage. This would result in a slight reduction in wastewater impacts associated with the City and County development. With the County development the onsite wastewater treatment facility would have to handle less wastewater than the proposed Project since less building square footage would be developed.

The reduction in impact severity would be driven by the overall reduction in the amount of development that would occur on the Project Site. Under this alternative the building square footage would be reduced to 562,000 square feet under both the City and County Development Plans. This alternative would reduce air emission, visual, traffic, water resources (County plan only), wastewater (County plan only), and utility/public services impacts when compared to the proposed Project. Some of these impact were identified as significant and unavoidable (Class I) for the proposed Project (air emissions and traffic). While this alternative would reduce the severity of these impacts it is likely they would still be significant Class I impacts for all but the Diesel PM impact, which would be Class II.

Given that this alternative has the potential for reducing the severity of some of the significant impacts identified for the proposed Project, and eliminating the Class I impact for Diesel PM it has been selected for further analysis in the EIR.

5.2.3 Transportation Alternatives

Table 5-15 (which is just before the end of Section 5.2.3) summarizes the screening analysis for the transportation alternatives and identifies the issue areas where impacts would increase or decrease relative to the proposed Project. The ratings of the various alternatives provided in Table 5-15 were developed based upon a review of the alternative description information provided above, and an assessment of the level of impacts that would occur if these alternatives were implemented. The impacts identified for each of the alternatives were then compared to the proposed Project to determine if the impact was greater or less than the proposed Project. The information in Table 5-15 was used as part of the screening analysis to determine which alternatives should be carried forward for further analysis in the EIR. The following sections summarize the results of this screening analysis for each of the transportation alternatives.

Unocal Collector Road

This alternative would not reduce or eliminate any impacts associated with the proposed Project. Implementation of this alternative would require the construction of new roads and would not eliminate any element of the proposed Project. As such, all of the impacts associated with the road construction and operation would be in addition to the impacts identified for the proposed Project. The biggest drawback to this alternative would be the biological impacts associated with constructing the road through wetland and VPFS habitat in the northwest area of the Project Site.

Also, a considerable amount of fill would need to be transported to the site to build the road through the Project Site. This fill would be needed because the road would be constructed within the 100-year flood plain. This would result in increased air emissions from construction and could impact the overall hydrology of the site since the north marsh wetlands are a key water retention area for controlling runoff during large storm events.

This alternative has been considered since the roadway was part of the AASP. However the roadway is not in the City's 1994 Circulation Element. While the Unocal Collector Road would improve access to the western parcel of the proposed Project and serve as an additional connection to Prado Road, its construction would not eliminate or reduce any identified transportation impacts due to the relatively low volumes of traffic it would serve. This is because very little of the proposed development would occur on the western portion of the Project Site.

Given that this alternative roadway would not result in eliminating or reducing any of the identified transportation impacts associated with the proposed Project, and would result in additional impacts to a number of issues areas, it has been dropped from further consideration in the EIR as a result of this screening analysis.

Prado Road Extension

This alternative would extend Prado Road from its current terminus to Broad Street as a two-lane facility (this would provide a new connection from South Higuera Street to Broad Street), and extend Santa Fe Road as a two-lane facility from the northern edge of the Project Site to Prado Road. These improvements would occur as a part of Phase 1 or Phase II of the Project. Widening of Tank Farm Road would be deferred to a later stage of the project development under this alternative. A roundabout would be constructed at the intersection of Santa Fe and Prado Roads.

The extension of Prado Road is a major transportation goal of the City. Completion of this road is critical to the development of the Margarita Area, and is part of the Margarita Area Specific Plan (MASP). Prado Road would provide the primary access to the Margarita area from other parts of the city, and would connect the southeastern and southwestern parts of the city (MASP, 2004). The City Circulation Element designates Prado Road as a "highway/regional route."

This alternative was evaluated using Average Daily Traffic (ADT) estimates, which are compared to standard daily roadway capacities to determine the number of lanes required on a roadway segment. Caltrans publishes standard ADT capacities for different facilities. Using these standard capacities, the LOS D threshold for a Class I 2-lane divided arterial is 17,325 daily vehicles. The existing ADT on Tank Farm Road between South Higuera Street and Santa Fe Road is 18,400 vehicles.

The extension of Prado Road would provide drivers with an alternative route parallel to Tank Farm Road early in project development and would remove vehicles from Tank Farm Road. The amount of traffic expected to shift from Tank Farm Road to the extended Prado Road was estimated using the City's Travel Demand Model. The model showed that the extension of Prado Road lowered the ADT on Tank Farm Road by 27% from 18,400 to 13,400 vehicles daily. The model showed a commensurate increase in volume on Prado Road, as drivers shifted to the new parallel route.

The proposed Project would generate 8,193 daily vehicle trips once pass-by trips and internalization reductions are applied. Of these trips, 35% are expected to travel on Tank Farm Road west of Santa Fe Road if the Prado Road extension is in place. This corresponds to 2,868 daily project trips on this segment, which yields an ADT of 16,268 with the Project (13,400+2,868). This is below the LOS D threshold for this facility, and is expected to provide acceptable operations.

Table 5-15 Comparison of Transportation Alternatives with the Proposed Project

Issue Area	Impacts Compared to Proposed Project		Comments
	Unocal Collector	Prado Road	
	Alternative Lessens or Avoids Impacts (–), Result in Increased or Additional Impacts (+) or Remain About the Same (0) when compared to the Proposed Project.		
Aesthetics/Visual	0	0	The two transportation alternatives would not be expected to affect the visual character or quality of the site and its surroundings when compared to the proposed Project
Air Quality	+ (construction) 0 (operations)	0 (construction) 0 (operations)	The Unocal Collector Road would increase overall construction emissions compared to the proposed Project since additional roads would need to be constructed with this alternative. In addition, fill material for the construction of the road in the northwest portion of the site would have to be trucked to the site, which would increase transportation emissions compared to the proposed Project. With the Unocal Collector Road operational emissions from transportation would remain the same as the proposed Project. The Prado Road alternative would not increase the peak quarterly air emissions for the proposed Project since the widening of Tank Farm Road would be delayed, and the emissions from these two road construction activities would not overlap. With the Prado Road extension operational emissions from transportation would remain the same as the proposed Project.
Agricultural	+	+	Both of the transportation alternatives would impact additional acreage that is currently being used for agricultural operations such as grazing and row crops. This would increase the agricultural impacts for these alternatives when compared to the proposed Project. With the Prado Road alternative, the widening of Tank Farm Road would be delayed, but it would still occur as part of the project, so none of the impacts associated with this widening would be eliminated.
Biological Resources	+	+	Both of the transportation alternatives would involve construction in areas that have biological resources. The Unocal Collector Road would impact additional wetland and VPFS habitat in the northwest corner of the Project Site. The Prado Road alternative would involve constructing a crossing of Acacia Creek, which contains riparian and wetland habitat. Construction of this creek crossing would likely result in impacts to biological resources. Even with the Prado Road alternative, eventually Tank Farm Road would be widened so none of the wetland impacts associated with this widening would be eliminated. Therefore, the biological impacts associated with construction would be greater for both of these alternatives when compared to the proposed Project.
Cultural Resources	+	+	Construction of the Unocal Collector Road would impact a number of historic sites on the Project Site that are associated with the past oil operations. Also, the potential for encountering unknown cultural resources would be greater with both the transportation alternative since they

Table 5-15 Comparison of Transportation Alternatives with the Proposed Project

Issue Area	Impacts Compared to Proposed Project		Comments
	Unocal Collector	Prado Road	
	Alternative Lessens or Avoids Impacts (–), Result in Increased or Additional Impacts (+) or Remain About the Same (0) when compared to the Proposed Project.		
			would increase the amount of grading and ground disturbance due to the additional length of road that would need to be built.
Geological and Soil Resources	+	+	The construction activities associated with both the transportation alternatives would increase the potential for erosion-induced siltation of nearby creeks just due to the fact that more grading and earthmoving activities would be needed due to the additional length of road that would need to be built. Neither of these alternatives would eliminate any aspect of the proposed Project. While the Prado Road alternative would delay the widening of Tank Farm Road, it still would have to be widened as part of the proposed Project, but just at a later date. Therefore, none of the geological and soil impacts for the proposed Project would be eliminated or reduced b these alternatives.
Hazards/ Hazardous Materials	0	0	The two transportation alternative would not be expected to affect the hazardous and hazardous materials impacts of the proposed Project.
Noise/Vibration	+	+	The construction of the two road alternatives would generate temporary construction noise in areas that would not be impacted by the proposed Project. With the Unocal Collector Road, the route would pass through sensitive biological habitat in the northwest corner of the site in an area that is not part of the proposed development. The increased traffic noise in this area could have an impact on wildlife in this area. The main driver for the increase noise would be due to the additional length of road that would need to be built for each of the transportation alternatives.
Population and Housing	0	0	The two transportation alternatives would not be expected to affect the population and housing impacts of the proposed Project.
Public Services/Utilities	0	0	The two transportation alternatives would not be expected to affect the public services and utilities impacts of the proposed Project.
Recreation	0	0	The two transportation alternatives would not be expected to affect the recreational impacts of the proposed Project.
Transportation/ Circulation	-	-	Installation of the Unocal Collector Road would allow traffic from the western side of the development to access Prado Road, so not all of the traffic would have to use Tank Farm Road. This could reduce the traffic and circulation impacts along Tank Farm Road compared to the proposed Project. The Prado Road alternative would allow traffic from the northeast side of the development to

Table 5-15 Comparison of Transportation Alternatives with the Proposed Project

Issue Area	Impacts Compared to Proposed Project		Comments
	Unocal Collector	Prado Road	
	Alternative Lessens or Avoids Impacts (–), Result in Increased or Additional Impacts (+) or Remain About the Same (0) when compared to the Proposed Project.		
			access Prado Road, so not all of the traffic would have to use the Southern part of San Fe Road and Tank Farm Road. This could reduce the traffic and circulation impacts along the southern parts of Santa Fe and Tank Farm Roads compared to the proposed Project.
Water Resources	+	+	The Unocal Collector Road alternative would result in construction of a road within the northwest corner of the Project Site, in an area that is not slated for development with the proposed Project. This area is within the 100-year flood plain and would require substantial amounts of fill to allow for the construction of the road. The change in contour of this area would affect the overall hydrology of the site. This northwest marsh area is a critical holding area for surface water runoff. Development in this area could result in limiting the ability to manage the surface water on site during large storm events. Therefore, the Unocal Collector Road alternative could increase the potential surface water runoff impacts compared to the proposed Project. The Prado Road alternative would involve constructing a crossing of Acacia Creek, which contains riparian and wetland habitat. Construction of this creek crossing could result in impacts to water resources from construction silt entering the creek. This creek would not be directly impacted by construction from the proposed Project.
Wastewater	0	0	The two transportation alternatives would not be expected to affect the wastewater impacts of the proposed Project.

The shift in traffic from Tank Farm Road to Prado Road would also affect intersection operations by adding turning traffic to the South Higuera Street/Prado Road intersection and lowering turning traffic at the South Higuera Street/Tank Farm Road intersection. The South Higuera Street/Prado Road intersection is projected to operate at LOS D or better with the Prado Road extension in place under Existing Plus Project conditions with its current lane configuration. The shift in traffic away from Tank Farm Road would also reduce queuing at the intersections of South Higuera Street and Broad Street with Tank Farm Road.

In summary, a two-lane section of Tank Farm Road west of Santa Fe Road would provide adequate capacity under Existing Plus Project conditions if the Prado Road extension is in place. Without the Prado Road extension it would be necessary to widen Tank Farm Road to four lanes between South Higuera Street and Broad Street. Under Cumulative Conditions, it would be necessary to widen Tank Farm Road to four lanes both with and without the Project, even with the Prado Road extension in place.

Under this alternative, the Applicant would participate in funding the Prado Road extension along with other property owners along the Prado Road alignment. The City's plan for the Prado Road extension is to build it concurrently with development of the Margarita Area. The respective properties would dedicate all right-of-way for the road in fee and also dedicate access control at the time of development. During initial development of the Margarita Area, the Western Enclave developers would construct or fund the construction of the two lanes of roadway, one bike path, and one sidewalk with street lighting. Given that the City is only asking for "fair share" funding from the Applicant for this Project, it is not entirely clear that funding from the Margarita Area developers would be available in a timeframe that would allow this alternative to be implemented as part of the Phase I Project development. This alternative would only be feasible if Prado Road could be completed prior to the start of the Phase I development.

As part of the traffic mitigation for the proposed Project (Impact T-5a), the City as required that the proposed Project be added to either the City's Transportation Impact Fee program or the AASP or MASP impact fee programs, which would require the Applicant to pay an additional mitigation amount commensurate with their additional traffic impact beyond cumulative conditions. These fees would include any "fair share" for the extension of Prado Road. Since the fees for building this road extension are already addressed as a mitigation measure on the proposed Project, this alternative has not been addressed further in the EIR.

5.2.4 Other County Development Alternatives

The use of City water and the sewer system have been eliminated from further consideration since they were found to be infeasible. The City has stated that water and sewer can only be provided to the Project if the development is within the City. The City would not be able to provide water and sewer to a development within the County (Dunsmore. 2013).

5.3 Environmental Analysis of Selected Alternatives

Based on the screening analysis presented above, three alternatives were selected for further evaluation in the EIR. State CEQA Guidelines Section 15126.6(d) states:

The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed Project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the Project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the Project as proposed.

In accordance with State CEQA Guidelines Section 15126.6(d) as presented above, this EIR provides sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed Project and the other alternatives. It should be noted that assumptions made regarding the alternatives' descriptions could differ from actual proposals and the analyses are not presented to a project-level of detail. Different alternative Project configurations and a project-level environmental analysis could result in different conclusions from those presented herein.

The remainder of this section analyzes the environmental impacts of the selected alternatives. The alternatives selected in Section 5.2 for more detailed analysis include:

- The No Project Alternative;
- Remedial Cap Replacement with Excavation; and
- Reduced Development;

5.3.1 No Project Alternative

The Applicant's proposed Project is to conduct remediation and restoration of the Project Site consistent with the proposed Remedial Action Plan (RAP) that has been submitted to the Regional Water Quality Control Board (RWQCB), and then to develop the portions of the Project Site with a mix of commercial and business park development. With the No Project Alternative, the development of the site would not occur, and the Project Site would remain as open space. However, it is likely that the RWQCB would approve the RAP or issue a Cleanup and Abatement Order (CAO) for the Project Site to require remediation and restoration to assure protection of human health and ecological receptors. Based upon data provided in the Human Health Risk Assessment (HHRA), predictive Ecological Risk Assessment (pERA), Remediation Feasibility Study, and feedback to date from the SERRT, the level of remediation under the No Project Alternative would likely be the similar to the proposed Project.

For the purposes of the EIR it has been assumed that the remediation and restoration of the Project Site under the No Project Alternative would be the same as for the proposed Project. The only change would be that the remediation portion of the Project would not include the construction of the rough pads for either the proposed City or County Development Plans, and that some of the remedial caps would be thinner in depth. The restoration would also be similar to the proposed project except the areas that are proposed for development would be returned to their natural grade and revegetated. None of the proposed infrastructure improvements associated with roads would occur as part of the No Project Alternative. Only the storm water management improvements needed to support the remediation and restoration effort would be constructed on-site.

With the No Project Alternative none of the development impacts identified for the proposed Project would occur. The No Project Alternative would not have any new environmental impacts associated with development, since none of the proposed development activities would occur. The No Project Alternative would not meet any of the development objectives of the proposed Project since none of the development would occur.

The Remediation/Restoration Project under the No Project Alternative would have similar impacts as the proposed Project. The main difference between the two remediation/restoration projects would be that less fill would need in the areas that are proposed for development, such as the Northwest Operations Area and Operational Unit #3. The estimated fill quantities for the No Project Alternative are provided in Table 5-1. With the No Project Alternative, about 300,000 cubic yards less of fill material would be needed compared to the proposed Project (641,850 cubic yards for the proposed Project vs. 341,800 cubic yards for the No Project Alternative). This would reduce the amount of earth moving and overall grading activities associated with the Project.

Under the No Project Alternative all of the impacts associated with the City or County Development Plans would be eliminated since no development would occur. Under the No Project Alternative the remediation/restoration impacts in the following issue areas would remain the same as for the proposed Project.

- Agricultural Resources,
- Biological Resources,
- Cultural Resources and Archeology,
- Geological and Soil Resources,
- Population and Housing,
- Recreation, and
- Wastewater.

All of the remediation/restoration impacts and mitigation measures identified for the proposed Project in these issue areas would also apply to the No Project Alternative. The reader is referred to Chapter 4 of the EIR for a description of the remediation impacts and mitigation measures for each of the issue areas listed above. The remediation/restoration impacts associated with each of the affected issue areas are discussed below.

Aesthetics and Visual Resources

With the No Project Alternative the development pads would not be rough graded, and the areas would be returned to their natural grade and revegetated. This would eliminate the long-term visual impact associated with rough graded pads remaining until development occurred, which could be as much as 25-years for some of the development areas. Impact AE.1 (Visual Character or Site Quality) would remain a Class II impact for remediation/restoration, but would be reduced in severity. Mitigation measures AE-1b identified for the proposed Project would be applicable to the No Project Alternative.

Air Quality and Greenhouse Gases

Air emissions of criteria pollutants (CO, ROG, NOx, SO_2, and PM) during construction would result from construction equipment with internal combustion engines (e.g., backhoes, cranes), and off-site vehicles (e.g., construction employee commuter vehicles and trucks delivering equipment and hauling materials to and from the site). With the No Project Alternative, the amount of emissions would be reduced since less site fill and grading would need to occur. Table 5-16 provides an estimate of the remediation emissions for the No Project Alternative.

Table 5-16 Remediation Emissions-No Project Alternative-Mitigated

PEAK DAY (lbs/day)	ROG + NOx	Diesel PM	
SLO County	483	4.6	
Thresholds	137	7	
Exceeds Thresholds?	Yes	No	
SB County	20.4	0.3	
Combined SLOC & SBC	497	4.9	
PEAK QUARTER (tons/qrtr)	**ROG + NOx**	**Diesel PM**	**Fugitive Dust**
SLO County	13.6	0.12	5.63
Thresholds	2.5	0.13	2.5
Exceeds Thresholds?	Yes	Yes	Yes
SB County	0.54	0	-
Combined SLOC & SBC	14.1	0.12	5.63

Note: Santa Barbara County does not have a peak day or quarter threshold for construction emissions. Peak days occur at different times in SBC and SLO County. Therefore, Combined is not an addition of the individual peaks in the above table.

The peak day emissions would not be expected to change with the No Project Alternative. There would be a 10 percent reduction in the peak quarterly emissions for the No Project Alternative. This reduction would also apply to the GHG and toxic emissions.

Impacts AQ.1 (Construction Criteria Emissions), AQ.2 (Construction GHG Emissions), and AQ.3 (Construction Toxic Emissions) would be less than for the proposed Project. The mitigation measures identified for the proposed Project under AQ.1, AQ.2 and AQ.3 would all be applicable to the No Project Alternative. PM and diesel PM construction emission impacts would remain Class II for the No Project Alternative. Construction GHG emission impacts would remain Class III for the No Project Alternative. Construction toxic and criteria emission impacts would remain a Class II for the No Project Alternative. However, the severity of all of these impacts would be reduced compared to the proposed Project.

Transportation and Circulation

There would be less truck traffic associated with the No Project Alternative since less material would need to be delivered to the site. Truck trips associated with importing fill material would be eliminated (approximately 5,500 truck trips would be need to import fill for the proposed Project.). Truck trips associated with remediation/restoration under the No Project Alternative would be expected to decrease by about 12 percent. However, there would not be an expected decrease in the peak day or peak hour truck trips for the No Project Alternative. Therefore, Impact T.1 (Remediation Traffic) would be the same as for the proposed Project. The mitigation

measures identified for the proposed Project under T.1 would all be applicable to the No Project Alternative. Transportation and Circulation impacts would remain Class II for the No Project Alternative, but would be reduced in severity.

Hazards and Hazardous Materials

The No Project Alternative would result in a reduction of truck transportation compared to the proposed Project, which would serve to reduce the transportation hazards. Transportation hazards are related to those components of a project where there is the possibility of a traffic accident resulting from the increased level of traffic on the local area roadways due to the Project. This traffic hazard would primarily be associated with the truck transportation of Non-Hazardous Hydrocarbon Impacted Soil and the importation of fill material. With the No Project Alternative fill material would not need to be imported to the site. This would eliminate approximately 5,500 truck trips thereby reducing the transportation hazards. Even with this reduction in truck trips, the Impact HM.2 (Truck Traffic Risk) would be the same as for the proposed Project (Class III), but would be reduced in severity. Under the No Project alternative it is likely that the modifications to Reservoir 2 would not occur, so Impact HM.5 (Topography Changes and Aircraft Safety) would not occur, so there would be no beneficial impact.

All of the other Hazards and Hazardous Material impacts identified for the proposed Remediation Project (HM.1-Health Risk, HM.3-Asbestos Exposure, and HM.4-Bird Strike Risk) would remain the same as for the proposed Project. Any mitigation measures associated with HM.1, HM.3, and HM.4 would also apply to the No Project Alternative.

Public Service and Utilities

A number of the remediation/restoration impacts are associated with increased traffic on local roads potentially interfering with emergency response, including fire (Impact PS/U.1) and police (Impact PS/U.2). With the elimination of the imported fill truck trips (about 5,500) the No Project Alternative could potentially result in a reduction in the severity of these impacts. However, as discussed under Transportation and Circulation above, the peak hour and peak day truck trips would be expected to remain the same as for the proposed Project. Therefore, on average the traffic impacts to emergency response would be expected to decrease in severity when compared to the proposed Project, but would remain the same on the peak traffic days. Impacts PS/U.1 (Traffic Interference with Fire) and PS/U.2 (Traffic Interference with Police) would remain Class III for the No Project Alternative, but would be reduced in severity.

Impact PS/U.3 (Use of Nonrenewable Resources) would reduce in severity over the proposed Project since there would be less trucking associated with the importing of soil for backfill. However, the impact would remain Class III, and any mitigation measures identified for P/U.3 would apply to this alternative.

PS/U.4 (Solid Waste Generation) would remain the same as the proposed Project for the remediation portion of the No Project Alternative. Any mitigation measures associated with PS/U.4 would also apply to the No Project Alternative.

Water Resources

The Remediation Project would require the use of groundwater resources as a water supply for remediation and construction activities. Water would be supplied by four existing wells. With the No Project Alternative, less groundwater would be needed for dust control and compaction moisture since less grading and fill/compaction would be needed as a result of no development. However, water use for the restoration activities would increase compared to the proposed Project due to the need to restore the areas of the site that would have been development pads. Table 5-17 provides estimates of the water use for remediation/restoration under the No Project Alternative.

The peak water demand under the No Project Alternative would occur in year three at approximately 145 acre-feet per year, which is just two acre-feet less than the Propose Project. In some of the outer years the water use for restoration would be greater than for the proposed Project due to the need to water more plants for restoration. Given that the reduction in remediation water use would be essentially offset by increased water use for restoration, the impacts of groundwater use would remain the same as the proposed Project for the No Project Alternative. Impact WR.2 (Use of Groundwater) would remain the same as the proposed Project (Class III).

Table 5-17 Estimated Water Demand for Remediation and Restoration by Year (acre-feet per year)-No Project Alternative

Work	Use	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Remediation	Dust Control	20	20	20	0	0	0	0	0
	Compaction Moisture	20	20	20	0	0	0	0	0
Restoration	Nursery	26	45	65	65	22	8	4	0
	Plantings		40	40	40	0	0	0	0
Total		66	125	145	105	22	8	4	0

MRS estimates, adapted from Cleath 2003.

All of the other water resources impacts associated with remediation (WR.1-Surface Water Quality, WR.3-Excavation of Contaminated Material, WR.4-Stormwater Runoff, and WR.5-Change in Surface Flows) would remain the same as for the Proposed Project. Any mitigation measures associated with WR.1, WR.3, WR.4, and WR.5 would also apply to the No Project Alternative.

5.3.2 Remedial Cap Replacement with Excavation

With the remedial cap replacement with excavation alternative, the areas of the Project Site where caps are proposed would be excavated. A more detailed description of this alternative is provided in Section 5.1.2.2.

Under the remedial cap replacement with excavation alternative the remediation/restoration impacts in the following issue areas would remain the same as the proposed Project.

- Agricultural Resources,
- Population and Housing, and
- Recreation.

All of the remediation/restoration impacts and mitigation measures identified for the proposed Project in these issue areas would also apply to the remedial cap replacement with excavation alternative. The reader is referred to Chapter 4 of the EIR for a description of the remediation impacts and mitigation measures for each of the issue areas listed above.

The remedial cap replacement with excavation alternative would not affect any of the development impacts. All of the development impacts associated with the City and County Development Plans would remain the same as the proposed Project. The reader is referred to Chapter 4 of the EIR for a description of the development impacts and mitigation measures for both the City and County Development Plans.

The remediation impacts associated with each of the affected issue areas are discussed below.

Aesthetics and Visual Resources

With the remedial cap replacement with excavation alternative the remediation activities would take longer to complete and there would be more equipment at the site to handle the increase amount of excavations. Also, more NHIS material would have to be trucked from the site, and more fill would need to be brought to the site, thereby increasing the amount of truck traffic in the vicinity of the Project Site. This would increase the level and duration of impact to the visual character and quality of the Project Site and surrounding area compared to the proposed Project. Impact AE.1 (Visual Character or Site Quality) would remain a Class II impact for remediation/restoration, but would increase in severity. Mitigation measures associated with impact AE.1 for the proposed Project would apply to this alternative.

Air Quality and Greenhouse Gases

Table 5-18 provides an estimate of the remediation emissions for the Remedial cap replacement with excavation alternative.

Air emissions of criteria pollutants (CO, ROG, NOx, SO_2, and PM) during construction would result from construction equipment with internal combustion engines (e.g., backhoes, cranes, sheet pile drivers, etc.), and off-site vehicles (e.g., construction employee commuter vehicles and trucks delivering equipment and hauling materials to and from the site). With the remedial cap replacement with excavation alternative, the amount of air emissions would be increased over the proposed Project due to the following major activities:

- Excavation of additional impacted soil,
- Installation of sheet pile walls,
- Additional truck trips to remove impacted soil and import clean fill material,
- Additional grading and fill activities associated with the increase in excavations, and
- Excavation dewatering activities.

Table 5-18 Remediation Emissions-Remedial Cap Replacement with Excavation Alternative-Mitigated

PEAK DAY (lbs/day)	ROG + NOx	Diesel PM	
SLO County	579.6	5.5	
Thresholds	137	7	
Exceeds Thresholds?	Yes	No	
SB County	24.5	0.38	
Combined SLOC & SBC	596.4	5.86	
PEAK QUARTER (tons/qrtr)	**ROG + NOx**	**Diesel PM**	**Fugitive Dust**
SLO County	20.4	0.18	8.4
Thresholds	2.5	0.13	2.5
Exceeds Thresholds?	Yes	Yes	Yes
SB County	0.8	0	-
Combined SLOC & SBC	21.2	0.18	8.4

Note: Santa Barbara County does not have a peak day or quarter threshold for construction emissions. Peak days occur at different times in SBC and SLO County. Therefore, Combined is not an addition of the individual peaks in the above table.

Note: Since the construction activity would last for more than 90 days, the daily thresholds would not apply (as per the SLOAPCD Handbook).

The peak day emissions would increase by about 20 percent over the Proposed Project. The peak quarterly emissions would increase by about 35 percent. These increases would also apply to the GHG and toxic emissions.

Impacts AQ.1 (Construction Criteria Emissions), AQ.2 (Construction GHG emissions), and AQ.3 (Construction Toxic Emissions) would be greater than for the proposed Project. The mitigation measures identified for the proposed Project under AQ.1, AQ.2 and AQ.3 would all be applicable to the remedial cap replacement with excavation alternative. PM and diesel PM construction emission impacts would remain Class II for the remedial cap replacement with excavation alternative. Construction GHG emission impacts would remain a Class III for the remedial cap replacement with excavation. Construction toxic and criteria emission impacts would remain a Class II for the remedial cap replacement with excavation alternative. However, the severity of all of these impacts would be increased compared to the proposed Project.

Transportation and Circulation

There would be greater truck traffic associated with the remedial cap replacement with excavation alternative since more NHIS soil would have to be hauled from the site, and more fill material would need to be delivered. For this alternative about 52,300 truck trips would be needed for export and import of soil, compared with 18,500 for the proposed Project. In addition, the increase in excavations would result in more general construction equipment use, which would require more truck traffic to the site (i.e., delivery of sheet pile, dewatering equipment, etc.) Truck trips associated with remediation under this alternative would be expected to increase by about 34,200 trips (56,450 truck trips for this alternative vs. 22,285 for the proposed Project.) over the proposed Project. This would result in an increase in peak day truck trips from about 180 to about 215.

Given that these trips would be spread throughout the day, remediation trip generation for this alternative would still be significantly lower than the trip generation associated with the development phase of the Project. However, the heavy vehicle traffic and temporary traffic control on Tank Farm Road would potentially obstruct the flow of vehicle and bicycle traffic resulting in potentially unsafe conditions. Double trailer trucks interacting with standard commuter traffic could produce greater accident potential and the potential for roadway damage. In addition, remediation activities may overlap with the reconstruction of the Los Osos Valley Road/U.S. Highway 101 interchange, exacerbating construction impacts.

Therefore, Impact T.1 (Remediation Traffic) would be greater in severity than for the proposed Project. The mitigation measures identified for the proposed Project under T.1 would all be applicable to this alternative. Traffic and circulation impacts would remain Class II for the remedial cap replacement with excavation alternative, but the severity of the impact would increase.

Hazards and Hazardous Materials

The remedial cap replacement with excavation alternative would result in an increase in truck transportation compared to the proposed Project, which would serve to increase the transportation hazards. Total truck trips would increase by about 34,200 trips (56,450 truck trips for this alternative vs. 22,285 for the proposed Project.) over the proposed Project. Transportation hazards are related to those components of a project where there is the possibility of a traffic accident resulting from the increased level of traffic on the local area roadways due to the Project. This traffic increase would be primarily associated with increases in traffic associated with truck transportation of NHIS and the importation of fill material (about 52,300 trips for this alternative vs. 18,500 for the proposed Project). Impact HM.2 (Truck Traffic Risk) would have the same impact classification as the proposed Project (Class III), but would be increased in severity.

The remedial cap replacement with excavation alternative would result in the removal of more of the hydrocarbon impacted material from the site. However, the level of human health and ecological risk would be essentially the same as the proposed Project. The main reason for this is that with the proposed Project these areas would be capped with clean soil/gravel and vapor barriers would be installed. These remedial methods would provide essentially the same levels of protection and risk reduction as excavation based upon the type of contamination at the Project Site (mainly crude oil components, and arsenic). Therefore, Impact HM.1-Helath Risk would remain the same as for the proposed Project (Class III).

All of the other Hazards and Hazardous Material impacts identified for the proposed Remediation Project (HM.3-Asbestos Exposure, and HM.4-Bird Strike Risk) would remain the same as for the proposed Project. Any mitigation measures associated with HM.3, and HM.4 would also apply to the Remedial cap replacement with excavation alternative.

Public Service and Utilities

A number of the remediation/restoration impacts are associated with increased traffic on local roads potentially interfering with emergency response, including fire (Impact PS/U.1) and police (Impact PS/U.2). The increase in the number of truck trips associated with the remedial cap

replacement with excavation alternative could potentially increase the severity of these two impacts. The increase peak day traffic (218 for this alternative vs. 180 for the proposed Project) would be due to more construction equipment, and the need to transport more soil to and from the Project Site. Impacts PS/U.1 (Traffic Interference with Fire) and PS/U.2 (Traffic Interference with Police) would remain Class III for the remedial cap replacement with excavation alternative, but would increase in severity.

PS/U.3 (Use of Nonrenewable Resources) would increase in severity for this alternative compared to the proposed project due to the increase the use of diesel burning construction equipment and truck use. Increased construction equipment would be required for the additional excavations, such as sheet pile wall drivers. Additional energy use would also be required for the handling and treatment of the water from the dewatering operations. As discussed above, there would be an additional truck use associated with the increase in import and export of soil from the site. While the severity of PS/U.3 would increase, the impact would remain Class III. Mitigation measures identified for PS/U.3 for the proposed Project would apply to this alternative.

PS/U.4 (Solid Waste Generation) would increase in severity over the proposed Project due to the increase in impacted soil that would need to be hauled from the site to the Santa Maria Landfill (558,000 cubic yards vs. 196,250 cubic yards for the proposed Project). While the severity of PS/U.4 would increase, the impact would remain Class III. Mitigation measures identified for PS/U.4 for the proposed Project would apply to this alternative.

Geological Soil Resources

The increase in excavations associated with this alternative would increase the potential for erosion-induced siltation of nearby waterways as a result of ground disturbing activities. This alternative would require the excavation of 558,000 cubic yards of affected material, compared with 196,250 cubic yards for the proposed Project. This increase in the amount of affected material would increase the potential for erosion-induced siltation of nearby waterways. Impact GR.1 (erosion-induced siltation) would increase in severity for this alternative, but would remain Class II. Mitigation measures identified for impact GR.1 under the proposed Project would apply to this alternative.

Water Resources

Excavations where groundwater is encountered can result in the groundwater becoming contaminated with the hydrocarbons in the excavated material. The proposed Remediation Project has been designed to avoid excavations to depths that would likely encounter groundwater. With the remedial cap replacement with excavation alternative a number of the excavations would occur at depths where groundwater would be encountered. This would require the installation of sheet pile around the excavations to allow for the dewatering of the excavation sites. As groundwater appears in the excavation area it would be pumped out and processed in an onsite water treatment facility. It is estimated that about 29,000,000 gallons of water would have to be treated and disposed of with this alternative. This increase in handling of contaminated groundwater would increase the potential for impacts to surface water and groundwater quality due to potential releases of the contaminated water. Impact WR.1 (Surface Water Quality) would remain a Class II, but the severity of the potential impact would be greater than for the proposed

Project. The mitigation measures associated with WR.1 would apply to the remedial cap replacement with excavation alternative.

During the excavation process, contaminated material has to be removed from the excavation, stockpiled on site, and then loaded into trucks for removal. This brings the contaminated material to the surface where it has the potential to be mobilized by rain events and surface water runoff, resulting in potential impacts to the environment. The remedial cap replacement with excavation alternative would increase the amount of contaminated material that would need to be handled (558,000 cubic yards for this alternative vs. 196,250 for the proposed Project), which would increase the potential for generating contaminated runoff. The potential severity of Impact WR.3 (Excavation of Contaminated Material) would increase for the remedial cap replacement with excavation alternative when compared to the proposed Project, but the impact classification would remain the same (Class II). The mitigation measures associated with WR.3 would apply to the remedial cap replacement with excavation alternative.

All of the other water resources impacts associated with remediation (WR.2-Groundwater Use, WR.4-stormwater runoff, WR.5-Change in Surface Flows) would remain the same as for the proposed Project. Any mitigation measures associated with WR.2, WR.4, and WR.5 would also apply to this alternative.

Biological Resources

The remedial cap replacement with excavation alternative would result in direct impacts to about 28 acres of wetland habitat compared with about 26 acres for the proposed Project. In addition, the remedial cap replacement with excavation alternative would impact approximately 14 acres of VPFS habitat, compared with about 13 acres for the proposed Project. This would increase the severity of impacts BIO.1 (Impacts to Habitat for Listed Species), BIO.3 (Impacts to Federally Listed Species), and BIO.4 (Impacts to Federal Wetlands) compared to the proposed Project. However all three impacts would remain Class II. The mitigation measures associated with BIO.1, BIO.3 and BIO.4 would apply to this alternative.

The greater impact to VPFS habitat would increase the severity of BIO.2 (Taking of Listed Federal Species), but would remain a Class II impact. The mitigation measures associated with BIO.2 would apply to this alternative.

All of the other biological resources impacts associated with remediation (BIO.5-Habitat Alteration, BIO.6-Impede Migration, and BIO.7-Reduction in Population) would remain the same as for the Proposed Project. Any mitigation measures associated with BIO.5, BIO.6, and BIO.7 would also apply to this alternative.

Cultural Resources and Archaeology

The potential for encountering unknown archaeological resources would be greater than the proposed Project since there would be more ground disturbance associated with the increased level of excavation. This would increase the potential severity of impacts CR.3 (Inadvertent Discovery of Archaeological Remains), and CR.4 (Inadvertent Discovery of Human Remains), but both impacts would remain Class II. The mitigation measures associated with CR.3 and CR.4 would apply to this alternative.

All of the other cultural resources and archaeology impacts associated with remediation (CR.1-Paleontological Resources, CR.2-Historic Resources) would remain the same as for the Proposed Project. Any mitigation measures associated with CR.1 and CR.2 would also apply to this alternative.

Noise and Vibration

A number of the excavations would need to use sheet pile because of their depth. Sheet pile drivers, which drive the sheet pile into the ground, would be needed for installation. These drivers produce noise levels of approximately 100 dBA at 50 feet, which makes them major noise generators. The sheet pile drivers also produce vibrational effects. The proposed Remediation Project has been designed to avoid excavations to depths that would require sheet piles. This additional construction activity, along with the increase truck traffic discussed above under Transportation/Circulation would increase the severity of the noise and vibration impacts compared to the proposed Project. Impacts N.1-Construiton Noise and N.2-Vibration would remain Class II impacts for the remedial cap replacement with excavation alternative. The mitigation measures associated with N.1 and N.2 would apply to this alternative.

Wastewater

Remedial cap replacement with excavation would require dewatering since some of the excavations would be deep enough to encounter groundwater. In order to complete the excavations the groundwater would need to be removed from the excavations. This alternative would require the treatment and disposal of the water that would be removed from the excavation areas. The treated water would then be discharged on site to one of the creeks, or sent to the City of San Luis Obispo County sewer system. It is estimated that about 29,000,000 gallons of water would have to be treated and disposed of with this alternative. Any discharge of excavation water would require a Waste Discharge Requirement (WDR) permit from the RWQCB.

The handling of all of this water would increase the potential for impacts to surface water and groundwater quality due to the potential release of water that has been contaminated as part of the excavation process. The proposed Remediation Project has been designed to avoid the need for dewatering operations. Impact WW.1 (Release of Contaminated Water) would remain a Class III impact for the remedial cap replacement with excavation, but the potential severity of the impact would increase due to the large volumes of water that would need to be handled.

5.3.3 Reduced Development

This alternative would be very similar to the proposed Project, but less development would occur on the Project Site. With the reduced development alternative, no development would occur on the western portion of the site just north of Tank Farm Road. This is the former Northwest Operations Area, and is the location of the highest level of contamination. Under this alternative, remediation in this area would be the same as for the proposed Project, but development pads would not be constructed. However, the existing buildings that occupy this site would be removed as described for the proposed Proposal. This would reduce the need for structural fill in this area by about 25,000 cubic yards. The Northwest Operations Area would be recontoured to a natural grade and then revegetated. All of the other remediation activities associated with the

proposed Project would remain the same under this alternative. This would be the case for development in either the City or the County.

Under the reduced development alternative the impacts in the following issue areas would remain the same as for the proposed Project.

- Agricultural Resources,
- Cultural Resources and Archeology,
- Geological Resources,
- Noise and Vibration,
- Hazards and Hazardous Materials
- Population and Housing, and
- Recreation.

All of the development impacts and mitigation measures identified for the proposed Project in these issue areas would also apply to the reduced development alternative. The reader is referred to Chapter 4 of the EIR for a description of the development impacts and mitigation measures for each of the issue areas listed above. The development impacts associated with each of the affected issue areas are discussed below.

Aesthetics and Visual Resources

For the proposed Project the EIR found that the development Project could degrade the existing visual character or quality of the site and its surroundings, and create nighttime glare from the new development. These impacts were driven by the development on the eastside of the Project Site. The reduced development alternative would still result in development in this area, though there would be less building square footage.

With the reduced development alternative, the western portion of the site would not be developed. However, this portion of the site currently has development (buildings associated with existing Tank Farm property), and as such, this portion of the development was not a major driver in the visual quality/character and nighttime glare impacts. Therefore, the impacts to visual quality/character (AE.2) and nighttime glare (AE.3) would less severe than the proposed Project since less building square footage would be developed, but would remain Class II for impact AE.2 and AE.3. The mitigation measures identified for AE.2 and AE.3 for the proposed Project would apply to this alternative.

The reduced development under the County Plan would still require the same wastewater treatment plant building. Therefore, Impact AE.4 would be the same for this alternative as the proposed Project. Mitigation measures associated with AE.4 would apply to this alternative.

Air Quality and Greenhouse Gases

Construction of the reduced development alternative would generate emissions due to construction equipment engines, fugitive dust, worker vehicles, and delivery of materials and equipment. There would be five phases of construction, with five years for each phase, for a total of 25 years.

Emissions were estimated utilizing the CalEEMod modeling software utilizing the development land uses associated with each phase. Construction equipment load factors were updated, as per the SLOCAPCD CalEEMod guidance, to coordinate with the Carl Moyer Program Guidelines adopted in 2011. Equipment horsepower and daily usage were assigned the CalEEMod defaults.

Emissions associated with construction for each phase of the alternative are shown in Table 5-19.

Table 5-19 Development Construction Emissions by Phase-Reduced Development Alternative

PEAK DAY (lbs/day)	ROG + NOx	Diesel PM	
Phase 1 – 2015	170.61	2.55	
Phase 2 – 2020	228.32	1.5	
Phase 3 – 2025	147.22	0.85	
Phase 4 – 2030	195.49	0.55	
Phase 5 – 2035	391.96	0.37	
Thresholds	137	7	
Exceeds Thresholds?	Yes	No	
PEAK QUARTER (tons/qrtr) Phase	**ROG + NOx**	**Diesel PM**	**Fugitive Dust**
Phase 1 – 2015	1.218	0.042	0.707
Phase 2 – 2020	0.875	0.021	0.679
Phase 3 – 2025	0.462	0.007	0.042
Phase 4 – 2030	0.567	0.007	0.679
Phase 5 – 2035	0.931	0.007	0.7
Thresholds	2.5	0.13	2.5
Exceeds Thresholds?	No	No	No

Note: Since the construction activity would last for more than 90 days, the daily thresholds would not apply (as per the SLOAPCD Handbook).

Peak day emissions would be the same as for the proposed Project. Peak quarterly emissions for the reduced development alternative would be about 30 percent less that for the proposed Project. Therefore, impact AQ.5 (Development Construction Emissions) would be less severe than the proposed Project, but would remain Class III for the reduced development alternative. The mitigation measures associated with AQ.5 would apply to this alternative.

The operational phases of the reduced development would generate emissions due to activities at each site that would be a function of land use, employee vehicles, and delivery of materials to each site. Operations would occur with each of the five phases of development and would increase cumulatively every five years as the development is built out.

Emissions associated with each phase of the Development for the reduced development alternative are shown in Table 5-19. Additional emissions would occur during each phase of the Development until final build-out in 2040, which are also shown in Table 5-20.

Emissions were estimated using the CalEEMod modeling program for each phase along with the associated land use provided in Section 5.1.3.5. Each phase and land use were entered into the

CalEEMod program along with estimated parking lot areas (using the "other asphalt surface" designation). Inputs were utilized as described in the SLOCAPCD CalEEMod information sheet. Most other inputs utilized the CalEEMod defaults.

Table 5-20 Development Operational Emissions by Phase-Reduced Development Alternative-Mitigated

PEAK DAY (lbs/day) Phase	ROG + NOx	Diesel PM	Fugitive Dust	CO
Phase 1 – 2020	20.44	0.44	13.79	51.53
Phase 2 – 2025	12.97	0.27	8.37	27.68
Phase 3 – 2030	7.13	0.16	5.31	13.88
Phase 4 – 2035	18.89	0.40	12.42	47.64
Phase 5 – 2040	23.15	0.36	10.63	47.33
Phase 1 & 2 in 2025	26.36	0.54	17.06	56.19
Phases 1, 2 & 3 in 2030	30.07	0.67	22.37	58.64
Phases 1, 2, 3 & 4 in 2035	56.02	1.01	30.46	131.68
All Phases Combined in 2040	51.81	1.22	41.06	86.80
Thresholds	25	1.25	25	550
Exceeds Thresholds?	Yes	No	Yes	No

PEAK YEAR (tons/year) Phase	ROG + NOx	Fugitive Dust
Phase 1 – 2020	3.00	1.72
Phase 2 – 2025	1.97	1.04
Phase 3 – 2030	1.09	0.64
Phase 4 – 2035	2.86	1.60
Phase 5 – 2040	3.62	1.35
Phase 1 & 2 in 2025	4.35	2.54
Phases 1, 2 &3 in 2030	5.00	3.32
Phases 1, 2, 3 & 4 in 2035	9.21	4.56
All Phases Combined in 2040	8.26	5.10
Thresholds	25	25
Exceeds Thresholds?	No	No

With the reduced development alternative the air emissions from operations would be about 30 percent less than for the proposed Project. Similar levels of emission reductions would occur for GHGs, and CO emissions. For the reduced development alternative, Impacts AQ.6 (ROG+NOx emissions) and AQ.8 (GHG Emissions) would remain Class II, but the severity of the impact would be less than the proposed Project. The mitigation measures associated with AQ.6 and AQ.8 would apply to this alternative.

Impact AQ.7 covers both diesel particulate and fugitive dust PM emissions. The diesel particulate impact would be reduced to a Class II impact for the reduced development alternative impact, compared with a Class I impact for the proposed Project. The fugitive dust PM impact

would remain Class I for the reduced development alternative, but would be less severe than the proposed Project. The mitigation measures associated with AQ.7 would apply to this alternative.

ImpactAQ.9 (CO Hot Spots) and AQ.10 (Diesel Particulate Cancer Risk) would remain Class III for the reduced development alternative, but would be less severe than the proposed Project. The mitigation measures associated with AQ.9 would apply to this alternative.

AQ.11 (Odors from Wastewater Treatment Facility), which only applies to the County Development Plan, would be the same for this alternative as for the proposed County Development Plan, since the WWTF would still have to be built under this alternative. While the facility might be smaller in size, the odors associated with the operations would remain. Impact AQ.11 would remain Class I for this alternative under the County Development Plan. The mitigation measures associated with AQ.11 would apply to this alternative for the County Development Plan only.

Biological Resources

BIO.12 (Use of Groundwater Could Impact Wetland Areas), which only applies to the County Development Plan, would be reduced in severity for this alternative since approximately 30 percent less groundwater would need to be used for the development. This reduction in groundwater use would reduce the likelihood that the groundwater levels would be drawn down to a level that wetlands at the site would be impacted. However, even with this reduction in groundwater use Impact BIO.12 would remain Class III for the County Development Plan.

All of the other biological resources impacts identified for the City and County Development Plans would remain the same for this alternative as the proposed Project. Any mitigation measures indentified for these impacts for the proposed Project would also apply to this alternative.

Transportation and Circulation

Traffic generated by the reduced development alternative when the final phase of development is complete would be approximately 30 percent less vehicle trips than for the proposed Project. This would serve to reduce the traffic impacts of the Project. Section 5.1.3.5 provides an estimate of the trip generation for this alternative. Even with this reduction, the Project would still have the same traffic impacts as the proposed Project for both the existing and cumulative conditions. While the severity of the impacts would be reduced, it would not change any of the impact classifications, or intersection level of service.

The addition of traffic generated by the reduced development alternative would still cause one intersection to operate at unacceptable levels under existing plus Project conditions (Impact T.2). However, the improvements at the intersection of Broad and Tank Farm Road recently completed by the City would reduce this impact to Class III.

The addition of traffic from the reduced development alternative would still cause nine intersections and two freeway segments to operate at unacceptable levels under cumulative conditions. Five intersection impacts and two freeway impacts would be significant and unavoidable, and four intersection impacts would be mitigable to a level of insignificance

(Impact T.5). This would remain a Class I impact, and the T.5 mitigation measures would apply to the reduced development alternative.

Impacts T.3 (Transit System Impacts) and T.4 (Construction Impacts) would remain Class II but would be reduced in severity compared to the proposed Project. The mitigation measures associated with T.3 and T.4 would apply to the reduced development alternative.

Public Service and Utilities

The reduced development alternative would result in a reduction of the total square feet of building space, and a similar reduction in the total number of people that would occupy the development. This would to some degree reduce the level of demand on fire and police services. It would also reduce the amount of solid waste that would be generated by the construction and operation of the development. The reduction in solid waste would be about 30 percent.

Under the reduced development alternative, impacts PS/U.5 and PS/U.10 (Demand on Fire Protection Services for City and County Development), PS/U.6 and PS/U.11 (Demand on Police Services for City and County Development), and PS/U.8 and PS/U.12 (Solid Waste for City and County Development) would be reduced in severity compared to the proposed Project. With the reduced development alternative, 30 percent less building square footage would be built. This would reduce the population using the development by about the same percentage. These reductions would reduce demand for fire protection and police services. The solid waste generated would also be reduced by about 30 percent over the proposed Project. Impact PS/U.5 (Demand on Fire Services for the City Development Plan) would remain Class II for this alternative. All of the other impacts discussed above would remain Class III for this alternative. Any mitigation measures associated with PS/U.5, PS/U.6, PS/U.8, PS/U.10, PS/U.11, and PS/U.12 would apply to the reduced development alternative.

If the reduced development alternative was developed in the City the water would be provided by the City Utilities Department. Table 5-9 provides an estimate of the water use for the City development under this alternative. The water use with this alternative would be expected to decrease by 30 percent due to the reduction in building square footage. This would reduce the severity of impact PS/U.9 (City Water Use) compared to the proposed Project. However, the impact would remain Class III for the reduced development alternative.

PS/U.7 (Nonrenewable Resources) would also be reduced in severity compared to the proposed Project since less development would occur and therefore less energy would be used for buildings and for commuters. These impacts would remain Class III for this alternative. Any mitigation measures associated with PS/U.7 would also apply to the reduced development alternative.

Water Resources

The western parcels on the Project Site would not be developed as part of the reduced development alternative. This would reduce the amount of paving associated with the development, and thereby reduce the amount of surface water runoff from paved areas. This would reduce the severity of impact WR.6 (Surface Water Runoff) compared to the proposed Project, but the impact would remain Class III for this alternative.

Under the County reduced development alternative, water would be supplied from onsite groundwater wells. Table 5-11 provides an estimate of the water use for the County development under this alternative. The water use with this alternative would be expected to decrease by 30 percent due to the reduction in building square footage. This would reduce the severity of impact WR.8 (Use of Groundwater) compared to the proposed Project. However, the impact would remain Class III for the reduced development alternative. Mitigation measures associated with WR.8 would also apply to the reduced development alternative.

The reduction in groundwater use would also reduce the severity of impact WR.9 (Contamination of Groundwater) since it would involve less drawdown of the groundwater. With less groundwater pumping there is less likelihood of drawing hydrocarbons from the shallow groundwater to the deep groundwater wells. Impact WR.9 would remain Class II under the reduced development alternative. Mitigation measures associated with WR.9 would also apply to the reduced development alternative.

WR.7 (Flooding due to Building in the 100-Year Flood Plain) would be the same as the proposed Project since none of the structures would be built in the 100-year flood plain. Impact WR.7 would remain Class III for this alternative.

Wastewater

If the reduced development alternative was developed in the City the sewer service would be provided by the City Utilities Department. Table 5-9 provides an estimate of the wastewater generated for the City development under this alternative. The wastewater generated with this alternative would be expected to decrease by 30 percent due to the reduction in building square footage. This would reduce the severity of impact WW.2 (City Sewer) compared to the proposed Project. However, the impact would remain Class III for the reduced development alternative.

Under the County reduced development alternative, wastewater would be handled by an onsite wastewater treatment plant. Table 5-11 provides an estimate of the wastewater generated for the County development under this alternative. The wastewater generated with this alternative would be expected to decrease by 30 percent due to the reduction in building square footage. This would reduce the severity of impacts WW.3 (Discharge Flow Rates) and WW.4 (Wastewater Discharges to Streams) compared to the proposed Project. However the impact classifications would remain the same as for the proposed Project (Class I for WW.3 and Class II for WW.4). Mitigation measures associated with WW.3 and WW.4 would also apply to the reduced development alternative.

5.4 Environmentally Superior Alternative

This section summarizes the environmental advantages and disadvantages associated with the proposed Project and the selected alternatives. Based upon this discussion, the environmentally superior alternative is selected as required by CEQA. The State CEQA Guidelines, Section 15126 (d) (2), state that if the environmentally superior alternative is the No Project Alternative, then the next most environmentally preferred alternative must also be identified.

CEQA does not provide specific direction regarding the methodology of comparing alternatives and the proposed Project. Each Project must be evaluated for the issues and impacts that are

most important; this will vary depending on the project type and the environmental setting. Issue areas with significant long-term impacts are generally given more weight in comparing alternatives. Impacts that are short-term (e.g., construction-related impacts) or those that are mitigable to less than significant levels are generally considered to be less important.

Table 5-21 (which is at the end of this section) provides a comparison between the proposed Project and each of the selected alternatives for each impact identified in the issue areas. For impacts with the same classification, an increase or decrease in severity is denoted with an up or down arrow, respectively. These impacts in the table were identified as a result of the analysis provided in Chapter 4.0, Environmental Analysis, for the proposed Project and Section 5.3 for the alternatives.

5.4.1 Remediation

5.4.1.1 Proposed Project and the No Project Alternative

The remediation/restoration portion of the No Project Alternative would be essentially the same as that for the proposed Project. The only change would be that the remediation portion of the No Project Alternative would not include the construction of the rough pads for the proposed development. Instead, the areas that are proposed for development would be returned to their natural grade and revegetated. None of the proposed infrastructure improvements associated with roads would occur as part of the No Project Alternative. Only the onsite drainage improvements associated with remediation would occur. The reasons for this are discussed in Sections 5.1.2 and 5.3.1.

There is very little difference in the environmental impacts of remediation/restoration under the No Project Alternative and the proposed Project. As discuss in Section 5.3.1, remediation/restoration under the No Project Alternative would not eliminate or change the significance (i.e., impact classification) of any of the environmental impacts of the proposed Remediation Project. The remediation/restoration portion of the No Project Alternative would reduce the severity of all of the air emission impacts including fugitive dust (PM), which was found to be a significant and unavoidable impact (Class I). However, even with remediation/restoration under the No Project Alternative, impacts associated with fugitive dust emissions would remain Class I.

Remediation/restoration under the No Project Alternative would also reduce the severity of four Class II impacts (AE.1-Visual Character/Quality, AQ.1-ROG+NO_x Air Emissions, AQ.4-Toxic Air Emissions, and T.1-Traffic Impacts to Roadways. None of these are significant and unavoidable impacts (Class I).

Given that remediation under the No Project Alternative would reduce the severity of one Class I impact (fugitive dust), it was found to be the environmentally superior alternative. However, if the Project Site was remediated under the No Project Alternative, it would have to remain as open space and no development could occur. As such, remediation under the No Project Alternative would not meet any of the development objectives of the Project. CEQA requires that if the environmentally superior alternative is the No Project Alternative, then the next most environmentally preferred alternative must also be identified.

5.4.1.2 Proposed Project and Remedial Cap Replacement with Excavation Alternative

The remedial cap replacement with excavation alternative would involve excavation of the areas on the site that are proposed for remedial caps.

The remedial cap replacement with excavation alternative would not reduce the severity of, or eliminate any of the environmental impacts associated with the proposed Project. This alternative would increase the severity of 21 other Class II impacts (less than significant with mitigation) identified as part of the proposed Project. These impacts are shown in Table 5.21.

This alternative would result in the removal of more of the hydrocarbon impacted material from the site than the proposed Project. However, the level of human health and ecological risk would remain essentially the same as for the proposed Project. The main reason for this is that with the proposed Project these areas would be capped with clean soil/gravel and vapor barriers would be installed. These remedial methods would provide essentially the same levels of protection and risk reduction as excavation based upon the type of contamination at the Project Site (mainly crude oil components, and arsenic).

Given that the remedial cap replacement with excavation alternative would increase the severity of 21 Class II impacts, and provide no reduction in environmental impacts, the proposed Remediation Project was found, in comparison to the No Project Alternative, to be the next environmentally superior alternative.

5.4.2 Development

5.4.2.1 Proposed Project and No Project Alternative

The development portion of the No Project Alternative would eliminate all of the development impacts of the proposed Project since no development would occur. It would also eliminate the beneficial impact to recreation since the ball fields and bike paths would not be built. Clearly, the development portion of the No Project Alternative is the environmentally superior alternative.

The No Project Alternative would not meet any of the development objectives of the Project. CEQA requires that if the environmentally superior alternative is the No Project Alternative, then the next most environmentally preferred alternative must also be identified.

5.4.2.2 Proposed Project and Reduced Development Alternative

The reduced development alternative would be very similar to the proposed Project, but 30 percent less building square footage would be developed on the Project Site. With the reduced development alternative, no development would occur on the western portion of the site just north of Tank Farm Road. This is the area of the former Northwest Operations Area, and is the location of the highest level of contamination. Under this alternative, the remediation would be the same as for the proposed Project, except the development pads would not be constructed in the Northwest Operations Area. This alternative would apply to both the City and County Development Plans.

This alternative would reduce the impact classification of one part of impact AQ.7 (Diesel Particulate Emissions) from significant and unavoidable (Class I) to less than significant with mitigation (Class II). The other part of impact AQ.7 (Fugitive Dust Emissions) would remain Class I but would be reduced in severity. Impact T.5 (Traffic Impacts to Five Intersections and Two Freeway Segments under the Cumulative Conditions), would be reduced in severity but would remain a Class I impact for this alternative. It should be noted that the traffic impact of the Project under the existing conditions (i.e., the baseline) would be less than significant (Class II) for this alternative.

The reduced development alternative would also reduce the severity of seven other Class II impacts (less than significant with mitigation) identified as part of the proposed City and County Development Plans. One Class II impact (less than significant with mitigation) identified as part of the proposed City a Development Plan would be reduced in severity with this alternative. These impacts are shown in Table 5.21.

For the County Development Plan only, this alternative would reduce the severity of one significant and unavoidable (Class I) impact (WW.3-Discharges from the Wastewater Treatment Plant Increasing Surface Water Flows during Storm Events). However, this impact would remain significant and unavoidable (Class I) for the reduced development alternative. The reduced development alternative would also reduce the severity of two Class II impacts (less than significant with mitigation) identified as part of the proposed County Development Plan (WR.9-Potential for Hydrocarbon Migration to Groundwater Wells used for Potable Water and WW.4-WWTP Discharges Increase Pollutants into Existing Drainages).

The reduced development alternative would meet all but one of the objectives of the proposed Project. The Applicant has stated that any reduction in building square footage would not meet objective #5 that states, “develop an economically viable commercial project with infrastructure and development phased over 25 years”. The Applicant’s position has been that all of the building square footage would be needed to allow for the public infrastructure that would be required for the Project, and that any reduction in the building square footage would make the Project uneconomical. The EIR does not address the issue of economic feasibility.

The proposed building square footage would be less than what was envisioned in the City’s Airport Area Specific Plan (AASP), and would be well below the allowable building and population densities allowed under the Airport Area Specific Plan.

From an environmental standpoint, the reduced development alternative would eliminate one significant and unavoidable (Class I) Project impact (the portion of AQ.7 covering diesel particulate emissions) and reduce the severity of the remaining significant and unavoidable portion of AQ.7 covering fugitive dust emissions. The alternative would also reduce the severity of the significant and unavoidable (Class I) cumulative traffic impact (T.5-Traffic Impacts to Five Intersections and Two Freeway Segments under the Cumulative Conditions). However, the traffic and fugitive dust impacts would remain significant and unavoidable (Class I) for this alternative.

Given that reduced development alternative would eliminate the Class I impact associated with diesel particulate emissions (first part of AQ.7), and would reduce the severity of two other Class

I impact (the second part of AQ.7 covering fugitive dust emissions and T.5 covering cumulative traffic impacts), it was found, in comparison to the No Project Alternative, to be the next environmentally superior alternative.

Table 5.21 Comparison of Proposed Project and Alternative Impacts

Impact #	Impact Description	Impact Classification ↓ - Decrease in Severity but the same Classification ↑ - Increase in Severity but the same Classification			
		Proposed Project	No Project[4]	Remedial Cap Replacement with Excavation[5]	Reduced Development[6]
Remediation					
AE.1	The Project remediation activities could degrade the existing visual character or quality of the site and its surroundings.	Class II	Class II(↓)	Class II(↑)	NA
AQ.1	Construction activities associated with remediation could generate ROG + NOx emissions that exceed SLOAPCD thresholds.	Class II	Class II(↓)	Class II(↑)	NA
AQ.2	Construction activities associated with remediation could generate fugitive dust that exceeds SLOAPCD thresholds.	Class II	Class II(↓)	Class II(↑)	NA
AQ.3	Construction activities associated with remediation could generate GHG emissions that exceed SLOAPCD thresholds.	Class III	Class III(↓)	Class III(↑)	NA
AQ.4	Construction activities associated with remediation would generate toxic emissions that exceed SLOAPCD thresholds for impacts to sensitive receptors.	Class II	Class II(↓)	Class II(↑)	NA
AR.1	The Project would result in the conversion of farmland or grazing land to non-agricultural uses.	Class III	Class III	Class III	NA
AR.2	The Project would potentially conflict with existing zoning for agricultural use or with a Williamson Act contract.	Class III	Class III	Class III	NA
AR.3	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use.	Class II	Class II	Class II	NA
BIO.1	Site remediation has the potential to result in both short-term and long-term impacts to habitat for listed and special status species.	Class II	Class II	Class II(↑)	NA
BIO.2	Site remediation and restoration would result in the taking of listed specimens, special-status species, or species protected by the Migratory Bird Treaty Act	Class II	Class II	Class II(↑)	NA
BIO.3	Site remediation and restoration could result in short-term and permanent loss of	Class II	Class II	Class II (↑)	NA

[4] NA is used for the development portion of the No Project Alternative since no development would occur, and as such the development impacts for the proposed Project would not apply.
[5] NA is used for the development portion of the remedial cap replacement with excavation alternative since this alternative would not apply to the development phase of the project. With this alternative, the City and County Development Plan Impacts would be the same as the proposed Project.
[6] NA is used for the remediation portion of the reduced development alternative since this alternative would not apply to the remediation phase of the project. With this alternative, the remediation would be the same as the propose Project.

Table 5.21 Comparison of Proposed Project and Alternative Impacts

Impact #	Impact Description	Impact Classification ↓ - Decrease in Severity but the same Classification ↑ - Increase in Severity but the same Classification			
		Proposed Project	No Project[4]	Remedial Cap Replacement with Excavation[5]	Reduced Development[6]
	biological functions of wetlands, native grasslands, habitats for rare plants and animals, and other biotic communities considered sensitive by federal, state, or local policies, statutes, and regulations.				
BIO.4	Site remediation would adversely affect federal wetlands as defined in Section 404 of the Clean Water Act.	Class II	Class II	Class II(↑)	NA
BIO.5	Site remediation and restoration would result in habitat alteration that precludes the re-establishment of native populations of plants and animals.	Class II	Class II	Class II(↑)	NA
BIO.6	Site remediation and restoration would temporarily impede migration and dispersal of upland, aquatic, and semi-aquatic wildlife species.	Class II	Class II	Class II(↑)	NA
BIO.7	Site remediation and restoration have the potential to reduce the size and diversity of plant and animal populations at the Project Site.	Class II	Class II	Class II(↑)	NA
CR.1	Impacts to paleontological resources due to ground disturbance as a result of the remediation and process.	Class II	Class II	Class II(↑)	NA
CR.2	Impacts to historical resources (P-40-041195, the Project Site) due to ground disturbance as a result of the remediation process.	Class II	Class II	Class II(↑)	NA
CR.3	Inadvertent discovery of archaeological remains during remediation activities.	Class II	Class II	Class II(↑)	NA
CR.4	Inadvertent discovery of human remains during remediation activities.	Class II	Class II	Class II(↑)	NA
GR.1	Remediation activities may cause erosion-induced siltation of nearby waterways as a result of ground disturbing activities.	Class II	Class II	Class II(↑)	NA
HM.1	Potential health risk due to exposure to residual contamination following site remediation for future site uses.	Class III	Class III	Class III	NA
HM.2	Public accident risk associated with truck traffic during site remediation.	Class III	Class III(↓)	Class III(↑)	NA
HM.3	Asbestos exposure risk during site remediation activities.	Class II	Class II	Class II	NA
HM.4	Increased aircraft wildlife strike risk due to wetland restoration within the airport Runway Protection Zone and Safety Areas.	Class I	Class I	Class I	NA
HM.5	Potential aircraft safety hazards due to changes in topography of the project site.	Class IV	NA	Class IV	NA

Table 5.21 Comparison of Proposed Project and Alternative Impacts

Impact #	Impact Description	Impact Classification ↓ - Decrease in Severity but the same Classification ↑ - Increase in Severity but the same Classification			
		Proposed Project	No Project[4]	Remedial Cap Replacement with Excavation[5]	Reduced Development[6]
N.1	On-site construction activities could generate noise impacts to nearby areas.	Class II	Class II	Class II(↑)	NA
N.2	On-site construction activities including blasting of rock could generate vibration impacts to nearby areas.	Class II	Class II	Class II(↑)	NA
P/H.1	The remediation component of the Project may induce substantial growth in the area by proposing new businesses in the area.	Class III	Class III	Class III	NA
PS/U.1	Additional truck trips or construction activities could interfere with Fire protection emergency vehicles response times along Tank Farm Road.	Class III	Class III(↓)	Class III(↑)	NA
PS/U.2	Additional truck trips or construction activities could interfere with Police protection emergency vehicles response times along Tank Farm Road.	Class III	Class III(↓)	Class III(↑)	NA
PS/U.3	Construction equipment could potentially use nonrenewable resources in a wasteful or inefficient manner.	Class III	Class III(↓)	Class III(↑)	NA
PS/U.4	Remediation activities would generate solid waste requiring disposal at landfills.	Class III	Class III	Class III(↑)	NA
REC.1	The remediation activities could have a potential effect on existing recreational facilities and users.	Class III	Class III	Class III	NA
T.1	Remediation activities related to the Project could result in potentially significant impacts to roadways in the Project vicinity due to the potential obstruction of heavy vehicles creating an unsafe situation.	Class II	Class II(↓)	Class II(↑)	NA
WR.1	The remediation stage of the Project could result in short-term, impacts to surface water quality, including indirect impacts to beneficial uses such as threatened and endangered species habitat, due to polluted runoff during construction.	Class II	Class II	Class II(↑)	NA
WR.2	The use of groundwater resources as a water supply for remediation could deplete groundwater supplies or interfere substantially with groundwater recharge.	Class III	Class III	Class III	NA
WR.3	The excavation of the contaminated soils could bring contaminant constituents to the surface where they could be mobilized by stormwater or irrigation activities.	Class II	Class II	Class II(↑)	NA
WR.4	The construction of the remediation caps may increase or concentrate storm runoff flowing onto erodible soils from impervious surfaces.	Class II	Class II	Class II	NA
WR.5	Grading and recontouring of the site could result in changes to surface water flows,	Class III	Class III	Class III	NA

Table 5.21 Comparison of Proposed Project and Alternative Impacts

Impact #	Impact Description	Impact Classification ↓ - Decrease in Severity but the same Classification ↑ - Increase in Severity but the same Classification			
		Proposed Project	No Project[4]	Remedial Cap Replacement with Excavation[5]	Reduced Development[6]
	thereby increasing surface water runoff from the Project Site.				
WW.1	The wastewater generated from remediation activities could result in releases to the environment that could impact surface water or groundwater quality.	Class III	Class III	Class III(↑)	NA
City and County Development					
AE.2	The City Development Plan component of the Project would degrade the existing visual character or quality of the site and its surroundings.	Class II	NA	NA	Class II(↓)
AE.3	The proposed Project will generate a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	Class II	NA	NA	Class II(↓)
AQ.5	Construction activities associated with the City Development Plan would generate emissions that exceed SLOAPCD thresholds.	Class III	NA	NA	Class III(↓)
AQ.6	Operational activities associated with the City Development Plan would generate ROG+NOx emissions that exceed SLOAPCD thresholds.	Class II	NA	NA	Class II(↓)
AQ.7	Operational activities associated with the City Development Plan would generate diesel particulate (DP) and fugitive dust (FD) emissions that exceed SLOAPCD thresholds.	Class I	NA	NA	Class II-DP Class I(↓)-FD
AQ.8	Operational and construction activities associated with the City Development Plan would generate GHG emissions that exceed SLOAPCD thresholds.	Class II	NA	NA	Class II(↓)
AQ.9	Operational activities associated with the City Development Plan would generate CO emissions that produce localized CO Hot Spots.	Class III	NA	NA	Class III(↓)
AQ.10	Operational activities associated with the City Development Plan would generate diesel PM emissions that produce localized, elevated cancer impacts.	Class III	NA	NA	Class III(↓)
AR.4	The City Development Plan would result in the conversion of farmland or grazing land to non-agricultural uses.	Class III	NA	NA	Class III
AR.5	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use.	Class II	NA	NA	Class II
BIO.10	The City Development Plan has the potential to reduce the size and diversity of plant and animal populations at the Project Site.	Class II	NA	NA	Class II
BIO.8	The City Development Plan would result in short-term and permanent loss of biological functions of wetlands, native grasslands, habitats for rare plants and	Class II	NA	NA	Class II

Table 5.21 Comparison of Proposed Project and Alternative Impacts

Impact #	Impact Description	Impact Classification ↓ - Decrease in Severity but the same Classification ↑ - Increase in Severity but the same Classification			
		Proposed Project	No Project[4]	Remedial Cap Replacement with Excavation[5]	Reduced Development[6]
	animals, and other biotic communities considered sensitive by federal, state, or local policies, statutes, and regulations.				
BIO.9	The City Development Plan would permanently impede migration and dispersal of upland, aquatic, and semi-aquatic wildlife species.	Class II	NA	NA	Class II
GR.2	Seismically induced ground shaking could damage proposed structures and infrastructure, potentially resulting in loss of property or risk to human health and safety.	Class II	NA	NA	Class II
GR.3	Existing uncertified fill on-site could be subject to hydroconsolidation, excessive settlement, expansive soil shrink and swell, and differential settlement and expansion, and thus could damage proposed facilities, resulting in loss of property and risks to human health and safety.	Class II	NA	NA	Class II
GR.4	Construction activities and grading may cause erosion-induced siltation of nearby waterways as a result of ground disturbing activities.	Class II	NA	NA	Class II
GR.5	Moderately expansive soils prone to swelling and shrinking from increased or decreased water content could damage proposed structures and infrastructure, resulting in loss of property and risks to human health and safety.	Class II	NA	NA	Class II
GR.6	Construction and improvement in areas lacking suitable factors of safety for existing slopes could result in gross or surficial instability, as well as earthquake-induced landslides, which could damage proposed structures and infrastructure, resulting in loss of property and risks to human health and safety.	Class III	NA	NA	Class III
GR.7	Compressible soils that underlie the site will be prone to excessive settlement that could adversely affect the proposed development and improvements.	Class II	NA	NA	Class II
HM.6	Potential health risk from exposure to residual contamination following site cleanup and development.	Class II	NA	NA	Class II
HM.8	Potential risk associated with the future use of acutely hazardous materials in the SLOCRA safety areas.	Class II	NA	NA	Class II
HM.9	Risk associated with land use changes and aircraft wildlife strikes and other aircraft hazards.	Class III	NA	NA	Class III

Table 5.21 Comparison of Proposed Project and Alternative Impacts

Impact #	Impact Description	Impact Classification ↓ - Decrease in Severity but the same Classification ↑ - Increase in Severity but the same Classification			
		Proposed Project	No Project[4]	Remedial Cap Replacement with Excavation[5]	Reduced Development[6]
N.3	Construction activities associated with the construction of the City Development Plan could increase noise levels in the area.	Class II	NA	NA	Class II
N.4	Off-site City Development Plan related traffic would generate noise impacts to nearby areas.	Class III	NA	NA	Class III
N.5	Development within the ALUP single event noise contours could cause the development to be exposed to unacceptable noise levels.	Class II	NA	NA	Class II
P/H.1	The City Project may induce substantial growth in the area by proposing new businesses in the area.	Class III	NA	NA	Class III
REC.2	The Project would increase the City's recreational acreage stock with 15 acres of sports fields, as well as Class I and Class II bicycle lanes, while not adding residential development.	Class IV	NA	NA	Class IV
T.2	The addition of traffic generated by the Project would cause one intersection to operate at unacceptable levels under Existing plus Project conditions.	Class II	NA	NA	Class II(↓)
T.3	Impacts to the City's transit system could result due to increased ridership generated by the Project, impacts to bicycle and pedestrian facilities could result from network discontinuities and unsafe crossings; impacts to site access and on-site circulation could result from queue spillback and the creation of additional conflict points.	Class II	NA	NA	Class II(↓)
T.4	The proposed construction phasing plan would disrupt vehicle and bicycle travel for an extended duration, and the proposed truck routes are inconsistent with the City's Circulation Element. Construction activities related to the Project could result in potentially significant impacts to roadways in the Project vicinity due to the potential obstruction of heavy vehicles.	Class II	NA	NA	Class II(↓)
T.5	The addition of Project traffic would cause nine intersections and two freeway segments to operate at unacceptable levels under Cumulative conditions. Five intersection impacts and two freeway impacts would be significant and unavoidable, and four intersection impacts would be mitigable to a level of insignificance.	Class I	NA	NA	Class I(↓)
WR.6	Paving and development could result in changes to surface water flows thereby	Class III	NA	NA	Class III(↓)

Table 5.21 Comparison of Proposed Project and Alternative Impacts

Impact #	Impact Description	Impact Classification ↓ - Decrease in Severity but the same Classification ↑ - Increase in Severity but the same Classification			
		Proposed Project	No Project[4]	Remedial Cap Replacement with Excavation[5]	Reduced Development[6]
	increasing surface water runoff from the Project Site.				
WR.7	Flooding of development structures or redirection of flood flows could occur if buildings are built within the 100-year flood plain.	Class III	NA	NA	Class III
City Development Only					
HM.7	Potential public risk associated with development within the SLOCRA Safety Areas.	Class III	NA	NA	Class III
PS/U.5	Build-out of the proposed land uses could increase demand for Fire Protection services.	Class II	NA	NA	Class II(↓)
PS/U.6	Build-out of the proposed land uses would create an incrementally higher demand for Police Protection services.	Class III	NA	NA	Class III(↓)
PS/U.7	Construction and operation of the proposed Project could potentially use nonrenewable resources in a wasteful or inefficient manner.	Class III	NA	NA	Class III(↓)
PS/U.8	Construction and operation of the proposed Project could generate significant amounts of solid waste.	Class III	NA	NA	Class III(↓)
PS/U.9	Development of the Project could impact availability of water supplies from the City water Utility.	Class III	NA	NA	Class III(↓)
WW.2	The wastewater generated from the City Development Plan component of the Project would exceed the design capacity of the City's downstream sewer lines or the capacity of the Water Reclamation Facility.	Class III	NA	NA	Class III(↓)
County Development Only					
AE.4	The wastewater treatment facility would degrade the existing visual character or quality of the site and its surroundings.	Class II	NA	NA	Class II
AQ.11	Operational activities associated with the County Development Plan WWTP could generate odor emissions.	Class II	NA	NA	Class II
BIO.11	The County Development Plan, specifically the wastewater treatment plant component would result in short-term and permanent loss of biological functions of wetlands, habitats for rare plants and animals, and other biotic communities considered sensitive by federal, state, or local policies, statutes, and regulations.	Class II	NA	NA	Class II
BIO.12	The County Development Plan, specifically the use of groundwater, would result in	Class III	NA	NA	Class III(↓)

Table 5.21 Comparison of Proposed Project and Alternative Impacts

Impact #	Impact Description	Impact Classification ↓ - Decrease in Severity but the same Classification ↑ - Increase in Severity but the same Classification			
		Proposed Project	No Project[4]	Remedial Cap Replacement with Excavation[5]	Reduced Development[6]
	impacts to wetland areas and VPFS by drawing down surface water levels.				
HM.10	Risk associated with chemical spills due to aircraft strikes for both the direct discharge and polishing pond wastewater treatment facility (WWTF) options.	Class II	NA	NA	Class II
HM.11	Risk associated with polishing ponds WWTF option could affect aircraft bird strikes.	Class II	NA	NA	Class II
HM.12	Potential public risk associated with development within the SLOCRA Safety Areas.	Class III	NA	NA	Class III
N.6	Development related industrial noise could generate noise impacts to nearby areas.	Class II	NA	NA	Class II
PS/U.10	Build-out of the County Development Plan could increase demand for Fire Protection services	Class III	NA	NA	Class III(↓)
PS/U.11	Build-out of the County Development Plan would create an incrementally higher demand for Police Protection services.	Class III	NA	NA	Class III(↓)
PS/U.12	Construction and operation of the County Development Plan could potentially use nonrenewable resources in a wasteful or inefficient manner.	Class III	NA	NA	Class III(↓)
PS/U.13	Construction and operation of the County Development Plan could generate significant amounts of solid waste.	Class III	NA	NA	Class III(↓)
WR.8	The use of groundwater for the County Development Plan could result in depleted groundwater supplies or interfere substantially with groundwater recharge.	Class III	NA	NA	Class III(↓)
WR.9	The use of groundwater for the County Development Plan could result in the migration of hydrocarbons from the shallow ground water to the deep groundwater wells.	Class II	NA	NA	Class II(↓)
WW.3	Discharges from the wastewater treatment plant would increase surface water flow rates and impact downstream properties.	Class I	NA	NA	Class I(↓)
WW.4	The wastewater treatment plant discharges would increase pollutants into the existing drainages.	Class II	NA	NA	Class II(↓)

5.5 References

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