



**CITY OF PACIFIC GROVE**  
300 Forest Avenue, Pacific Grove, California 93950

**AGENDA REPORT**

**To:** Honorable Mayor and Members of City Council

**From:** Sarah Hardgrave, previous Staff Member and previous Consultant  
Jeff Krebs, City of Monterey Senior Engineer

**Meeting Date:** May 21, 2014

**Subject:** Certification of Final Environmental Impact Report (FEIR) for the Area of Special Biological Significance Stormwater Management Project

**CEQA:** FEIR Prepared

**RECOMMENDATION**

1. Receive a report on the Area of Special Biological Significance Stormwater Management Project and FEIR; and
2. Schedule June 18, 2014 public hearing to approve a resolution to certify the FEIR.

**BACKGROUND**

The Pacific Grove Area of Special Biological Significance (ASBS) is 3.2 miles of coastline adjacent to the City of Pacific Grove, one of 34 designated ASBS in near-shore waters along the California coast. In March 2012, the State Water Resources Control Board (SWRCB) adopted a statewide General Exception to permit stormwater discharges to the ASBS, with Special Protections. Storm water discharges from the Department's Municipal Separate Storm Sewer System (MS4) to the ASBS is regulated under a National Pollutant Discharge Elimination System (NPDES) permit issued by the SWRCB. The ASBS is also subject to specific additional monitoring and water quality regulations.

Over the past several years, the Cities of Monterey and Pacific Grove have been evaluating alternative stormwater management projects to address regulatory requirements imposed by the State Water Resources Control Board (SWRCB) for stormwater discharges to the ASBS. The City of Monterey has managed a \$270,000 Integrated Water Resources Management Planning (IRWMP) grant and provided a 36 percent match to the grant (\$151,875), to fund this work (total project funds (\$421,875). It is part of a larger (\$1M) grant managed by the Monterey Peninsula Water Management District.

[Note by City Manager: It is important to recognize and appreciate the considerable investment in this project by the City of Monterey and its Neighborhood Improvement Program. It is also important to recognize the collaborative efforts of Jeff Krebs and Sarah Hardgrave, who have spearheaded this long and complex effort since the beginning, as well as others in each city. Sarah is continuing to invest her own time into the project; Jeff has already committed to

undertaking all necessary efforts to secure one or more grants for implementation of this project. This is just one more example of the benefits received by the strong affiliation and close collaboration developed over the years between the two cities.]

In 2013, the cities also initiated the multi-year Central Coast Regional ASBS Water Quality Monitoring Program to assess potential water quality impacts from stormwater runoff in to the Pacific Grove ASBS. A Draft ASBS Compliance Plan is due in September 2014; the Final ASBS Compliance Plan is due within eighteen months after the draft, and must describe how the structural as well as non-structural controls are being implemented to reduce pollutant loads to the ASBS. The proposed project has been developed to determine the full extent of structural controls that may be needed to comply with the Special Protections. However, project implementation is not planned or anticipated until further results of the monitoring program become available, and are contingent upon additional grants or other funding. Certification of the FEIR is a necessary step both towards being eligible to apply for additional grant funds, as well as to demonstrate the Cities efforts in the Draft ASBS Compliance Plan due this year.

## **DISCUSSION**

In January 2013, Fall Creek Engineering, Inc. (FCE) was retained by the City of Monterey to complete the *City of Monterey and Pacific Grove ASBS Refined 2006 Feasibility Study of Alternatives Management Plan*. The scope of work in this study was to: (1) refine and select a preferred and alternate project from the broad list of projects identified by MACTEC, (2) select a preferred project alternative, (3) develop conceptual and preliminary plans for the preferred project, (4) prepare the CEQA environmental impact report (EIR) for the preferred project; and (5) prepare a project implementation work plan for the preferred project.

After review and screening of the 22 alternatives identified in the 2006 MACTEC Study, 6 project alternatives were identified and refined with input from the cities of Monterey and Pacific Grove. These alternatives were then screened by numerical ranking and weighted to select a preferred and alternative project.

The preferred project would divert both wet and dry weather flows from both Pacific Grove and New Monterey watershed areas into an upgraded stormwater collection and treatment system. As proposed, flows would be directed either to a new stormwater treatment facility adjacent to Pacific Grove Golf Links at the retired Point Pinos Wastewater Treatment Plant site and/or to the Monterey Regional Water Pollution Control Agency (MRWPCA) regional wastewater treatment plant in Marina. The objective of the project is to achieve up to a 90% reduction in pollutant loading during storm events to comply with the SWRCB's ASBS Special Protections.

The preferred ASBS stormwater management project is comprised of five associated sub-projects located primarily in the City of Pacific Grove, with a portion of two projects located in the City of Monterey. The five projects include: (1) David Avenue Reservoir Improvements, (2) Pine Avenue Conveyance, (3) Ocean View Boulevard Conveyance, (4) Point Pinos Stormwater Treatment Facility, and (5) Diversions to the MRWPCA. Together, these projects would divert and provide treatment for runoff up to the 85<sup>th</sup> percentile design storm; flows exceeding this design storm would continue to the existing outfall locations and flow to the Pacific Grove ASBS. The current preliminary engineering design is at the approximate 40% completion level.

Several special studies, geotechnical and surveying analysis, and further engineering are all required for implementation of the project in the future.

The proposed stormwater management project outlines the steps that may be implemented for structural measures to effectively manage stormwater discharges to comply with the SWRCB's water quality requirements and to protect the ASBS. Additional information about the proposed project can be found in the attached Executive Summary of the Engineering Report prepared under the IRWMP grant (Attachment A), including further description of the proposed project, estimated costs, recommendations for phasing and implementation, and additional next steps.

### **CEQA**

The City of Pacific Grove is the Lead Agency for the project evaluated in the CEQA Document and independently reviewed and analyzed in the Draft EIR and FEIR. The City of Monterey is a Responsible Agency for the project and also intends to certify the FEIR, following action by Pacific Grove. The Draft and Final EIRs have been available at the Library and Community Development Department, as well as being posted on the City's website, as follows:  
Homepage/City Hall/Public Works/Environmental Programs/Pacific Grove Area of Special Biological Significance: <http://www.ci.pg.ca.us/index.aspx?page=335>

The CEQA Document provides objective information to assist decision-makers and the public at large in their consideration of the environmental consequences of the project. The public review period provided all interested jurisdictions, agencies, private organizations, and individuals the opportunity to submit all comments made during the public review period. The Notice of Preparation of the Draft EIR was circulated for public review. It requested that responsible and trustee agencies respond as to the scope and content of the environmental information germane to that agency's specific responsibilities. The public review period for the Draft EIR was for 45 days between January 17, 2014 and March 3, 2014. The Draft EIR and appendices were available for public review during that time. A Notice of Completion and copies of the Draft EIR were sent to the State Clearinghouse, and Notices of Availability of the Draft EIR were published by the City. The Draft EIR was available for review at the City of Pacific Grove's offices, located at 300 Forest Avenue, Pacific Grove, California 93950.

The CEQA Document evaluated the following impacts: (1) aesthetics; (2) air quality; (3) biological resources; (4) cultural resources; (5) geology/soils; (6) greenhouse gas emissions/climate change; (7) hazards and hazardous materials; (8) hydrology and water quality; (9) land use and planning; (10) noise; (11) public services and utilities; and (12) transportation/traffic. Additionally, the CEQA Document considered, in separate sections, significant irreversible environmental changes and growth inducing impacts of the project, as well as a reasonable range of project alternatives. All of the significant environmental impacts of the project were identified in the CEQA Document; no significant impacts that are not able to be reduced to less-than-significant levels have been identified for the proposed project. Therefore, there is no need for the City of Pacific Grove to adopt a statement of overriding conditions in order to consider certifying the FEIR and approving the project.

The City evaluated the two comment letters on environmental issues received from persons who reviewed the Draft EIR. In accordance with CEQA, the City prepared written responses

describing the disposition of significant environmental issues raised. The FEIR provides adequate, good faith, and reasoned responses to the comments, and these responses were provided to the commenters on May 12, 2014. The City reviewed the comments received and responses thereto and has determined that neither the comments received nor the responses to such comments add significant new information to the Draft EIR regarding adverse environmental impacts. The City has based its actions on full appraisal of all viewpoints, including all comments received up to the date of adoption of these Findings, concerning the environmental impacts identified and analyzed in the FEIR. The responses to the comments on the Draft EIR, which are contained in the FEIR, clarify and amplify the analysis in the Draft EIR.

The Mitigation Monitoring and Reporting Program includes all of the mitigation measures identified in the CEQA Document and has been designed to ensure compliance during implementation of the Project. The MMRP provides the steps necessary to ensure that the mitigation measures are fully enforceable. The MMRP designates responsibility and anticipated timing for the implementation of mitigation; the City will serve as the MMRP Coordinator.

### **FISCAL IMPACT**

As noted above, certification of the FEIR is not a commitment by either city to built any part of the project. Thus, there is no fiscal impact associated with certification of the FEIR.

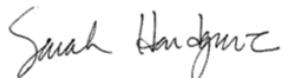
By certifying the FEIR, however, the cities may become eligible for additional grant funds to prepare additional studies needed to further the project design and engineering. Other than staff resources for preparation of grant applications, no further funding for this project is budgeted in FY 14/15 for either City.

Additional work on the project may be further considered in the FY 15/16 budget, pending the findings of the ASBS monitoring program as well as further discussion with the SWRCB based on their review of the Draft ASBS Compliance Plan. If grants or other funds do not become available within the timeframe required by the ASBS Special Protections, the City may consider petitioning to the SWRCB in the Final Compliance Plan that implementation is financially infeasible, based on the project cost estimates and limited resources within the City General Fund.

### **ATTACHMENTS**

- A. Engineering Report Executive Summary (full document provided on a CD and on City website)
- B. Final EIR Executive Summary (full document provided on a CD and on City website)

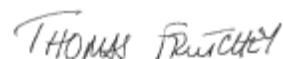
RESPECTFULLY SUBMITTED:



---

Sarah Hardgrave  
Consultant

REVIEWED BY:



---

Thomas Frutchey  
City Manager

## EXECUTIVE SUMMARY

This project addresses stormwater discharges into the Pacific Grove Area of Special Biological Significance (ASBS), which receives urban runoff from the New Monterey District in the City of Monterey and from the City of Pacific Grove. Over the past several years, the Cities of Monterey and Pacific Grove have been evaluating alternative stormwater management projects to address regulatory requirements imposed by the State Water Resources Control Board (SWRCB) for stormwater discharges to the ASBS.

In 2013, the Cities also initiated the multi-year Central Coast Regional ASBS Water Quality Monitoring Program to assess potential water quality impacts from stormwater runoff in to the Pacific Grove ASBS. This proposed stormwater management project, as presented in this report and accompanied plans, outlines the steps that can be implemented for structural measures to effectively manage stormwater discharges to comply with the SWRCB's water quality requirements and to protect the ASBS.

### **E.S.1 Project Approach**

In 2006 the City of Monterey completed an evaluation of a suite of options to address SWRCB restrictions for stormwater discharges into the ASBS. The analysis, prepared by MACTEC Engineering and Consulting, Inc. (MACTEC), compared twenty two (22) alternative projects including local projects that collect and treat runoff in Pacific Grove before it is discharged to the Monterey Bay, regional projects that pump runoff to the MRWPCA, a publicly owned treatment plant in Monterey, and other projects.

In January 2013, Fall Creek Engineering, Inc. (FCE) was retained by the City of Monterey to complete the *City of Monterey and Pacific Grove ASBS Refined 2006 Feasibility Study of Alternatives Management Plan*. The scope of work in this study was to: (1) refine and select a preferred and alternate project from the broad list of projects identified by MACTEC, (2) select a preferred project alternative, (3) develop conceptual and preliminary plans for the preferred project, (4) prepare the CEQA environmental impact report (EIR) for the preferred project; and (5) prepare a project implementation work plan for the preferred project.

After review and screening of the twenty two (22) alternatives identified in the 2006 MACTEC Study, six (6) project alternatives were identified and refined with input from the Cities of Monterey and Pacific Grove. These alternatives were then screened by numerical ranking and weighting to select a preferred and alternative project.

The preferred project would divert both wet and dry weather flows from both Pacific Grove and New Monterey watershed areas into an upgraded stormwater collection and treatment system. As proposed, flows would be directed either to a new stormwater treatment facility adjacent to Pacific Grove Golf Links at the retired Point Pinos Wastewater Treatment Plant site and/or to the Monterey Regional Water Pollution Control Agency (MRWPCA) regional wastewater treatment plant in Marina. The objective of the project is to achieve up to a 90% reduction in pollutant loading during storm events to comply with the SWRCB's ASBS Special Protections.

As a result of urbanization in the ASBS watershed, impervious surfaces such as pavement and rooftops, speed the transition between when rainfall falls on the surface to when it runs off into drainage ways and into the Monterey Bay. Low Impact Development (LID) is a stormwater management strategy concerned with maintaining or restoring natural hydrologic functions to protect water quality, manage stormwater runoff, achieve natural resource protection objectives and fulfill environmental regulatory requirements. LID strategies and practices were considered throughout the project selection and design process and the proposed project would result in a multitude of benefits associated with typical LID applications, specifically a reduction in peak stormwater flows and a de-synchronization of rainfall and associated runoff that will more closely resemble pre-development conditions. Due to the magnitude of flows that need to be managed to protect the Pacific Grove ASBS, LID practices alone were not considered as a feasible management approach. Future project phases should continue to evaluate opportunities to retrofit existing sites to accommodate LID practices and integrate LID into the proposed project to further enhance compliance with the ASBS Special Protections.

By conveying stormwater to Point Pinos and the MRWPCA the discharge of stormwater into the ASBS will be eliminated during storms less than or equal to the design storm. Runoff to the ASBS would also be reduced during rainfall events in excess of the design storm because runoff would continue to be diverted into the proposed stormwater collection and treatment system. Runoff exceeding the system design capacity would continue to discharge through existing outfalls. Though treated freshwater runoff through Crespi Pond will be increased as a result of the proposed project, overall freshwater runoff into the ASBS from Pacific Grove will be significantly reduced.

Results of the Central Coast Regional ASBS Water Quality Monitoring Program will inform the decision about if the proposed project should be implemented to comply with the SWRCB's water quality requirements to protect the ASBS. The monitoring results will also indicate if the proposed project needs to be modified and will also inform the stormwater treatment plant design, specifically the refinement of the proposed treatment system. In addition the monitoring efforts will evaluate potential stormwater impacts in the mixing zone as related to freshwater and stormwater pollutants.

## E.S.2 Project Description

The preferred ASBS stormwater management project is comprised of five associated sub-projects located primarily in the City of Pacific Grove, with a portion of two projects located in the City of Monterey. The five projects include (1) David Avenue Reservoir Improvements, (2) Pine Avenue Conveyance, (3) Ocean View Boulevard Conveyance, (4) Point Pinos Stormwater Treatment Facility, and (5) Diversions to the MRWPCA. Together each of these projects would divert and provide treatment for runoff up to the 85<sup>th</sup> percentile design storm; flows exceeding this design storm would continue to the existing outfall locations and flow to the Pacific Grove ASBS.

### ***Sub-Project 1. Upgrading and restoring the retired David Avenue Reservoir, adjacent to the intersection of David Avenue, Terry Street, and Carmel Avenue***

This project would improve the David Avenue Reservoir (reservoir) so that it could be used to capture runoff from a portion of the ASBS watershed within the City of Monterey and release it into the existing City of Pacific Grove storm drain system for conveyance downhill (northward) to Pine Avenue and then eventually to either the urban runoff diversion system or to the stormwater treatment system at Point Pinos. Detaining stormwater within the reservoir provides flow

equalization and a potential water source for local landscape irrigation. The reservoir could be managed with stormwater storage proposed at the Robert Down Elementary School (Sub-Project 2) and at the intersection of Caledonia Street and Pacific Avenue (Sub-Project 3) to provide dry weather irrigation to areas within Pacific Grove. Additionally, restoring the reservoir as a water feature provides potential opportunities as a neighborhood park which has been identified as a goal of residents living in the neighborhood around the reservoir. Figure E.S.1 provides a rendering of what the reservoir could become if rehabilitated and if public access were permitted. The property is currently owned and operated by the California American Water Company (CalAm).



Figure E.S.1. David Avenue Reservoir Landscape Concept Plan

***Sub-Project 2. Modifying the Pine Avenue drainage system between 7<sup>th</sup> Street and 18<sup>th</sup> Street***

The Pine Avenue Conveyance project creates a back-bone stormwater conveyance system to divert flows from the upper watershed to the Point Pinos Stormwater Treatment Facility (Sub-Project 4). Conveyance at this location reduces flows to the lower watershed and reduces the extent of upgrades needed in the existing urban diversion system to the MRWPCA (Sub-Project 5). Stormwater storage is proposed beneath the fields behind the Robert Down Elementary School and would provide a supply of water for irrigation of the school yard during dry weather. In addition to flow equalization this proposed storage site reduces peak flows and provides a desynchronization of rainfall and runoff.

***Sub-Project 3. Modifying the Ocean View Boulevard drainage system from Forest Avenue west to the retired Pacific Grove Wastewater Treatment Plant at the Point Pinos***

The Ocean View Conveyance Improvements would convey stormwater from the existing storm drain along Ocean View Boulevard to the Point Pinos Stormwater Treatment Facility (Sub-Project 4), with underground storage proposed beneath the intersection of Caledonia Street and Pacific Avenue. This sub-project would divert urban runoff from the northeastern portion of Pacific Grove, which currently has unmanaged wet and dry weather discharges to the ASBS. Routing stormwater along Ocean View Boulevard makes collection of these unmanaged flow possible while re-using an existing pipeline. Alternative locations would have required new construction with potential impacts to archeological resources while reducing the amount of runoff to the ASBS that could be collected and treated.

***Sub-Project 4. Installing a new stormwater treatment system at the retired Pacific Grove Wastewater Treatment Plant site, located on the Pacific Grove Golf Links***

This sub-project would involve the installation of a stormwater treatment facility at the retired Pacific Grove Wastewater Treatment Plant at Point Pinos. Treated stormwater from the stormwater treatment plant would either be discharged to the Monterey Bay, outside the ASBS, through the existing Crespi Pond outfall or be available for reuse as irrigation water. The project would treat both wet and dry weather flows, so there is the potential to reuse treated stormwater during the dry season when irrigation demands are highest. A multi-stage treatment stormwater system is proposed which includes four stages of treatment: a rotary screen, a first stage disc filter, a second stage disc filter and a UV disinfection system. FCE recommends that pilot testing of stormwater treatment technologies should be completed prior to developing final engineering design plans and implementing the project. A wet-weather equalization basin at the site would provide additional reduction in peak runoff while metering flows into the treatment facility.

The retired Pacific Grove Wastewater Treatment Plant site is ideally suited as the stormwater treatment plant location. The existing site is cleared and graded with non-native plants and no sensitive natural habitat. The existing structures on the site include two tanks that have the potential to be re-used for water storage as part of this project. Collecting and treating stormwater at this site is more efficient and less environmentally disruptive than constructing distributed treatment facilities along the Pacific Grove coastline to collect runoff from the numerous outfalls that currently discharge to the ASBS.<sup>1</sup>

***Sub-Project 5. Upgrading the stormwater drainage system along the Ocean View Boulevard right-of-way from Forest Avenue east to David Avenue to increase the diversion of wet weather flows to the MRWPCA Regional Wastewater Treatment Plant in Marina***

This project would capture runoff from approximately 23% of the total 950 acre ASBS drainage area and convey it to the MRWPCA Regional Wastewater Treatment Plant in Marina through upgrades to Pacific Grove's existing dry weather urban diversion system. On average, approximately 150 acre-feet per year of urban runoff would be delivered to the MRWPCA as a potential supply to its recycled water project or the proposed groundwater replenishment project. Additionally, connections between the stormwater collection system and the MRWPCA are proposed at the existing MRWPCA Coral Street pump station.

Analysis conducted to support development of the proposed project included 15% Concept Design Plans, a David Avenue Reservoir Alternatives Screening Analysis, a review of Geotechnical Findings at David Avenue Reservoir, a Geotechnical Investigation Report, 40% Preliminary Design Plans, and an Environmental Impact Report. A hydrology analysis was also performed to appropriately size the new conveyance and treatment system to manage runoff resulting from the design storm (the 85<sup>th</sup> percentile annual rainfall event).

### **E.S.3 Preliminary Project Cost Estimates**

FCE has prepared preliminary costs estimates for capital construction costs, engineering and construction management, administrative and legal fees and other related costs. FCE has also

<sup>1</sup> Twenty three outfalls over 12-inches in diameter were identified along the coastline that currently discharge into the Pacific Grove ASBS.

estimated the annual operation and maintenance costs for each subproject. The following sections present a summary of the capital and operational costs estimated for this project.

**Capital Cost.** Preliminary engineering capital cost estimates for the proposed improvements include material and labor costs, contingency (15%), project complexity factor (15%), engineering design (13%), construction management (8%), administrative and legal fees (2.5%) and inflation factor (4%). Please note that the capital costs summarized in Table ES-1 are preliminary and in some instances additional information and project analysis will be required to finalize and refine estimates.

Table ES-1. Project Cost Estimate Summary by Sub-Project

Project Description	Total Estimated Capital Cost	Annual Debt Payment on Capital (i = 3%, n = 20)
Sub-Project 1: David Avenue Reservoir	\$3,575,939	\$240,359
Sub-Project 2: Pine Avenue Stormwater System Improvements	\$2,383,475	\$160,207
Sub-Project 3: Ocean View Boulevard Conveyance	\$6,813,338	\$457,963
Sub-Project 4: Point Pinos Stormwater Treatment Facility	\$4,973,686	\$334,310
Sub-Project 5: Urban Diversion System Improvements	\$3,997,157	\$268,672
<b>Total</b>	<b>\$21,743,595</b>	<b>\$1,461,511</b>

**Operation and Maintenance (O&M) Costs.** O&M costs generally include the cost of labor, materials and energy for equipment, structural and landscape components. Annual operation costs would depend greatly upon the Cities' policies, specifically related to labor and maintenance schedules. At this stage in project development the O&M costs are assumed to be 3% of the preliminary capital cost estimate as shown in Table ES-2. Also shown in Table ES-2 is the average annual O&M over the 20-year loan period calculated as the average of 20-years of O&M costs increased annually by 1.5% inflation.

Table ES-2. Summary of Estimated O&M Cost for Each Sub-Project

Project Description	Total Estimated Capital Cost	O&M Cost (3% of Capital Cost)	Average Annual O&M <sup>1</sup>
Sub-Project 1: David Avenue Reservoir	\$3,575,939	\$107,000	\$ 123,700
Sub-Project 2: Pine Avenue Stormwater System Improvements	\$2,383,475	\$72,000	\$ 83,200
Sub-Project 3: Ocean View Boulevard Conveyance	\$6,813,338	\$204,000	\$ 235,900
Sub-Project 4: Point Pinos Stormwater Treatment Facility	\$4,973,686	\$149,000	\$ 172,300
Sub-Project 5: Urban Diversion System Improvements	\$3,997,157	\$120,000	\$ 138,700
<b>Total</b>	<b>\$21,743,595</b>	<b>\$652,000</b>	<b>\$753,800</b>

1. Average Annual O&M Cost is the average of the O&M cost adjusted annually for inflation over the 20 year period.

## E.S.4 Cost Benefit Analysis

A cost benefit analysis was conducted to evaluate and compare stormwater management options. For this analysis, and for consistency with previous project evaluations in the Pacific Grove ASBS region, Total Suspended Sediment (TSS) was selected as a representative constituent to conduct pollutant load reductions. Table ES-3 presents the Cost Effective Ratio of the proposed project with an estimated cost of \$4.81 per pound of TSS removed. After the initial Central Coast ASBS Regional Monitoring Program has been completed and additional pollutant load data is available, this analysis should be further developed as part of the final PG ASBS Compliance Plan, due to the SWRCB in 2018.

Table ES-3. Estimated CER for the proposed project based on pounds of TSS prevented from discharge into the Monterey Bay

<b>Cost Effective Ratio (CER)</b>		
TSS Load	lbs/yr	360,500
	lbs/ac-yr	370
<b>Proposed Project</b>		
Pollutant Removal Efficiency for 85th Percentile	Storm Event <sup>1</sup>	93%
Pollutant Removal	lbs/yr	335,300
Life Cycle Cost (LCC)	\$	\$32,276,476
Equivalent Annual PW (LCC/n)	\$/yr	\$1,613,824
<b>Cost Effective Ratio (CER)</b>	<b>\$/lbs of TSS Removed</b>	<b>\$ 4.81</b>
1. As reported from MACTEC, 2006 as "Average Annual Capture" (i.e. the amount of annual runoff captured and treated) estimated using STORM modeling as a combined efficiency for simulations of dry and wet weather storm management for systems designed to manage the 85% storm event.		

The two project options identified in the MACTEC (2006) analysis that are most similar to the proposed project were Pacific Grove ASBS Options 3 and 9. Option 3 proposed treatment of wet and dry weather flows up to the 85% storm event at the Point Pinos Treatment site. Option 9 proposed delivery and treatment of all wet and dry weather flows up to the 85% storm event to the MRWPCA. The proposed project CER of \$4.81/lb of TSS Removed is less than Option 9 (\$4.97/lb TSS) and more than Option 3 (\$1.43/lb TSS). It should be noted that neither Option 3 or 9 included rehabilitation of the David Avenue Reservoir. Option 3 also provided for a wet pond with impermeable liner, whereas, the proposed project includes a stormwater treatment facility designed to meet the 90% reduction requirements. It is unlikely that a wet pond would meet these requirements without additional treatment.

### **E.S.5 Market Value Comparison**

The primary objective of the proposed project is to manage and treat stormwater discharges into the Pacific Grove ASBS. As a secondary benefit, the proposed project provides the opportunity to reuse collected stormwater for irrigation. Specifically, the proposed project would install three storage facilities located in the vicinity of where irrigation is currently occurring with potable water from Cal-Am; at the Robert Down Elementary School, Caledonia Park and Pacific Grove Golf Links. Potential reuse demands at these locations for recycled water or stormwater have been identified in two previous studies. In the vicinity of the Pacific Grove Golf Links, individual demands were identified for the El Carmelo Cemetery and for filling maintenance trucks.

The proposed Pacific Grove ASBS Stormwater Management project has also been designed so that water stored in the various reservoirs can be reused to meet local irrigation demands. It is anticipated that with additional releases from the rehabilitated David Avenue Reservoir, stormwater could be managed to meet 5 acre-feet per year (AFY) of irrigation demand at the Robert Down Elementary School, 1 AFY of irrigation demand at Caledonia Park and approximately 6.3 AFY of irrigation demand at Point Pinos (either at the Golf Links, El Carmelo Cemetery or truck filling), for a total of 12.3 AFY. Assuming an annual cost of treatment of \$18,900, the cost to use stored stormwater for irrigation at these locations would cost approximately \$1,500/AF.

### **E.S.6 Project Implementation**

**Project Phasing.** It is unlikely that each of the five sub-projects would be constructed at the same time. The following is one potential approach to sequencing the construction:

1. Restore the David Ave Reservoir;
2. Install the Robert Down Elementary School Storage and CDS Unit
  - a. Treatment system for stormwater reuse to meet irrigation demand
3. Install the Caledonia Storage and CDS Unit
  - a. Treatment system for stormwater reuse to meet irrigation demand
4. Upgrade the MRWPCA Urban Diversion Improvements
5. Install the Ocean View conveyance and pump stations (three stations);
6. Install the Pine Avenue conveyance system; and
7. Install the Point Pinos Stormwater Treatment Facility

This implementation sequence maximizes the use of each facility without depending on the completion of a subsequent sub-project allowing for the immediate use of each facility once it has been constructed. Importantly, the conveyance along Pine Avenue and Ocean View Boulevard should be closely coordinated; Ocean View conveyance would need to be installed to adequately convey the additional flows delivered from Pine Avenue.

**Institutional Agreements.** The construction and continued O&M of the proposed project would depend upon agency coordination and institutional agreements between numerous entities. The following list describes institutional agreements likely required for the project.

City of Monterey and City of Pacific Grove – This project is a partnership between both Cities and numerous elements will need to be coordinated and agreed upon, including the following:

- Implementation
  - o The project would provide a coordinated approach for the Cities to each achieve ASBS compliance, therefore proportional responsibility would need to be assigned as it pertains to each city's share of the project costs, including both capital and long term O&M.
  - o Due to the range of benefits this project would accomplish if implemented, it is expected to be competitive for grant and other funding opportunities. The Cities will need to coordinate joint pursuit of funding opportunities, in terms of application preparation and management of funds received.
  - o Similarly, the Cities will need to agree upon how permitting will be coordinated and led.
- Facility Management
  - o The Cities would need to agree upon the coordinated management of the new stormwater treatment facility and the MRWPCA diversion system, which would receive flows from northeastern Pacific Grove and New Monterey.
  - o If a facility transfer or sharing agreement is reached with CalAm for the use of the David Avenue site, the Cities will potentially need to agree upon joint ownership and/or management of the property and reservoir.
  - o Additionally, if agreed upon, the Cities would need to coordinate the release of water from David Avenue Reservoir to meet irrigation demands and agreed upon locations in Pacific Grove and/or Monterey.

CalAm – CalAm is the current owner and operator of the David Avenue Reservoir site which includes one of their critical distribution facilities, the Eardley Pump Station. CalAm has expressed interest and support of the proposed project and is a necessary partner for successful rehabilitation of the David Avenue Reservoir. In the near term, CalAm will need to be a project permitting partner specifically as it relates to approval and coordination of the proposed reservoir design review with the Division of Safety of Dams (DSOD). With support from CalAm, the City of Monterey, either independently or jointly with the City of Pacific Grove, could coordinate an agreement for transferring the Reservoir to the City for rehabilitation and a return to service for stormwater management. The current use of the site as a maintenance and operations yard would likely require modifications or potentially need to be relocated depending upon the agreed upon final use of the property.

Pacific Grove Unified School District (PGUSD) – The proposed location for storage of stormwater between David Avenue and Pine Avenue is on PGUSD property, specifically the playing fields behind Robert Down Elementary School, near Junipero Avenue. The proposed storage location would need to be negotiated with PGUSD and could provide PGUSD with an irrigation supply source, offsetting the existing 5 AFY potable water demand at potential cost savings to the PGUSD.

MRWPCA – The proposed project would increase deliveries of wet weather flows to the MRWPCA in addition to the existing dry weather diversion system. The additional capacity of the MRWPCA system to receive and treat these flows would need to be confirmed and the cost of any additional improvements negotiated (e.g. capacity fees) if the MRWPCA would use them as a source of supply for recycled water demands.

MPWMD - With the MPWMD/MRWPCA's planned Groundwater Replenishment Project (GRP) it is also in the Cities' interest to clearly define with the MPWMD the amount of stormwater conveyed into the MRWPCA system for treatment in Marina, storage in the Seaside Groundwater Basin, and reuse in the CalAm potable water system. There is the potential that some of the stormwater conveyed to the MRWPCA, treated in Marina, and delivered to the GRP could become a part of each Cities' water supply portfolio or become new water allocation to the Cities. For this to occur, MPWMD must conduct further environmental review to establish new water allocations or credits.

### E.S.7 Next Steps

**Master Planning and Technical Studies.** There are three additional investigations, or special studies, that if completed could expedite project implementation. The proposed investigations are specifically related to continued use of the David Avenue Site, improvements on Pine Avenue and stormwater treatment and reuse. The recommended scope of each of these studies is described in more detail below.

David Avenue Reservoir Master Plan – In addition to the institutional agreement required for successful transfer of the Reservoir site (described in Section 6), the proposed rehabilitation of the Reservoir would benefit from a shared vision for how the site can balance competing community, water utility and stormwater management needs. The proposed Master Plan would incorporate representatives from each of these sectors and recommend a strategy for ownership, site use and landscape amenities to the site.

Pine Avenue Master Plan – The conveyance pipeline along Pine Avenue was strategically located to coincide with future improvements on Pine Avenue; a Safe Routes to Schools project and Green Street Low Impact Development (LID) retrofit. The Green Street improvements can be connected to the proposed stormwater conveyance pipeline on Pine Avenue, and would provide additional stormwater water quality benefits for the ASBS. A Pine Avenue Master Plan would provide a cohesive plan for how these three projects can not only be strategically phased but physically interwoven to maximize their individual impacts.

Stormwater Treatment and Reuse Pilot Study – There is currently very little available data documenting the successful treatment and reuse of stormwater. A pilot study treating stormwater runoff from the ASBS watershed could benefit the project by testing stormwater treatment

technologies and removal efficiencies. Such a study would not only benefit the ASBS, but other local utilities considering similar water supply projects.

**Geotechnical Investigations and Surveying.** Additional geotechnical studies and surveying work will need to be conducted in all project areas to support the final design and permitting for the projects. A comprehensive geotechnical investigation of the existing David Avenue Reservoir dam site would be needed to support the final designs and permitting of the project with the State Division of Safety of Dams.

**Engineering Design and Permitting.** The current preliminary engineering design is at the approximate 40% completion level. Subsequent design plans and construction documents will need to be completed to implement any or all of the projects.

**Funding Strategy.** Along with developing institutional agreements, identifying a funding strategy for the proposed project should be a near term objective for each of the Cities. The funding strategy should be for the proposed project as a whole and for each of the sub-projects because it is unlikely all the sub-projects would be implemented simultaneously. A successful funding strategy would consider local, state and federal sources and if implemented would greatly enhance each of the Cities' mandates of successfully managing stormwater runoff in the ASBS watershed.

### E.S.8 Project Funding

This project is well suited to qualify for a variety of grant funding opportunities. Three potential opportunities are the (1) Integrated Regional Water Management (IRWM) grant program, (2) funding through Proposition 84 and (3) directly through the Ocean Protection Council (OPC). The OPC generally does not have an open solicitation process, but can be approached directly with funding requests. They have funds available for low impact development (LID) projects and have ASBS related strategic goals. Where match funds are required to receive grant awards, the Cities could potentially apply monitoring efforts and/or property contributions (e.g. at David Avenue Reservoir).

Table ES-4 outlines available programs for stormwater related projects remaining in Proposition 84 and Proposition 1E as well as Clean Water Act funding, including 319(h) and the State Revolving Loan Fund. A new water bond may be put on the ballot in 2014 and may provide future funding opportunities for the project as a whole or the various sub-projects. Stormwater is supported in all of the existing water bonds with sufficient funding for the costs associated with the ASBS Stormwater Management Project.

Additionally drought emergency legislation currently in effect will expedite an approximate \$200 million dollar portion of the Proposition 84 IRWMP funds for a grant round in early spring 2014. These funds will be especially focused on multi-benefit water supply projects as focused by the drought emergency.

Table ES-4. Funding Programs for Stormwater Related Projects

Program	Agency	Website
Clean Beaches Initiative – Proposition 84	State Water Resources Control Board	<a href="http://www.waterboards.ca.gov/water_issues/programs/grants_loans/">http://www.waterboards.ca.gov/water_issues/programs/grants_loans/</a>
Stormwater Program – Proposition 84	State Water Resources Control Board	<a href="http://www.waterboards.ca.gov/water_issues/programs/grants_loans/">http://www.waterboards.ca.gov/water_issues/programs/grants_loans/</a>
Stormwater Flood Management – Proposition 1E	Department of Water Resources	<a href="http://www.water.ca.gov/irwm/grants/stormwaterflood.cfm">http://www.water.ca.gov/irwm/grants/stormwaterflood.cfm</a>
Integrated Regional Water Management Program – Proposition 84	Department of Water Resources	<a href="http://www.water.ca.gov/irwm/grants/index.cfm">http://www.water.ca.gov/irwm/grants/index.cfm</a>
Ocean Protection Council – Proposition 84	State Coastal Conservancy	<a href="http://www.opc.ca.gov/category/funding-opportunities/">http://www.opc.ca.gov/category/funding-opportunities/</a>
Clean Water Act 319 h Grant Program	State Water Resources Control Board	<a href="http://www.waterboards.ca.gov/water_issues/programs/grants_loans/">http://www.waterboards.ca.gov/water_issues/programs/grants_loans/</a>
State Revolving Loan Fund	State Water Resources Control Board	<a href="http://www.waterboards.ca.gov/water_issues/programs/grants_loans/">http://www.waterboards.ca.gov/water_issues/programs/grants_loans/</a>

## EXECUTIVE SUMMARY

This section summarizes the characteristics of the proposed project as well as the environmental impacts, mitigation measures, and residual impacts associated with implementation of the proposed project.

### PROJECT SYNOPSIS

#### Project Proponent and Lead Agency

City of Pacific Grove  
Public Works Department  
2100 Sunset Drive  
Pacific Grove, California 93950  
*Contact:* Daniel Gho, Public Works Program Manager; Sarah Hardgrave, Project Manager

#### Co-Sponsor and Responsible Agency

City of Monterey  
Plans and Public Works Department  
580 Pacific Street, Room 7  
Monterey, California 93940  
*Contact:* Jeff Krebs, Senior Engineer

#### Project Description

The proposed project is the Monterey-Pacific Grove Area of Special Biological Significance (ASBS) Stormwater Management Project (project). The primary purpose of the project is to improve stormwater quality prior to being discharged into the ASBS, in accordance with State Water Resources Control Board (SWRCB) standards. A secondary project purpose is to provide stormwater as a source of non-potable recycled water supply for local irrigation and regional groundwater replenishment.

The proposed project area is comprised of five associated components located primarily in the City of Pacific Grove, with a portion of one component located in the City of Monterey, California. The five components include:

- 1) *The former David Avenue Reservoir and adjacent inlet infrastructure improvements near the intersection of David Avenue, Terry Street, and Carmel Avenue (a portion of this project component is within the City of Monterey);*
- 2) *The Pine Avenue right-of-way between 7<sup>th</sup> Street and 18<sup>th</sup> Street;*
- 3) *The Ocean View Boulevard right-of-way from Forest Avenue west to the retired Pacific Grove Wastewater Treatment Plant (PGWTP) at the Point Pinos Lighthouse Reservation;*
- 4) *The retired PGWTP and adjacent Crespi Pond, located on the Pacific Grove Golf Links; and*
- 5) *The Ocean View Boulevard right-of-way from Forest Avenue east to David Avenue (existing runoff diversion system to the Monterey Regional Water Pollution Control Agency [MRWPRA] Regional Wastewater Treatment Plant in Marina).*



**Project Objectives.** The primary goal of the project is to improve stormwater quality discharged into the Pacific Grove ASBS. In addition, key objectives of the project are:

1. *To meet the ASBS Special Protection requirements to implement structural best management practices (BMPs) to achieve up to a 90 percent reduction in pollutant loading during storm events, if the wet weather discharges are impacting natural water quality to comply with the ASBS water quality standards set by the SWRCB;*
2. *To conserve potable water by developing dry and wet weather storm system flows as a source of non-potable water for irrigation at the Pacific Grove Golf Links, El Carmelo Cemetery, and other feasible non-potable water demands;*
3. *To restore the David Avenue Reservoir to a year-round continuous reservoir;*
4. *To install necessary stormwater infrastructure and structural BMPs to comply with the Special Protections and National Pollutant Discharge Elimination System (NPDES) permit requirements, including: new stormdrain pipelines, stormwater treatment units, equalization basins, and lift stations so that runoff can be managed in an effective manner to protect water quality, and to allow the reuse of runoff either locally from David Avenue Reservoir, the proposed equalization systems, the planned Point Pinos Stormwater Treatment System and/or at MRWPCA future groundwater replenishment project;*
5. *To construct improvements in such a way as to allow the future addition of stormwater BMPs into the system to further enhance water quality and local reuse activities;*
6. *To expand the existing dry weather diversion system to collect runoff west of Lovers Point for discharge to the Point Pinos Stormwater Treatment Facility or the MRWPCA system for reuse in North Monterey County or the proposed groundwater replenishment project in Seaside.*
7. *To reduce regulatory uncertainty by addressing the requirements of the ASBS Special Protections that may impact the cities of Monterey and/or Pacific Grove if they do not participate in the project;*
8. *To construct a project that is both financially and technically feasible;*
9. *To construct a project that does not exceed MRWPCA Regional Treatment Plant (RTP) capacity; and*
10. *To construct a project that can be eligible for multiple funding opportunities.*

The project components are bordered by a range of low-density urban land uses. The following describes the surrounding land use pattern by component.

- 1) **David Avenue Reservoir.** The David Avenue Reservoir and adjacent inlet infrastructure would be improved to capture runoff from the portion of the ASBS watershed within the City of Monterey and release it from the reservoir into the existing City of Pacific Grove storm drain system for conveyance downhill (northward) to Pine Avenue. The reservoir site is bordered by single family residences to the east and west, Hillcrest Avenue and Pacific Grove Middle School to north, and David Avenue and single and multi-family residences to the south. This component comprises lands within the City of Pacific Grove and the City of Monterey.
- 2) **Pine Avenue Conveyance.** The Pine Avenue stormwater conveyance improvements would be located primarily within the Pine Avenue right-of-way, which is bordered to the northeast by single family residences, commercial uses, multi-family residences, professional offices, and City Hall and to the southwest by single family residences, Robert Down Elementary School, multi-family residences, and professional offices. This project component also includes installation of an underground stormwater



equalization/storage facility in the vicinity of Robert Down Elementary School, which is bounded by Pine Avenue and single family residences to the north, multi-family residences to the west, 12<sup>th</sup> Street and single family residences to the east, and Junipero Avenue and the Pacific Grove Community Center to the south.

- 3) **Ocean View Boulevard Conveyance**. The Ocean View Boulevard conveyance improvements would be located primarily within the Ocean View Boulevard right-of-way, which is surrounded by open space, pedestrian trails, and Monterey Bay to the north and east, and by single family residences and commercial uses to the south. At the western edge of this project component, Ocean View Boulevard is bounded to the south by Pacific Grove Golf Links, Crespi Pond, and the retired PGWTP. In addition to conveyance improvements within the right-of-way, this project component includes three new pump stations: at the Lovers Point parking lot; north of the intersection of Sea Palm Avenue/Moss Street and Ocean View Boulevard; and near the intersection of Coral Street and Ocean View Boulevard. The Lovers Point pump station would be surrounded by a parking lot to the east, south, and west and by the Monterey Bay Coastal Recreation Trail to the north. The Sea Palm pump station would be located primarily within a landscaped median, and bordered by a parking area and Monterey Bay to the north and Ocean View Boulevard to the south. The Coral Street pump station would be primarily within the Ocean View Boulevard right-of-way, bordered by single family residences to the south and open space and the Monterey Bay to the north.
- 4) **Point Pinos Stormwater Treatment Facility and Crespi Pond**. The retired PGWTP (referred to here as the Point Pinos Stormwater Treatment Facility) and Crespi Pond are surrounded by open space, pedestrian trails, and the Monterey Bay to the north, dune habitat restoration to the west, and the Pacific Grove Golf Links to the south and east.
- 5) **Diversions to MRWPCA**. This component would be primarily within or adjacent to the Ocean View Boulevard right-of-way east of Forest Avenue, which is bordered by open space, pedestrian trails, Hopkins Marine Station, and the Monterey Bay to the north and east, single family residences and commercial uses to the south and west.

## ALTERNATIVES

Three alternatives to the proposed project were chosen for analysis as follows:

- *Alternative 1: No Project*
- *Alternative 2: Treatment at the MRWPCA WTP*
- *Alternative 3: Treatment at the Retired PGWTP*

The No Project alternative assumes that the proposed ASBS Stormwater Management Project is not constructed and the current uses of the five component sites would continue. However, the proposed Pacific Grove Local Water Project (PGLWP) may still move forward under this alternative, and thus, some improvements to the PGWTP site, outside of those proposed as part of this project, may still occur. Stormwater runoff under this alternative would continue to flow to the Monterey Bay as under current conditions.



The Treatment at the MRWPCA WTP alternative would divert both dry and wet-weather runoff from both Pacific Grove and New Monterey to the MRWPCA WTP in Marina.

The Treatment at the Retired PGWTP alternative would divert 100 percent of runoff to the retired PGWTP for treatment, rather than diverting a portion of the drainage area to the MRWPCA WTP, as in the proposed project.

Refer to Section 6.0, *Alternatives*, for complete descriptions of the three alternatives and the associated analysis.

## SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table ES-1 includes a brief description of the environmental issues relative to the proposed project, the identified environmental impacts, proposed mitigation measures, and residual impacts.

Impacts are categorized by significance. *Significant and unavoidable* adverse impacts (Class I) require a statement of overriding considerations to be issued per Section 15093 of the *State CEQA Guidelines* if the project is approved. *Significant but mitigable* impacts (Class II) are adverse impacts that can be feasibly mitigated to less than significant levels and which require findings to be made under Section 15091 of the *State CEQA Guidelines*. *Less than significant* impacts (Class III) would not exceed significance thresholds and therefore would not require mitigation.



**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

Impact	Mitigation Measure	Residual Impact
<b>AESTHETICS</b>		
<b>Impact AES-1</b> Several of the project component sites are located in visually-sensitive locations. However, given the nature of the proposed improvements, construction and operation of the project would not have a substantial adverse effect on a scenic vista. Impacts would be Class III, <i>less than significant</i> .	None required	Less than significant
<b>Impact AES-2</b> Construction and operation of the proposed project would visually transform the existing character of the component sites. Considering the existing and historical uses of these sites, project features would not substantially degrade the existing character or quality of the sites. Impacts would be Class III, <i>less than significant</i> .	None required	Less than significant
<b>Impact AES-3</b> The proposed project would introduce new sources of lighting at the David Avenue Reservoir and Point Pinos Stormwater Treatment Facility. All new site lighting would be down-lit and directional in nature, consistent with City of Pacific Grove standards. Impacts would be Class III, <i>less than significant</i> .	None required	Less than significant
<b>Impact AES-4</b> The proposed project would introduce glare at the David Avenue Reservoir and Point Pinos Stormwater Treatment Facility sites. Impacts would be Class III, <i>less than significant</i> .	None required	Less than significant
<b>AIR QUALITY</b>		
<b>Impact AQ-1</b> The proposed project would not contribute to population growth, and would therefore be consistent with the growth assumptions in the Air Quality Management Plan (AQMP). This impact would be Class III, <i>less than significant</i> .	None required	Less than significant
<b>Impact AQ-2</b> Construction of the proposed project would result in the temporary generation of air pollutants, which would affect local air quality. Short-term emissions of PM <sub>10</sub> during the	None required	Less than significant

**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

construction period would not exceed MBUAPCD thresholds. Impacts would be Class III, <i>less than significant</i> .		
<b>Impact AQ-3</b> The project does not have the potential to create objectionable odors that could affect neighboring properties. The construction of the Point Pinos Stormwater Treatment Facility would not emit compounds that would result in substantial objectionable odors. Therefore, impacts related to odors would be Class III, <i>less than significant</i> .	None required	Less than significant
<b>BIOLOGICAL RESOURCES</b>		
<b>Impact B-1</b> Implementation of the proposed project could result in impacts to CRLF. This impact is Class II, <i>significant but mitigable</i> .	<p><b>B-1(a) CRLF Consultation and Protocol Surveys.</b> Prior to construction of the David Avenue Reservoir and Point Pinos Stormwater Treatment Facility and Crespi Pond components of the project, a qualified biologist shall prepare a CRLF site assessment of the David Avenue Reservoir and Crespi Pond following the guidelines included in the USFWS <i>Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog</i> (USFWS, 2005). The site assessment shall be submitted to the USFWS for review and determination if a protocol survey is recommended for the project. If USFWS recommends completion of CRLF protocol surveys, a qualified biologist shall conduct protocol surveys prior to initiation of construction activity at the David Avenue Reservoir and prior to construction of the water conveyance structure between the Point Pinos Stormwater Treatment Facility and Crespi Pond and any associated work within Crespi Pond. Protocol surveys shall be conducted in accordance with the USFWS guidelines (USFWS, 2005). If preconstruction surveys are negative for CRLF, then no further action is required.</p> <p><b>B-1(b) Worker Environmental Awareness Program (WEAP) Training.</b> WEAP training shall be provided to all construction personnel prior to onset of construction at the David Avenue Reservoir and Point Pinos Stormwater Treatment Facility and Crespi Pond components of the project. Training shall include how to recognize CRLF and review of applicable avoidance measures to protect the species. Construction personnel shall also be informed that if a CRLF is encountered in the work area, a qualified biologist shall be contacted and construction shall stop</p>	Less than significant



**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

	<p>until the animal leaves the area of its own volition.</p> <p><b>B-1(c) Pre-construction Surveys for CRLF.</b> A qualified biologist shall conduct a pre-construction CRLF survey immediately prior to any ground disturbing activities at the David Avenue Reservoir and Crespi Pond and shall be on-site during all vegetation clearing and ground disturbing activities. If a CRLF is encountered in the work area, construction shall not begin until the animal leaves the area of its own volition.</p> <p><b>B-1(d) Submission of Biologist Qualifications.</b> At least 15 days prior to the onset of construction activities for the David Avenue Reservoir and Point Pinos Stormwater Treatment Facility and Crespi Pond components of the project, the project proponent shall submit the name(s) and credentials of biologist(s) who would conduct activities specified in these measures to the City of Pacific Grove and/or USFWS. No project activities shall begin until the project proponent has received written approval from the City of Pacific Grove that the biologists are qualified to conduct the work.</p> <p><b>B-1(e) Construction Fencing.</b> A temporary silt fence or other wildlife exclusion fencing suitable for amphibians shall be erected along the perimeter of the construction areas at the David Avenue Reservoir and at the site of construction for the water conveyance structure between the Point Pinos Stormwater Treatment Facility and Crespi Pond to prevent entry of CRLF into the construction area and to deter construction personnel from accessing adjacent habitat. The qualified biologist shall verify appropriate placement of the construction fencing prior to the start of construction. The fence shall be inspected on a daily basis to ensure that it remains in place without any breaks or openings. No construction activity shall be allowed until this condition is satisfied. No grading, clearing, storage of equipment or machinery, or other disturbance or activity may occur until the qualified biologist has inspected and approved all temporary construction fencing.</p> <p><b>B-1(f) CRLF Entrapment Avoidance.</b> To avoid entrapment of CRLF, all excavated steep-walled holes or trenches more than 12 inches deep shall be provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work</p>	
--	---	--



**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

	<p>day. If escape ramps cannot be provided, then holes or trenches shall be covered with plywood or similar materials. Providing escape ramps or covering open trenches is anticipated to prevent injury or mortality of individuals resulting from falling into trenches and becoming trapped. The trenches shall be thoroughly inspected for the presence of CRLF prior to covering and at the beginning of each workday by a designated person trained by the qualified biologist. This person shall report daily during construction to the qualified biologist on the findings of these inspections.</p> <p><b>B-1(g) Trash Disposal.</b> All food-related garbage shall be placed in tightly sealed containers at the end of each workday to avoid attracting predators. Containers shall be emptied and garbage removed from the construction site at the end of each work week. If sealed containers are not available, garbage shall be removed from the construction site upon completion of daily activities. All garbage removed from the construction site shall be disposed of at an appropriate off-site refuse location.</p> <p><b>B-1(h) Construction Timing.</b> All construction activities shall be performed during daylight hours or with suitable lighting so that frogs can be seen.</p> <p><b>B-1(i) Work Restrictions During Precipitation.</b> No ground disturbing work shall occur during rain events of more than 0.5 inches in 24 hours.</p>	
<p><b>Impact B-2</b> Implementation of the proposed project could result in impacts to western pond turtle. This impact is Class II, <i>significant but mitigable</i>.</p>	<p><b>B-2 Pre-construction Surveys for Western Pond Turtle.</b> A qualified biologist shall conduct a pre-construction survey immediately prior to any ground disturbing activities at the David Avenue Reservoir and at the site of construction for the water conveyance and dissipation structures between the Point Pinos Wastewater Treatment Facility and Crespi Pond, and shall be on-site during all vegetation clearing and ground disturbing activities at these locations. If a western pond turtle is encountered in the work area, the qualified biologist shall relocate individuals to a part of Crespi Pond where no construction activity would occur.</p>	Less than significant
<p><b>Impact B-3</b> Implementation of the proposed project could result in impacts to white-tailed kite and other nesting bird species. This impact is Class II, <i>significant but mitigable</i>.</p>	<p><b>B-3(a) Tree Removal Conducted Outside of Nesting Season.</b> Every effort shall be made to conduct all, or the majority, of tree removal activity at the David Avenue Reservoir during the non-nesting season (September 16 to January 31). No trees shall be removed from the David Avenue Reservoir site during the nesting</p>	Less than significant



**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

	<p>season (February 1 through September 15) unless there is no reasonable alternative, and removal during the non-nesting season is not possible.</p> <p><b>B-3(b) Preconstruction Surveys for Nesting Birds.</b> For construction activities occurring during the nesting season (February 1 to September 15) and for any tree removal that would occur during the nesting season at any project component, surveys for nesting birds covered by the CFGC and the MBTA (including, but not limited to, white-tailed kite, red-tailed hawk and red-shouldered hawk) shall be conducted by a qualified biologist no more than 14 days prior to initiation of construction activities for each component project site where construction staging and tree or other vegetation removal would occur. The surveys shall include the entire disturbance area plus a 200 foot buffer around the site. If active nests are located, all construction work shall be conducted outside a buffer zone from the nest to be determined by the qualified biologist. The buffer shall be a minimum of 50 feet for non-raptor bird species and at least 150 feet for raptor species. Larger buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. The biologist shall have full discretion for establishing a suitable buffer. The buffer area(s) shall be closed to all construction personnel and equipment until the adults and young are no longer reliant on the nest site. A qualified biologist shall confirm that breeding/nesting is completed and young have fledged the nest prior to removal of the buffer.</p>	
<p><b>Impact B-4</b> The proposed project would involve removal of established wetland habitat on-site and discharge of non-potable water into the Pacific Ocean, thus impacting waters of the state and waters of U.S. These impacts would be Class II, <i>significant but mitigable</i>.</p>	<p><b>B-4 Jurisdictional Delineation.</b> Once final design has been developed, but prior to the start of construction, a qualified biologist shall conduct a jurisdictional delineation of the David Avenue Reservoir and Crespi Pond disturbance areas where construction activity could affect jurisdictional waters. The jurisdictional delineation shall determine if features are under the jurisdiction of CDFW, USACE, RWQCB, and/or other regulatory agencies. The result shall be a preliminary jurisdictional delineation report that shall be submitted to the implementing entity, CDFW, USACE, RWQCB (and other agencies if necessary), as appropriate for review and approval. Prior to construction, all necessary permits shall be obtained from each agency where applicable. If it is determined that no jurisdictional waters would be impacted by project development, no further</p>	<p>Less than significant</p>



**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

	<p>action is required. If the project would impact waters of the State and/or waters of the US, consultation with CDFW, RWQCB, and/or USACE shall be initiated, and applications for any required permits (SAA, 404, 401, and/or WDR) shall be prepared and submitted to the requisite agencies.</p>	
<b>Impact B-5</b> Implementation of the proposed project could result in impacts to trees protected under the City of Pacific Grove 2013 Amended Urban Forestry Tree Ordinance. This impact is Class III, <i>less than significant</i> .	None required	Less than significant
<b>Impact B-6</b> Implementation of the proposed project could result in impacts to hoary bat. However, the project would not modify the quality of foraging habitat, nor impact foraging behavior. This impact is Class III, <i>less than significant</i> .	None required	Less than significant
<b>CULTURAL RESOURCES</b>		
<b>Impact CR-1</b> Construction of the proposed project would involve surface excavation, which has the potential to unearth or adversely impact prehistoric or archaeological resources. Impacts would be Class II, <i>significant but mitigable</i> .	<p><b>CR-1(a) Phase II Archaeological Assessment.</b> Prior to the issuance of any building or grading permits for the Ocean View Boulevard Conveyance component, a Phase II Archaeological Assessment shall be completed for that portion of the project by a licensed archaeologist. This assessment shall be submitted for review and approval by the City of Pacific Grove. Any recommendations given in the Assessment shall be included as notes on any grading or building permit issued for the project site. Such recommendations may include, but would not be limited to: site avoidance and cataloging of any finds.</p> <p><b>CR-1(b) Archaeological Monitor.</b> The following notes shall appear on all grading permits issued for the Ocean View Boulevard Conveyance improvements:</p> <ul style="list-style-type: none"> <li>• A qualified archaeological monitor shall be present during all project excavations for the pump stations within the boundaries of the archaeological sites at Lovers Point, the foot of Sea Palm Avenue, and the Coral Street Pump Station. The monitor shall document and recover any potentially significant cultural materials that may be found in the excavated soil. Excavated soil may be screened to assist in such data recovery.</li> </ul>	Less than significant

**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

	<ul style="list-style-type: none"><li>If, at any time, intact midden containing potentially significant cultural materials or features is encountered, work shall be halted until the monitor and/or the principal archaeologist has evaluated the discovery. If the find is determined to be significant, appropriate data recovery mitigation shall be developed, with the concurrence of the City of Pacific Grove, and implemented.</li></ul>	
<b>Impact CR-2</b> Construction of the proposed project would involve surface excavation. Although unlikely, construction activities have the potential to unearth or impact previously unidentified prehistoric or archaeological cultural resources. Impacts would be Class II, <i>significant but mitigable</i> .	<p><b>CR-2(a) Archaeological Resource Construction Monitoring.</b> Prior to the commencement of construction activities for each component of the project, an orientation meeting shall be conducted by an archaeologist, general contractor, subcontractor, and construction workers associated with earth disturbing activities. The orientation meeting shall describe the potential of exposing archaeological resources, the types of cultural materials may be encountered, and directions on the steps that shall be taken if such a find is encountered.</p> <p>A qualified archaeologist shall be present during all initial earth moving activities for each component. In the event that unearthed prehistoric or archaeological cultural resources or human remains are encountered during project construction, mitigation measure CR-2(b) shall take effect.</p> <p><b>CR-2(b) Unearthed Prehistoric or Archaeological Cultural Remains.</b> If prehistoric or archaeological cultural resource remains are encountered during construction or land modification activities, work shall stop and the City of Pacific Grove shall be notified at once to assess the nature, extent, and potential significance of any prehistoric or archaeological cultural remains. The City shall implement a Phase II subsurface testing program to determine the resource boundaries within the project component/impact area, assess the integrity of the resource, and evaluate the site's significance through a study of its features and artifacts.</p> <p>If the site is determined significant, the City may choose to cap the resource area using culturally sterile and chemically neutral fill material. A qualified archaeologist shall be retained to monitor the placement of fill upon the site. If a significant site will not be capped, the results and recommendations of the Phase II study shall determine the need for a Phase III data recovery program designed to record and remove significant prehistoric or</p>	Less than significant

**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

	archaeological cultural materials that could otherwise be tampered with. If the site is determined insignificant, no capping and or further archaeological investigation shall be required. The results and recommendations of the Phase II study shall determine the need for construction monitoring.	
<b>Impact CR-3</b> Construction of the proposed project would involve surface excavation, which has the potential to unearth or adversely impact previously unidentified human remains. Pursuant to compliance with California Health and Safety Code Section 7050.5 requirements, impacts would be Class III, <i>less than significant</i> .	None required	Less than significant
<b>Impact CR-4</b> Construction of the proposed project would involve surface excavation. Although unlikely, these activities have the potential to unearth and/or impact paleontological resources. Impacts would be Class II, <i>significant but mitigable</i> .	<p><b>CR-4 Paleontological Resource Construction Monitoring.</b> Any excavations exceeding three feet in depth at the David Avenue Reservoir or Pine Avenue Conveyance components of the project shall be monitored on a full-time basis by a qualified paleontological monitor. Ground disturbing activity that does not exceed three feet in depth shall not require paleontological monitoring. If no fossils are observed during the first 50 percent of excavations exceeding three feet in depth, paleontological monitoring shall be reduced to weekly spot-checking under the discretion of the qualified paleontologist.</p> <p>If fossils are discovered, the qualified paleontologist (or paleontological monitor) shall recover them. Typically fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. Once salvaged, fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition and curated in a scientific institution with a permanent paleontological collection, along with all pertinent field notes, photos, data, and maps.</p>	Less than significant
<b>GEOLOGY/SOILS</b>		
<b>Impact GEO-1.</b> The project could expose people or structures to substantial adverse effects involving strong seismic shaking or seismic-related ground failure, including liquefaction,	<b>GEO-1(a) DSOD Oversight.</b> The City of Pacific Grove shall designate the DSOD the applicable oversight agency with respect to design, construction, maintenance, operation, emergency response and eventual in operation and/or removal. The DSOD	Less than significant

**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

landslides, subsidence, lurch cracking, and lateral spreading. Impacts would be Class II, <i>significant but mitigable</i> .	<p>shall accept oversight pursuant to <i>Statutes and Regulations Pertaining to Supervision of Dams and Reservoirs</i> (DSOD, n.d.). Compliance shall be verified by the City Engineer. If the DSOD declines to regulate the reservoir, mitigation measures GEO-1(c) through GEO-1(e) shall be implemented.</p> <p><b>GEO-1(b) Emergency Action Plan (EAP).</b> An EAP shall be developed to address site specific scenarios following the Department of Water Resources DSOD Sample EAP (Pacific Geotechnical, November 25, 2013) contained in Appendix F. The EAP shall be distributed to emergency managers and law enforcement as well as dam operators and oversight agencies. The EAP shall be designed to facilitate and organize actions during emergencies. The EAP shall include notification requirements and actions for different types and levels of emergencies specific to the proposed David Avenue Reservoir design and operation. The EAP shall also contain dam operator staff training guidance, EAP annual review guidance, and a process for incorporating revisions as necessary to ensure the EAP covers applicable emergency scenarios. EAP preparation and consistency with the Sample EAP shall be verified by the City Engineer.</p> <p><b>GEO-1(c) Preliminary Geotechnical Study.</b> Prior to finalizing the preliminary design of the David Avenue Reservoir, the initial phase of geotechnical investigation shall consist of a sufficient number of exploratory borings and cone penetration tests to adequately characterize the extent of past grading and depth of fill as well as the underlying native materials. Secondly, the preliminary seismic analysis to determine seismic loading shall be conducted based on current seismic parameters for the site and current code standards. Liquefaction potential of the foundation materials shall be re-analyzed using current seismic parameters. The preliminary investigation shall include but not be limited to:</p> <ul style="list-style-type: none"><li>• <i>Geologic mapping.</i></li><li>• <i>Analysis and subsurface mapping to define the extent of past grading at the site.</i></li><li>• <i>Areal extent and depth of fill currently at the site.</i></li><li>• <i>Hydrologic characteristics of the bedrock and alluvial materials to better understand the groundwater flow regime and how it would affect the proposed design.</i></li></ul>	
--	---	--



**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

	<p>The results of this investigation shall be utilized to determine the critical design considerations and shall be followed in the design process. Compliance shall be verified by the City Engineer.</p> <p><b>GEO-1(d) Design-Level Geotechnical Study and Oversight.</b> After an initial investigation has addressed the liquefaction hazard and seismic setting of the David Avenue Reservoir site, subsequent phases of investigation shall be geared towards final design. The City of Pacific Grove Public Works Division shall be consulted when determining the scope and requirements for the Design-Level Geotechnical Investigation. At a minimum, the Design-Level Geotechnical Investigation shall include:</p> <ul style="list-style-type: none"><li>• <i>Liquefaction and subsidence potential</i></li><li>• <i>Seismic stability</i></li><li>• <i>Static Stability</i></li></ul> <p>The results of the Design-Level Geotechnical Investigation shall be utilized to refine the final design such that the proposed design would be stable under static and seismic conditions pursuant to current code standards and applicable standards of the DSOD. All earthwork operations, including site preparation and grading, shall be performed in accordance with the recommendations and the project specifications set forth in the design-level geotechnical report. Earthwork recommendations may include, but would not be limited to, the following:</p> <ul style="list-style-type: none"><li>• <i>Removal of unsuitable soil materials</i></li><li>• <i>Recommendations for compaction</i></li><li>• <i>Recommendations for outflow and drainage</i></li><li>• <i>Recommendations for installation of the liner</i></li><li>• <i>Recommendations for key-ins</i></li></ul> <p>All earthwork operations shall be performed under the observation of a Professional Geologist to ensure that the site is properly prepared, the selected fill materials (if used) are satisfactory, and placement and compaction of the fill has been performed in accordance with the report recommendations and project specifications. Sufficient notification prior to earthwork shall be given. Compliance shall be verified by the City Engineer.</p>	
--	---	--



**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

	<p><b>GEO-1(e) Safety Measures.</b> Safety measures applicable to the David Avenue Reservoir shall be incorporated into the design components, operational directives, and maintenance directives as indicated below to protect life and property. These design components, operational directives and maintenance directives shall be consistent with applicable standards of the Division of Safety of Dams under the oversight of a Professional Geologist and Registered Civil Engineer specializing in the design and maintenance of dams and reservoirs. Compliance shall be verified by the City Engineer. Design components, operational directives and maintenance directives consistent with the proposed double lined pond system could include but would not be limited to the following:</p> <ul style="list-style-type: none"><li>• <i>Design Components</i><ul style="list-style-type: none"><li>○ <i>Settlement monuments mounted within the embankment to monitor stability.</i></li><li>○ <i>Vibrating wire piezometers beneath the liner and standpipe piezometers along the crest of the embankment to monitor pore water pressure.</i></li><li>○ <i>Pumping system with automated level controls to prevent build-up of water on the lower liner.</i></li><li>○ <i>A strobe light and alarm on the control system panel to indicate if the water within the sump is too high, providing an indication that the pumping system is not working properly, or if a significant breach of the primary liner has occurred.</i></li><li>○ <i>Flow meter with a totalizing function to indicate the amount of solution that has been pumped.</i></li><li>○ <i>Continuous monitoring at specific intervals with real time monitoring from a remote location if desired.</i></li></ul></li><li>• <i>Operational Directives</i><ul style="list-style-type: none"><li>○ <i>First Month of Initial Operation</i><ul style="list-style-type: none"><li>■ <i>Monitoring of the settlement monuments and piezometers (if installed) on a weekly basis during the initial filling or whenever the reservoir is filled quickly.</i></li><li>■ <i>Upon initial filling, check the sump daily for proper operation and to determine if there is any leakage.</i></li></ul></li></ul></li></ul>	
--	---	--



**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

	<ul style="list-style-type: none"><li>○ <b>Quarterly</b><ul style="list-style-type: none"><li>▪ Settlement monuments and piezometers (if installed) and the sump system should be monitored quarterly and immediately after each significant seismic event (site acceleration over 0.1g).</li><li>▪ Visual inspection of the embankment and lined area.</li></ul></li><li>● <b>Maintenance Directives</b></li><li>○ <b>Precautionary Maintenance</b><ul style="list-style-type: none"><li>▪ If there are any indications of the embankment and liner system being compromised, the reservoir shall be drained and examined for deficiencies.</li><li>▪ Leakage through the primary liner that does not exceed 1,000 gallons per acre of reservoir area shall be pumped out via sump.</li><li>▪ If leakage through the primary liner exceeds 1,000 gallons per acre of reservoir area, or the sump is not able to pump as much as is leaking, the reservoir shall be drained as soon as practical during a dry part of the year, the leaks located, and the primary liner repaired.</li></ul></li><li>○ <b>Deficiency Response</b><ul style="list-style-type: none"><li>▪ Each deficiency shall be examined for the potential cause and risk level. For high hazards such as slope failure or liner breach, the municipality shall be notified immediately and emergency actions shall be taken.</li><li>▪ For lesser hazards, the municipality shall be notified verbally immediately upon completion of the inspection and a formal report filed with recommended actions provided within one week.</li><li>▪ The EAP shall be implemented and followed in response to any deficiencies identified during operation and maintenance of the reservoir (refer to Mitigation Measure GEO-1[b]).</li></ul></li></ul>	
--	---	--



**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

	<b>GEO-1(f) Compliance with Geotechnical Recommendations.</b> Geotechnical recommendations shall be utilized to finalize the design of the Point Pinos Stormwater Treatment Facility and Crespi Pond. All earthwork operations at the Point Pinos Stormwater Treatment Facility and Crespi Pond site, including clearing and grubbing , excavations and shoring, subgrade preparation, engineered fill, utility trench excavation, cut and fill slopes, wet weather construction and foundations, shall been performed in accordance with the recommendations set forth in the geotechnical report (Pacific Geotechnical Engineering, August 2013 ). Compliance shall be verified by the City Engineer.	
<b>Impact GEO-2.</b> Project construction and development could result in soil erosion or loss of topsoil, and project components located along Ocean View Boulevard may be susceptible to coastal erosion. However, compliance with existing regulations would reduce impacts to a Class III, <i>less than significant</i> , level.	None required	Less than significant
<b>Impact GEO 3.</b> Some of the project components would be located on soils with moderate or high shrink-swell potential. The impact would be Class II, <i>significant but mitigable</i> .	<p><b>GEO-3(a) Robert Down Elementary School Geotechnical Study and Geotechnical Oversight.</b> A Geotechnical Study shall be performed by a licensed Professional Geologist to characterize the on-site soils and provide engineering recommendations that would facilitate construction of the equalization and storage facility proposed in the athletic field south of Robert Down Elementary School. The Geotechnical Study shall include recommendations that reduce the potential for adverse effects from expansive soils. Earthwork recommendations related to expansive soil conditions may include, but would not be limited to, the following:</p> <ul style="list-style-type: none"> <li>• <i>Selective grading to avoid expansive soil;</i></li> <li>• <i>Use of non-expansive fill material;</i></li> <li>• <i>Treating expansive areas with additives to lower the expansion index; and/or</i></li> <li>• <i>Specifying a flexible containment system for the equalization facility.</i></li> </ul> <p>All earthwork operations shall be performed under the observation of a Professional Geologist to ensure that the site is properly prepared, the selected fill materials (if used) are satisfactory, and placement and compaction of the fill has been performed in accordance with the report recommendations and project specifications. Sufficient notification prior to earthwork shall be given.</p>	Less than significant

**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

<b>GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE</b>		
<b>Impact GHG-1</b> The proposed project would generate GHG emissions during construction and operation. However, GHG emissions generated by the project would not exceed the significance threshold of 1,150 MT CO <sub>2</sub> per year. Impacts would be Class III, <i>less than significant</i> .	None required	Less than significant
<b>Impact GHG-2</b> The proposed project would not conflict with California GHG reduction goals, or any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. This impact would be Class III, <i>less than significant</i> .	None required	Less than significant
<b>HAZARDS AND HAZARDOUS MATERIALS</b>		
<b>Impact HAZ-1</b> Construction and operation of the proposed project may include the use, storage, and/or transport of hazardous materials. Compliance with existing laws and regulations governing the use, transport and/or storage of hazardous materials would reduce impacts to Class III, <i>less than significant</i> .	None required	Less than significant
<b>Impact HAZ-2</b> Underground utility lines may be located beneath the project component areas. Construction of the proposed project would be affected by the presence of these lines. Impacts would be Class II, <i>significant but mitigable</i> .	<p><b>HAZ-2 Utility Line Location and Consultation.</b> Prior to construction of each project component, the contractor shall determine the presence and exact location of any underground utility lines that correspond to the project area. In addition, the presence of any above-ground utility lines in close proximity to the project area shall be determined.</p> <p>If any utility lines are found to be in proximity to a project component, the contractor shall contact the utility line operator regarding any regulations for grading and construction activities near the lines. The project component shall be constructed and designed in compliance with all regulations and policies set forth by the City of Pacific Grove.</p>	Less than significant
<b>Impact HAZ-3</b> The proposed project has components that are within ¼ mile of a school. However, the proposed project would not include the handling or emitting of acutely hazardous materials; therefore, impacts would be Class III, <i>less than significant</i> .	None required	Less than significant
<b>Impact HAZ-4</b> Some project components would be located on or near site which is included on	<b>HAZ-4 Soil and Groundwater Sampling and Remediation.</b> Prior to issuance of grading permits for the Ocean View Boulevard	Less than significant

**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

<p>a list of hazardous material sites compiled pursuant to Government Code Section 65962.5. Grading associated with construction could expose construction workers to health hazards by releasing contaminants that could be present in the soil or groundwater. This construction-related hazard is a Class II, <i>significant but mitigable</i>, impact.</p>	<p>Conveyance, a soil and groundwater assessment shall be completed for that component under the supervision of a professional geologist, hydrologist or professional civil engineer to determine the presence or absence of contaminated soil and groundwater. If soil or groundwater sampling indicates the presence of any contaminant in quantities not in compliance with applicable laws or regulations, the project proponent shall coordinate with City of Pacific Grove Environmental Health Services to develop and implement a program to remediate or manage the contaminated soil during construction. Disposal shall occur at an appropriate facility licensed to handle such contaminants and remedial excavation shall proceed under the supervision of an environmental consultant licensed to oversee such remediation. The remediation/disposal program shall be approved by City of Pacific Grove Environmental Health Services. The project proponent shall submit all correspondence to City of Pacific Grove Environmental Health Services prior to issuance of grading permits. All proper waste handling and disposal procedures shall be followed. Upon completion of the remediation/disposal, a qualified environmental consultant shall prepare a report summarizing the project, the remediation/disposal approach implemented, and the analytical results after completion of the remediation, including all waste disposal or treatment manifests.</p>	
<b>HYDROLOGY AND WATER QUALITY</b>		
<p><b>Impact HYD-1</b> Site preparation, grading and construction activities could degrade water quality due to the potential for erosion and sedimentation. However, compliance with existing federal, state, and local requirements would ensure that impacts remain Class III, <i>less than significant</i>.</p>	None required	Less than significant
<p><b>Impact HYD-2</b> The proposed project would serve to improve water quality by diverting stormwater, providing treatment, and allowing for re-use as irrigation water. This is a Class IV, <i>beneficial</i>, impact.</p>	None required	Less than significant
<p><b>Impact HYD-3</b> The proposed project involves upgrades and redevelopment of existing infrastructure at five different stormwater conveyance sites within the City of Pacific Grove,</p>	None required	Less than significant

**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

as well as infrastructure improvements in the City of Monterey. The project would not introduce substantial additional impervious surfaces, and would not, therefore, increase the potential for downstream flooding or increased erosion. Impacts would be Class III, <i>less than significant</i> .		
<b>Impact HYD-4</b> The proposed project would involve construction of drainage facilities in an area that is subject to inundation by a tsunami and may be subject to shoreline retreat associated with sea level rise. Impacts would be Class III, <i>less than significant</i> .	None required	Less than significant
<b>Impact HYD-5</b> The proposed project would rehabilitate an existing reservoir, which would include improvements to enable water storage behind an existing dam. The potential for dam failure as a result of the proposed improvements is a Class II, <i>significant but mitigable</i> , impact.	Mitigation measures GEO-1(a) through GEO-1(e) in Section 4.5, Geology/Soils, would provide the necessary geotechnical oversight and design specifications to ensure that the proposed David Avenue Reservoir project component is constructed, maintained, and operated in a manner that reduces the potential adverse effects relating to dam failure to a level that is less than significant. The remaining project components do not require mitigation for dam failure.	Less than significant
<b>LAND USE AND PLANNING</b>		
<b>Impact LU-1</b> Based on the design of project components and following implementation of the mitigation measures identified throughout this EIR, the proposed project would be consistent with applicable policies of the City of Pacific Grove's General Plan, including its Local Coastal Program. Impacts would be Class II, <i>significant but mitigable</i> .	Mitigation measures outlined in Sections 4.1 to 4.12 would achieve consistency with applicable policies included in the adopted General Plan, including the Local Coastal Program. No further mitigation measures would be required.	Less than significant
<b>NOISE</b>		
<b>Impact N-1</b> Operation of heavy equipment during construction of all components of the proposed project would result in a temporary noise level increase that could disturb nearby sensitive receptors. Impacts would be Class II, <i>significant but mitigable</i> .	<b>N-1(a) Construction Hours.</b> Hours of construction for the David Avenue Reservoir, Pine Avenue Conveyance, Ocean View Boulevard Conveyance, and Diversions to MRWPCA components of the project shall be limited to the hours between 8:00 AM and 7:00 PM on weekdays and 9:00 AM to 4:00 PM on Saturdays. No construction work shall be allowed to occur on Sundays or other federal, state or local holidays. The portions of the David Avenue Reservoir and Diversions to MRWPCA which are in the City of Monterey would be subject to less restrictive construction hours based on the MCC; however, since portions of the component are also in the City of Pacific Grove, the more restrictive hours shall be applied.	Less than significant

**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

	<p><b>N-1(b) Construction Equipment.</b> Stationary construction equipment that generates noise that exceeds 70 dB at the boundaries of adjacent sensitive receptors shall be baffled to reduce noise and vibration levels. All construction equipment powered by internal combustion engines shall be properly muffled and maintained. Unnecessary idling of internal combustion engines shall be prohibited.</p> <p><b>N-1(c) Noise Mitigation and Monitoring Program.</b> For the David Avenue Reservoir and Diversions to MRWPCA, the construction contractor shall provide, to the satisfaction of the City of Monterey Planning Office, a Noise Mitigation and Monitoring Program, as described below. For all components of the project, the construction contractor shall provide, to the satisfaction of the City of Pacific Grove Planning Division, a Noise Mitigation and Monitoring Program that requires all of the following:</p> <ul style="list-style-type: none"><li>• Construction contracts that specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state required noise attenuation devices.</li><li>• That all property owners and occupants located within 300 feet of project components shall be sent a notice, at least 15 days prior to commencement of construction, regarding the construction schedule of the project. All notices shall be reviewed and approved by the appropriate City Planning Office/Division prior to the mailing or posting and shall indicate the dates and duration of construction activities, as well as provide a contact name and telephone number where residents can inquire about the construction process and register complaints. Notices shall be sent to affected property owners within both the City of Pacific Grove and City of Monterey where applicable.</li><li>• That prior to issuance of any grading or building permit, the construction contractor shall demonstrate to the satisfaction of the appropriate City Planning Office/Division how construction noise reduction methods such as shutting off idling equipment and vehicles, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance</li></ul>	
--	--	--



**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

	<p>between construction equipment staging and parking areas and occupied residential areas, and electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible.</p> <ul style="list-style-type: none"> <li>• That during construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.</li> <li>• For all noise-generating construction activity on each component site, additional noise attenuation techniques shall be employed to reduce noise levels to the maximum extent feasible. Such techniques may include, but are not limited to: the use of sound blankets on noise generating equipment and the construction of temporary sound barriers between the construction site and nearby sensitive receptors.</li> </ul> <p><b>N-1(d) Staging Areas.</b> The construction contractor shall provide staging areas on-site to minimize off-site transportation of heavy construction equipment. These areas shall be located to maximize the distance between activity and sensitive receptors (neighboring residences). This would reduce noise levels associated with most types of idling construction equipment.</p> <p><b>N 1(e) Electrically-Powered Tools and Facilities.</b> Electrical power shall be used to run air compressors and similar power tools and to power any temporary structures, such as construction trailers.</p>	
<b>Impact N-2</b> Project construction would result in a short-term increase in vehicle trips to and from the project site that could increase traffic noise on area roadways. However, this noise would not result in a substantial increase in ambient noise levels on affected roadways that would impact nearby sensitive noise receptors. This impact would be Class III, <i>less than significant</i> .	None required	Less than significant
<b>Impact N-3</b> Construction of the proposed project would involve the use of construction equipment, including loaded trucks, jackhammers, and bulldozers, which could result in temporary groundborne vibration that could disturb nearby sensitive receptors. This impact would be Class II, <i>significant but mitigable</i> .	<p><b>N-3 Vibration Mitigation.</b> Vibration-generating construction activities associated with the installation of storm drain conveyance pipeline beneath Pine Avenue and the installation of an underground stormwater equalization/storage facility at Robert Down Elementary School shall not occur simultaneously. Equipment used for these activities shall be limited to 20 tons, and</p>	Less than significant



**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

heavily-loaded trucks shall be routed away from professional offices on Pine Avenue, Pacific Grove City Hall, Pacific Grove Recreation Department and Youth Center, and the Robert Down Elementary School. Earth-moving equipment shall be operated as far from these uses as possible.		
<b>PUBLIC SERVICES AND UTILITIES</b>		
<b>Impact PSU-1</b> The amount of solid waste that would be generated during construction and operation of the proposed project would not exceed the surplus capacity of the landfill serving the site. Impacts would be Class III, <i>less than significant</i> .	None required	Less than significant
<b>Impact PSU-2</b> The proposed project would divert some stormwater to the MRWPCA Regional Treatment Plant via the Fountain Pump Station in Pacific Grove. The diverted stormwater would not exceed the capacity of the Fountain Pump Station or the Regional Treatment Plant. Impacts would be Class III, <i>less than significant</i> .	None required	Less than significant
<b>TRANSPORTATION/TRAFFIC</b>		
<b>Impact T-1</b> Construction of the proposed project would result in changes to intersection operations and roadway traffic. The project would generate new truck trips as part of the construction phase and would require temporary block closures during construction. Impacts would be Class II, <i>significant but mitigable</i> .	<p><b>T-1(a) Temporary Traffic Handling Plans.</b> Plans shall be prepared for the proposed lane reductions on Pine Avenue and Ocean View Boulevard as part of the Pine Avenue Conveyance and Ocean View Boulevard Conveyance components of the project, respectively. The plans shall be prepared in accordance with the latest California Manual on Uniform Traffic Control Devices (CA MUTCD) and Work Area Traffic Control Handbook (WATCH) manual requirements (where appropriate) and contain provisions for handling bike and pedestrian traffic, as well as ensuring access to neighboring facilities and residences during construction and ensuring emergency access to fire hydrants along all roadways. The plans shall be reviewed and approved by the City of Pacific Grove Public Works Department prior to construction. At each of the lane closure locations and at the intersection of Pine Avenue and Forest Avenue, a traffic flagger shall be utilized to ensure that traffic can be safely accommodated through the closures during construction. In addition, traffic flaggers shall be utilized to handle school/pedestrian traffic crossing if construction on Pine Avenue is to occur during school hours.</p> <p><b>T-1(b) City Staff Coordination.</b> For the Point Pinos Stormwater Treatment Facility and Crespi Pond and Diversions to MRWPCA</p>	Less than significant

**Table ES-1**  
**Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts**

	Components of the project, the project administrator shall coordinate with City staff regarding the duration and locations of short-term traffic diversions. Temporary traffic handling plans shall be prepared when necessary to detour traffic to appropriate locations. In addition, the daytime hours of traffic diversion shall be restricted to allow for adequate traffic flow at high traffic volume locations during peak commute hours.	
<b>Impact T-2</b> Construction of the proposed project would generate temporary traffic at the intersection of David Avenue and Forest Avenue. Impacts to this intersection's level of service would be Class III, <i>less than significant</i> .	None required	Less than significant

