FINAL ENVIRONMENTAL IMPACT REPORT

for

PAJARO VALLEY BASIN MANAGEMENT PLAN UPDATE

February 2014

Prepared for:
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INTRODUCTION TO THE FINAL EIR

1.1 BACKGROUND

In October 2013, the Pajaro Valley Water Management Agency (PVWMA or the Agency), as Lead Agency, circulated a Draft Environmental Impact Report (Draft EIR or DEIR) prepared under the California Environmental Quality Act (CEQA), Public resources Code §§21000 et seq. The Draft EIR was prepared to provide the public and responsible and trustee agencies with information on the potential environmental effects of implementation of the Pajaro Valley Basin Management Plan Update (BMP Update) on the local and regional environment. The EIR was prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended), the CEQA Guidelines, and California Administrative Code, Title 14, Chapter 3. The Draft EIR was circulated for a 45-day public review period, between October 18, 2013, and December 2, 2013; the public review period was extended to allow for a total of a 56-day review period during which public comments were received.

The PVWMA, as Lead Agency, has prepared this document pursuant to CEQA Guidelines Section 15132 which specifies the following requirements for a Final EIR:

“The Final EIR shall consist of:

a) The Draft EIR or a revision of the draft.
b) Comments and recommendations received on the Draft EIR either verbatim or in summary.
c) A list of persons, organizations, and public agencies commenting on the Draft EIR.
d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process.
e) Any other information added by the Lead Agency.”

This Final EIR contains a list of the comments submitted on the Draft EIR, copies of the comment letters received on the Draft EIR during the public review period, responses to the points raised in those comments, and various revisions to the Draft EIR made as a result of the public review process. In accordance with CEQA Guidelines Section 15132, this document has been prepared to address the comments received during the public review periods and, together with the Draft EIR, constitutes the Final Environmental Impact Report for the BMP Update.

1.2 PROJECT OVERVIEW

The Draft EIR addresses the environmental impacts of the BMP Update, the “proposed project” under CEQA. The following priority or primary components were selected for the BMP Update portfolio based upon recommendations of the Ad Hoc BMP Committee to the PVWMA Board: 1) Conservation; 2) Increased Recycled Water Storage at Treatment Plant; 3) Increased Recycled Water Deliveries; 4) Harkins Slough Recharge Facilities Upgrades; 5) Watsonville Slough with Recharge Basins; 6) College Lake with Inland Pipeline to Coastal Distribution System (CDS); and 7) Murphy Crossing with Recharge Basins. The Draft EIR also addresses a suite of secondary BMP Update component alternatives, several alternative locations, and a “No Project” alternative.
1.3 PUBLIC PARTICIPATION FOR DRAFT AND FINAL EIR

1.3.1 Public Review of the Draft EIR

The following lists the actions taken during the distribution and review of the Draft EIR.

- In accordance with CEQA Guidelines §15088.5(d) and 15088.5(f)(3), the PVWMA notified all responsible and trustee agencies, interested groups, and individuals that the Draft EIR had been completed and was available for public review and comment.

- The Draft EIR was distributed to interested responsible and trustee agencies, interested groups, organizations, and individuals on October 18, 2013, for the required 45-day public review period, which ended on December 2, 2013.

- PVWMA held two public meetings for the Draft EIR during the Draft EIR review period. The first meeting, held on October 23, 2013, informed the Board and the public of the content of the Draft EIR and CEQA process. The PVWMA public hearing on November 20, 2013 was a formal public meeting on the Draft EIR to receive oral comments on the contents of the EIR. Public notices were placed in local newspapers informing the general public of the meetings and the Draft EIR and associated Draft EIR notices contained information about the meetings, also.

- During the review period for the Draft EIR, certain agencies requested an extension of the review period. CEQA Guidelines section15105 requires that a Draft EIR provide a public review period not less than 45 days. The Draft EIR was published on October 18, 2013 with the review period set to close on December 2, 2013, a period of 45 days. In response to requests for an extension of the comment period, the PVWMA Board formally approved an extension of 7 days during the November 20, 2013 public hearing on the Draft EIR to December 9, 2013.

- Additionally, the California Department of Fish and Wildlife (CDFW) requested an additional extension of the Draft EIR public review period in order to submit comments. The PVWMA General Manager granted the request for consideration of these comments with a review period ending December 13, 2013. This provided a total of 56 days for public review, more than the required 45 days.

- In addition to the public testimony from the public hearing on the Draft EIR, fifteen comment letters were received within the public review period.

At least 10 days prior to the Agency hearing to consider whether to certify the Final EIR and approve the proposed project, proposed written responses to comments will be sent to those public agencies that provided timely comments on the DEIR. No aspect of the proposed BMP Update Project will be approved until after the Final EIR is considered.

1.3.2 Final EIR and Final EIR Certification

The PVWMA Board will review and consider the Final EIR. If the Board finds that the Final EIR reflects the Agency’s independent judgment and has been prepared in accordance with CEQA and the CEQA Guidelines, the Agency will certify the adequacy and completeness of the Final EIR, which will include the Draft, and Final EIR documents. A decision to approve the project would be accompanied by written
findings prepared in accordance with CEQA Guidelines Section 15091, and if applicable, Section 15093. For each significant effect identified in the Final EIR, the findings will describe whether it can be reduced to a less-than-significant level through feasible mitigation measures and if not, why there are no feasible mitigation measures or alternatives to reduce the impact to a less-than-significant level.

If in approving the BMP Update Project, the Agency adopts mitigation measures to reduce significant effects, it also will adopt a Mitigation Monitoring and Reporting Program (MMRP), as required by Section 15097 of the CEQA Guidelines. The MMRP describes how each of the mitigation measures will be implemented and provides a mechanism for monitoring and/or reporting on their implementation. If the Agency approves the BMP Update Project with associated significant effects on the environment that cannot be feasibly avoided or reduced to less-than-significant levels, the Agency must also adopt a Statement of Overriding Considerations that explain the benefits that outweigh the significant unavoidable environmental effects, in accordance with Section 15093 of the CEQA Guidelines.

Prior to project-level design and environmental review, PVWMA proposes to certify this EIR, approve the BMP Update, and file a Notice of Determination (NOD) on the approval action.

1.4 ORGANIZATION OF THE FINAL EIR

This Final EIR (herein referred to as “FEIR”) is organized into the following five sections:

- **Section 1.0, “Introduction,”** contains this introduction to the FEIR, including a discussion of the background of the environmental review, a description of the contents of the FEIR, a description of the master responses, and a summary of the project decision-making process.

- **Section 2.0, “List of Comments,”** contains a list of all written comments received on the Draft EIR.

- **Section 3.0, “Master Responses to Comments,”** contains master responses to certain topics raised by the commenters.

- **Section 4.0, “Comments and Responses on the Draft EIR”** contains copies of all comment letters received on the Draft EIR, and appropriate responses to each comment.

- **Section 5.0, “Changes to the Draft EIR,”** contains revisions to the text of the Draft EIR in response to the public comments.

- **Appendix A** contains the Final EIR Revised Summary Table from the Draft EIR.

1.5 MASTER RESPONSE TO COMMENTS

This document contains “master” responses that address common topics raised by the commenters. The intent of a master response is to provide a comprehensive response to an issue so that all aspects of the issue can be addressed in a coordinated, organized manner in one location. This ensures that each topic is thoroughly addressed and reduces repetition of responses. Responses to individual comments cross-reference the appropriate master response when the comment is pertinent to the master response.
2 LIST OF COMMENTS

2.1 INTRODUCTION

This section provides responses to comments on the Draft EIR in accordance with CEQA Guidelines §15088. A total of 14 comment letters was received on the Draft EIR during the public review process. A list of comment letters on the Draft EIR is included below in Section 2.2.

2.2 LIST OF COMMENT LETTERS

The following list identifies all of the comment letters received during the course of the public review period on the Draft EIR for the BMP Update Project. Each of the comment letters have been assigned a letter designation and the dates of the letters are noted.

State, Regional and Local Agencies

A. Governor's Office of Planning and Research, State Clearinghouse December 10, 2013
B. California Department of Transportation (Caltrans) December 2, 2013
C. California Coastal Commission, Central Coast District Office December 6, 2013
D. California Department of Fish and Wildlife (CDFW) December 13, 2013
E. Monterey County Resource Management Agency December 4, 2013
F. County of Santa Cruz Environmental Health Department December 8, 2013
G. Monterey Bay Unified Air Pollution Control District (MBUAPCD) December 9, 2013

Organizations/Individuals

H. Attorney for College Lake Reclamation Dist. 2049 December 9, 2013
I. Douglas Deitch, Monterey Bay Conservancy December 9, 2013
J. Jerry Busch December 9, 2013
K. Sandra Baron December 9, 2013
L. Ted Remde November 20, 2013
M. Jerry Busch November 20, 2013
N. Allen Harryman November 20, 2013

Public Hearing Testimony

O. Public Hearing Testimony, November 20, 2013
3 MASTER RESPONSES TO COMMENTS ON THE DRAFT EIR

The master responses address comments related to general issues that are common throughout several comment letters or are addressing CEQA adequacy issues. The intent of a master response is to provide a comprehensive response to an issue so that all aspects of the issue can be addressed in a coordinated, organized manner in one location. The following master responses are included in this section:

1. Master Response # 1 - Programmatic EIR
2. Master Response # 2 - CEQA Public Process
3. Master Response # 3 - Adequacy of Alternatives
4. Master Response # 4 – Recirculation
5. Master Response # 5 – EIR Conclusions Regarding Significance of Impacts.

Master Response # 1: Programmatic EIR

Program EIR

A Program EIR is prepared on a series of actions that can be characterized as one large project, including a general plan or planning document such as the Basin Management Plan Update (CEQA Guidelines Section 15168). A Program EIR generally establishes a framework for "tiered" or project-level environmental documents that are prepared in accordance with the overall program. In comparison to a Program EIR, a Project EIR examines the impacts that would result from development of a specific project (CEQA Guidelines Section 15161). The level of detail of the project and impacts are more specific in a project-level document, since a greater level of detail is available regarding the project.

The PVWMA as the CEQA lead agency has the discretion to determine whether to proceed with a project or program-level EIR. A Project EIR assesses all impacts associated with all components of the project, i.e., planning, construction, and operation. (CEQA Guidelines Section 15161, defining “Project EIR”.) The BMP Update here is appropriate for a Program EIR since it proposes a series of actions by the PVWMA that are described at the planning level of detail. Accordingly, the PVWMA has not provided or does not yet have detailed information regarding all aspects of the project to produce a project-level environmental document. This Program EIR or programmatic analysis analyzes the series of actions that can be characterized as the BMP Update, or one large project.

Following adoption of the BMP Update, PVWMA will conduct additional project-level design studies and CEQA review, as needed, on the specific projects it proposes to implement. Project-level CEQA analysis on program actions will be conducted at later dates at such a time that subsequent discretionary actions are taken. (See CEQA Guidelines Section 15168, defining “Program EIR”.)

A number of comment letters requested specific project-level information or project-detailed mitigation. The responses to these individual comments explain the level of CEQA documentation requirements above. Several commenters also noted that future permits would be required. As noted in the Draft EIR, implementation of individual components may require PVWMA to secure permits and approvals from local, regional, state, and federal agencies. Depending on final design, consultation and permits may be
required from various agencies. Additionally, PVWMA will conduct additional project-level design studies and CEQA review on the specific projects it proposes to implement. PVWMA acknowledges that the BMP Update serves as the foundation for future site-specific, project-level CEQA documents and that both the public and agencies will provide project-specific comments on these future CEQA documents at the appropriate time.

Master Response #2: CEQA Public Process

This master response addresses comments raised on adequacy of the CEQA public notification process and the review period. This includes discussion on the public notice and distribution of the Draft Notice of Preparation (NOP), Notice of Availability (NOA), Draft EIR and the adequacy of CEQA review period. Comments questioned the methods and adequacy of the public notification and claimed that the Agency failed to provide timely opportunity to comment on issues.

Compliance with CEQA Guidelines

CEQA Guidelines Section 15087 requires a lead agency to give public notice of the availability of a Draft EIR by one of several methods. Section 15087(a) requires that an NOA be mailed to the last known name and address of all organizations and individuals who have previously requested such notice in writing. Section 15087(a) also requires that in addition to the above notifications, at least one of the following procedures be implemented:

- Publication at least one time by the public agency in a newspaper of general circulation in the area affected by the proposed Project;
- Posting of notice by the public agency on and off the site in the area where the Project is to be located; or
- Direct mailing to the owners and occupants of property contiguous to the parcel or parcels on which the Project is located.

To comply with these requirements, an NOA was sent to organizations and individuals who previously requested notifications, pursuant to Section 15087(a).

Section 15087(d) requires the NOA be posted for 30 days in the office of the county clerk of each county in which the project will be located. An NOA was posted with the county clerks for Santa Cruz and Monterey counties. Receipt of these NOAs satisfies CEQA Section 15087(d).

Section 15087(f) requires that an NOA be sent to affected responsible, trustee, and federal agencies through the State Clearinghouse. Notices were sent to affected agencies as described below.

Section 15087(g) requires that lead agencies place copies of the Draft EIR in public libraries. Copies were placed in two libraries, including Watsonville Main Branch Library and Watsonville Freedom Branch Library, in addition to being made available at the Pajaro Valley Water Management Agency. The Draft EIR was therefore appropriately noticed in accordance with CEQA regulations, satisfying these requirements.
Notification
On October 17, 2013, an NOA was sent to the State Clearinghouse, as well as to responsible, trustee, and federal agencies that may have an interest in the project. The NOA was circulated to over 200 local, state, and federal agencies and to organizations and individuals that expressed interest in reviewing and commenting on the Draft EIR. Delivery of these NOAs satisfies CEQA Section 15087(a). In addition, PVWMA filed an NOA with the Governor’s Office of Planning and Research (OPR) on October 17, 2013. The Draft EIR was made available at the following locations:

- Pajaro Valley Water Management Agency: 36 Brennan Street, Watsonville, CA 95076
- Watsonville Main Branch Library and Watsonville Freedom Branch Library
- Online at: http://www.pvwater.org

The NOA was published in the Santa Cruz Sentinel on October 22, 2013 and Register-Pajaronian on October 24, 2013. With notification published in local newspapers, the noticing requirements of Section 15087(a) were satisfied in compliance with the CEQA Guidelines.

A total of 200 copies of the NOA were mailed and emailed to members of the public, as well as local, state, and federal agencies concerning the availability of the Draft EIR. The list included all parties that commented on the Notice of Preparation (NOP) and all parties that contacted PVWMA requesting to be notified about the project. The mailing of NOAs satisfies CEQA Guidelines Section 15087(a).

The other suggested means of providing notice includes site posting or mailing to contiguous properties (sections 15087(a)(2) and (3)). All property owners outside the City of Watsonville and within the PVWMA boundary received a copy of the spring 2013 newsletter, which invited all interested parties to contact PVWMA for further information and to be added to the mailing list.

A notice of extension for comments was sent on Thursday, November 21, 2013, to all interested parties that originally received an NOA or Draft EIR. Additionally, to reach as many interested people as possible, notices were also sent to individuals who attended the public meetings on the Draft EIR.

CEQA Guidelines Section 15087(a) provides three, independently sufficient options for a lead agency to provide the public with the notice of availability of an EIR. One of these is through direct mailing to the owners and occupants of property contiguous to the parcel, or parcels, on which the project is located. PVWMA, as authorized under Section 15087(a), to provide notice of availability of the Draft EIR (as noted above) by publishing the NOA in the Santa Cruz Sentinel on October 22, 2013 and Register-Pajaronian on October 24, 2013.

CEQA Guidelines Section 15082 requires a lead agency to publish an NOP of an EIR to all responsible agencies, trustee agencies, and the California Office of Planning and Research (OPR or State Clearing House). These agencies have 30 days to specify the scope and content of the environmental information germane to their area of statutory responsibility. Public Resource Code Section 21080.4 further provides that a lead agency must convene a scoping meeting to discuss these issues upon the request of any responsible agency, trustee agency, or the project applicant. The NOP must be sent to these agencies by
certified mail or equivalent procedure. For this project, PVWMA held scoping meetings on February 27, 2013 at 4:00 p.m. and February 27, 2013 at 5:30 p.m.

To further encourage public participation, PVWMA held a public meeting on November 20, 2013, to receive comments on the Draft EIR. PVWMA Board also received a presentation on the Draft EIR at their regularly scheduled October Board hearing during the Draft EIR public review period. Additional public outreach was conducted by Agency staff by reaching out to individuals and agency staff and conducting meetings, events, talks and tours.

**Adequacy of CEQA Review Period**

During the review period for the Draft EIR, certain agencies requested an extension of the review period. CEQA Guidelines Section 15105 requires that a Draft EIR provide a public review period not less than 45 days. The Draft EIR was published on October 18, 2013, with the review period set to close on December 2, 2013, a period of 45 days. In response to requests for an extension of the comment period, the PVWMA Board formally approved an extension of 7 days during the November 20, 2013 public hearing on the Draft EIR. This extension resulted in an extended date for public review until December 9, 2013. On Thursday, November 21, 2013, notices of the review period extension were sent to all interested parties that had originally received the Draft EIR or NOA.

Additionally, the California Department of Fish and Wildlife (CDFW) requested an additional extension of the Draft EIR public review period in order to submit comments. The PVWMA General Manager granted the request for consideration of these comments with a review period ending December 13, 2013. This provided a total of 56 days for public review, an additional 12 days more than the required 45 days. The 56-day review period provided additional time for interested parties to review the technical information provided in the Draft EIR and to adequately provide substantive comments on the analysis.

**Master Response # 3: Adequacy of Alternatives**

This master response addresses comments raised on adequacy of the EIR alternatives analysis.

**CEQA Requirements for Alternatives**

CEQA Guidelines Section 15126.6 requires the consideration of a range of reasonable alternatives to the proposed project. The purpose of the alternative analysis, according to CEQA Guidelines Section 15126.6(a), is to describe a range of reasonable alternative projects that could feasibly attain most of the objectives of the proposed project and to evaluate the comparative merits of the alternatives. The Guidelines further require that discussion focus on alternatives capable of eliminating significant adverse impacts of the project or reducing them to a less-than-significant level, even if the alternative would not fully attain the project objectives or would be more costly.

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1 Additional public outreach including meetings events, talks, and tours were conducted on the following dates: January 24, 2013; March 13, 2013; March 22, 2013; April 4, 2013; April 16, 2013; April 25, 2013; July 12, 2013; August 13, 2013; October 25, 2013; November 5, 2013; November 8, 2013 and November 22, 2013.
The range of alternatives evaluated in an EIR is governed by a “rule of reason,” which requires the evaluation of alternatives “necessary to permit a reasoned choice.” An EIR need not consider alternatives that have effects that cannot be reasonably ascertained and/or are remote and speculative. Alternatives considered must include those that offer substantial environmental advantages over the proposed project and may be feasibly accomplished in a successful manner considering economic, environmental, social, technological, and legal factors. In accordance with the CEQA Guidelines, the alternatives considered in this Draft EIR include a reasonable range of alternatives that 1) could accomplish most of the basic objectives of the project and 2) could avoid or substantially lessen one or more of the significant effects of the project.

**Draft EIR Alternatives**

As described on page S-4 of the Draft EIR, the Alternatives Section incorporates, by reference, all previous alternative analyses in past PVWMA BMPs and Local Water Supply Project EIRs as well as summarizing the BMP Update alternatives analysis process conducted in 2011 to 2012 that considered a wide variety of other projects, programs, and BMP components. For the BMP, project alternatives and summary sheets were developed for 44 projects; these were then narrowed to the 14 shown in Table S-1 on page S-2 of the Draft EIR. The first seven alternatives are analyzed in detail in Section 3 of the Draft EIR as part of the programmatic analysis in the Draft EIR.

The types of alternatives were fully described and comparatively analyzed at a programmatic level in the Draft EIR, including the "No Project" Alternative, Demand Management Only Alternative, Water Supply Facilities Alternatives and Alternative Locations for BMP Update components. In the Water Supply Facilities category of alternatives, the last seven projects/programs in Table S-1 of the Draft EIR are described, and their impacts are compared qualitatively to the proposed BMP Update components. Based on the record of the alternatives analyses, the proposed BMP Update (including, the seven primary components) would best meet the BMP Update objectives.

**New Alternative for College Lake**

Comment letters expressed the need to add a project alternative or specific detail of the alternatives related to College Lake. No additional alternatives were considered necessary to be added in the Final EIR. The Draft EIR included Alternative S-3, College Lake with Inland Pipeline to Coastal Distribution Systems (CDS) and Alternative S-4, Expanded College Lake, Pinto Lake, Corralitos Creek, Watsonville Slough, and Aquifer Storage and Recovery. The proposed project and alternatives addressing College Lake adequately address, at a program level, the impacts and comparative merits of the alternatives in accordance with CEQA. The discussion of proposed project and alternative projects clearly states that the seven secondary components may be pursued in the future if the selected portfolio does not meet the planning-level expectations with respect to supply yield or demand offset, using an adaptive management method of project implementation; however, it would require applicable CEQA compliance prior to future discretionary actions.
Master Response # 4: Recirculation

CEQA also provides that a Draft EIR needs to be recirculated only if significant new information is added to an EIR after notice of public review has been given, but before certification of the Final EIR. (Pub. Res. Code, Section 21092.1; CEQA Guidelines, Section 15088.5; Vineyard Area Citizens for Resp. Growth Inc. v. City of Rancho Cordova (2007) 40 Cal.4th 412,447.) The critical issue in this inquiry is whether any new information added is "significant"; if so, recirculation is required. (Pub. Res. Code, Section 21092.1) If it is not significant, no recirculation is required. CEQA Guidelines, Section 15088.5(a) states "new information added to an EIR is not 'significant' unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement."

In four situations, recirculation is required:

a) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.

b) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of less than significant.

c) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.

d) The Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

Here, the public has not been deprived of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible project alternative or mitigation measure. For example, no significant new information was added that would result in a new project impact. No feasible project alternatives that would lessen the environmental impacts of the project were proposed that were not already considered. The information added supports the existing analysis and conclusions, and clarifies inquiries made from commenters (see Changes to the Draft EIR, Section 5.0 of this Final EIR). Nor was new significant information added that would substantially increase an impact unless mitigation measures would be adopted to offset the impact.

Master Response # 5: Conclusions of the EIR

EIR Conclusions Regarding Significance of Impacts
A number of comments questioned the groundwater analysis in the BMP and Draft EIR, including the presentation of the basin conditions, demand and potential to achieve the goals of the Agency and the objectives of the BMP Update. The responses to these comments are individually addressed in responses to Letter J and Letter D in Section 4.0. As noted in the Draft EIR, the PVWMA’s role is to manage existing and supplemental water supplies for its service area. The intent of PVWMA is to manage local groundwater resources in a manner that halts long-term overdraft of the groundwater basin and stops
seawater intrusion, while ensuring sufficient water supplies for present and anticipated needs. As noted in the Draft EIR, the specific objectives of the BMP Update are as follows:

- To prevent seawater intrusion, long-term groundwater overdraft, land subsidence, and water quality degradation;
- To manage existing and supplemental water supplies to control overdraft and to provide for present and future water needs;
- To create a reliable, long-term water supply, which has been identified as an important cornerstone of the long-term economic vitality of the Pajaro Valley;
- To develop water conservation programs; and
- To recommend a program that is cost effective and environmentally sound.

To achieve this objective, PVWMA has prepared and periodically updates a basin-wide water management plan, the BMP Update, to serve as the guiding document for its major projects and programs. The BMP Update preparation process includes review of the existing basin conditions, evaluation of the results of implemented projects to reduce overdraft and seawater intrusion, as well as the identification of additional projects and management strategies to achieve its stated goals. The Draft EIR appropriately uses the information and data presented, including technical reports by experts and Agency staff, to analyze the project’s impacts at a programmatic level.

The State CEQA Guidelines require that decisions regarding the significance of environmental effects addressed in an EIR be based on substantial evidence and recognize that other evidence suggesting a different conclusion may exist. The Draft EIR provides a comprehensive evaluation of the project’s environmental impacts in compliance with CEQA Guidelines and in accordance with professionally-accepted methodology for the evaluation of environmental resources. The Draft EIR and this Final EIR, including this Response to Comments document, present substantial evidence to support the conclusions drawn within these documents regarding the significance of the project’s environmental effects. When commenters disagree about environmental conclusions, the EIR can acknowledge that disagreement, but it need not resolve all debates. Section 15151 of the State CEQA Guidelines states that: “Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts.” The PVWMA, as lead agency, will ultimately determine which conclusion is appropriate, based on the substantial evidence presented in the EIR and other documents in the whole of the record.

The comment letters and associated responses present summaries of the areas of disagreement. In some cases, there is no substantial evidence offered by commenters to support that a different conclusion should be drawn. As such, no further response to disagreements presented in the comment letters is necessary. If evidence is provided by the commenter to support the disagreement with the EIR’s conclusion, the evidence is summarized and considered in reaching the EIR’s conclusion. The PVWMA, as lead agency, will review and consider all the substantial evidence in the whole of the record in making its decisions about the project and its environmental effects.
4 COMMENTS AND RESPONSES ON THE DRAFT EIR

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4.1 INTRODUCTION

This section provides responses to the comments received on the Draft EIR. A list of the comment letters
is presented in Section 2.2, and copies of each of the comment letters are included in this section, with
responses to each comment provided following the letter.

4.2 COMMENT LETTERS AND RESPONSES TO COMMENTS

Letters received on the Draft EIR are presented in this section. Each letter received as a comment on the
Draft EIR is assigned a letter of the alphabet; within that letter, all individual comments are assigned
numbers located in the right-hand margin of the letter. Responses to each comment are provided
immediately following each comment letter. In those instances in which a comment states an agency
position or opinion and does not comment on issues relevant to the environmental analysis presented
in the Draft EIR, the sentence "The comment is acknowledged" is provided. If the comment is directed at
Pajaro Valley Water Management Agency regarding the decision on the project, the sentence "The
comment is referred to the decision-makers for their consideration" is provided; typically, these
comments do not raise issues relevant to the environmental analysis. Where the response notes an
addition or deletion to the text, tables, or figures in the Draft EIR, the reader is directed to Section 5.0,
Changes to the Draft EIR.
December 10, 2013

Mary Bannister  
Pajaro Valley Water Management Agency  
36 Brennan St.  
Watsonville, CA 95076

Subject: Basin Management Plan Update  
SCH#: 2000062030

Dear Mary Bannister:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on December 9, 2013, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project’s ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

“A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation.”

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan  
Director, State Clearinghouse

Enclosures

cc: Resources Agency  
1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044  
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov
SCH# | 2000062030
---|---
**Project Title** | Basin Management Plan Update
**Lead Agency** | Pajaro Valley Water Management Agency

**Type** | EIR Draft EIR
**Description** | Note: Extended Review

The BMP Update represents a comprehensive set of actions, including individual projects, policies, and basin management strategies to stop seawater intrusion and overdraft of the Pajaro Valley groundwater basin while providing an adequate water supply to meet annual demands within the basin. The recommended BMP Update consists of the following components to reduce groundwater pumping while providing adequate water supply to meet service area needs: Conservation, Increased Recycled Water Storage, Increased Recycled Water Deliveries, Harkins Slough Recharge Facilities Upgrades, Watsonville Slough with Recharge Basins, College Lake with Inland Pipeline to Coastal Distribution System, Murphy Crossing with Recharge.

**Lead Agency Contact**

| **Name** | Mary Bannister |
| **Agency** | Pajaro Valley Water Management Agency |
| **Phone** | 831 722 9292 |
| **Fax** | |
| **Address** | 36 Brennan St. |
| **City** | Watsonville |
| **State** | CA |
| **Zip** | 95076 |

**Project Location**

| **County** | Monterey, Santa Cruz |
| **City** | Watsonville |
| **Region** | 
| **Lat/Long** | 
| **Cross Streets** | 
| **Parcel No.** | 
| **Township** | 
| **Range** | 
| **Section** | 
| **Base** | 

**Proximity to:**

| **Highways** | Hwy 101/129 |
| **Airports** | Watsonville Municipal |
| **Railways** | SPRR, UPRR |
| **Waterways** | Pajaro River, College Lake, Pinto LakeCoralitos Creek, Watsonville Slough |
| **Schools** | 
| **Land Use** | Varies, mainly Commercial Agriculture |

**Project Issues**

Economics/Jobs; Flood Plain/Flooding; Drainage/Absorption; Geologic/Seismic; Noise; Public Services; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Growth Inducing; Landuse; Cumulative Effects; Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Toxic/Hazardous

**Reviewing Agencies**

Resources Agency; California Coastal Commission; Department of Fish and Wildlife, Region 4; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 5; CA Department of Public Health; Air Resources Board; Regional Water Quality Control Board, Region 3; State Water Resources Control Board, Division of Water Rights; Native American Heritage Commission; Public Utilities Commission; State Lands Commission
| Date Received  | 10/18/2013 | Start of Review | 10/18/2013 | End of Review | 12/09/2013 |
LETTER A:  GOVERNOR’S OFFICE OF PLANNING AND RESEARCH, STATE CLEARINGHOUSE, LETTER #1

A-1: The letter states the State Clearinghouse submitted the Draft EIR to selected state agencies for review, and the California Coastal Commission submitted a letter of comment through the State Clearinghouse during the public review period. A separate letter also states the State Clearinghouse recognizes that the Pajaro Valley Water Management Agency extended the public review period for the EIR from December 2, 2013 to December 9, 2013 and that notification was received. No further response is required. The Pajaro Valley Water Management Agency has complied with the State Clearinghouse review requirements as required pursuant to CEQA.

A-2: Comment is acknowledged. No further response is required.

A-3: Comment is acknowledged. No further response is required.
December 2, 2013

Ms. Mary Bannister  
General Manager  
Pajaro Valley Water Management Agency  
36 Brennan Street  
Watsonville, CA 95076

Dear Ms. Bannister:

COMMENTS ON THE DRAFT EIR FOR THE PAJARO VALLEY WATER MANAGEMENT AGENCY BASIN MANAGEMENT PLAN UPDATE

The California Department of Transportation (Caltrans), District 5, Development Review, has reviewed the above referenced project and offers the following comments.

1. Caltrans supports local development that is consistent with state planning priorities intended to promote equity, strengthen the economy, protect the environment, and promote public health and safety. We accomplish this by working with local jurisdictions to achieve a shared vision of how the transportation system should and can accommodate interregional and local travel and development.

2. As provided in the Draft EIR, work will be necessary in our right of way (ROW) and will require an encroachment permit. As such, please provide an itemized list with details showing the proposed alignment impacting the state highway system (SHS).

3. In addition, please note that all work within our ROW must be done to Caltrans engineering and environmental standards, and at no cost to the state. The conditions of approval and the requirements for obtaining the encroachment permit are issued at the sole discretion of the Permits Office, and nothing in this letter shall be implied as limiting those future conditions and requirements. For more information regarding the encroachment permit process, please visit our Encroachment Permit Website at http://www.dot.ca.gov/hq/traffops/developserv/permits/.

Thank you for the opportunity to review and comment on the DEIR. If you have any questions or need further clarification on the items discussed above, please contact me at (805) 549-3099 or e-mail jennifer.calate@dot.ca.gov.

Sincerely,

JENNIFER CALATÉ  
Associate Transportation Planner  
District 5 Development Review Coordinator

"Caltrans improves mobility across California"
LETTER B:  CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS)

B-1: The letter states Caltrans supports local development consistent with state planning priorities by working with local jurisdictions. Comment is acknowledged. No further response is required.

B-2: Comment noted. The PVWMA concurs that work required in the Caltrans right of way (ROW) may require an encroachment permit. This is a project-level design component and specific construction detail requested will be provided at the project level. The PVWMA will be required to conduct several site-specific design studies and prepare design plans to fulfill the requirements of the project-level documentation and permitting, including plans defining any proposed alignment component impacting the state highway system. The BMP Update Draft EIR provides a program-level evaluation of the BMP Update and this level of detail is not appropriate for the program-level and conceptual level of design currently available. Following adoption of the BMP Update, PVWMA will conduct additional project-level design studies and CEQA review, as needed, on the specific projects it proposes to implement. See also Master Response #1 addressing program-level EIR versus project-level EIR level of detail and CEQA requirements.

B-3: Comment acknowledged. Page 2-27, Table 2-8 of the Draft EIR identifies anticipated applicable permits and approvals for the proposed BMP projects. The table includes the Caltrans encroachment permit as a requirement for any future proposed project impacting Caltrans ROW. The PVWMA is directed to consult with Caltrans regarding encroachment permit requirements at the time of project-level permitting. The text has been revised as requested. Please refer to Section 5.0, Changes to the Draft EIR for the revised text. Also, please refer to Master Response #1 regarding program-level EIR versus project-level EIR level of detail and CEQA requirements.
Mary Bannister, General Manager
Pajaro Valley Water Management Agency
36 Brennan Street
Watsonville CA 95076


Dear Mary Bannister:

Thank you for providing us with a copy of the Draft Environmental Impact Report (DEIR) for the Basin Management Plan (BMP) Update EIR. The BMP Update covers the jurisdictional areas of the Pajaro Valley Water Management Agency (PVWMA), which includes portions of south Santa Cruz County, north Monterey County, a small area of east San Benito County and the City of Watsonville. The BMP Update represents a comprehensive set of actions, including individual projects, policies, and basin management strategies to stop seawater intrusion and overdraft of the Pajaro Valley groundwater basin while maintaining an adequate water supply to meet annual demands within the basin.

While the Commission understands the need for the PVWMA to design and implement a management strategy to stop seawater intrusion and overdraft of the groundwater basin and at the same time maintain an adequate water supply in this area, some issues are raised by this proposed developments and related DEIR. These comments need to be addressed so that the PVWMA and the Commission can adequately evaluate the proposed project for consistency with the certified LCPs of Santa Cruz and Monterey Counties as applicable, as well as the relevant Coastal Act policies. In addition, there may be issues related to coastal permitting jurisdictional boundaries depending on the various locations of the proposed project’s components.

Therefore, after our initial review of this proposal we have the following comments:

Future Site-Specific Comments: The DEIR evaluates the aggregate impacts of the BMP project components and serves as the foundation for future site-specific, project-level CEQA documents, which will be required for a number of the individual project components. We will provide additional project-specific comments on these future CEQA documents as they become available.
Coastal Commission Permitting Jurisdiction: The jurisdictional boundary for coastal permitting purposes associated with the projects proposed in this DEIR will need to be clearly identified and defined. Within the Coastal Commission’s retained jurisdiction area, applications for coastal development permits would need to be processed by the Coastal Commission. For areas outside of this retained jurisdiction, but still located within the coastal zone, coastal development permits would need to be processed by Santa Cruz and/or Monterey Counties as appropriate pursuant to their certified LCPs.

In addition to the above described coastal permit jurisdictional boundaries, please note that if any of the proposed projects include a federal component, the entirety of such projects (including coastal zone and non-coastal zone components) may be subject to the Coastal Commission’s federal consistency procedures. Some of the project components that require Coastal Commission consistency review may be subsumed within the Commission’s CDP review (and vice versa). Further, to the extent non-coastal zone elements of the proposed project impact coastal zone resources, such development (federal project or not) may trigger coastal development permit review by the Commission.

Agricultural Resources: Coastal Act Section 30241 requires that the maximum amount of prime agricultural land shall be maintained in agricultural production, and Coastal Act Section 30242 states that lands suitable for agricultural uses shall not be converted to nonagricultural uses for those areas located in the coastal zone. According to the DEIR, future development proposed by the BMP Update components would result in the permanent conversion of approximately 30 to 50 acres of agricultural land. Any permanent conversion of prime agricultural lands within the coastal zone would be considered a significant impact and currently no feasible mitigation measures have been proposed for such impacts. The EIR should evaluate project alternatives that avoid the conversion of agricultural land. If complete avoidance of the conversion of agricultural land is not possible, the EIR should include appropriate measures to mitigate for any loss of agricultural land.

Wetlands Delineation: The proposed BMP Update includes projects located in the coastal zone west of State Highway 1, in areas that are known to contain wetlands. However, the DEIR states that a wetland delineation to cover all aspects of the currently proposed BMP Update project areas was not conducted. As mentioned above, the DEIR evaluates the aggregate impacts of the BMP project components and serves as the foundation for future site-specific, project-level CEQA documents, which will be required for a number of the individual project components. The future site-specific project-level CEQA documents will need to include the results of wetland delineations, as appropriate, to ensure that any and all potential wetlands habitats are clearly identified and that required mitigation measures, such as the provision of adequate setbacks to protect wetland habitats, are included in the projects.

Please also note that all future wetland delineations for the projects covered by the DEIR should be done using the Coastal Commission’s wetland delineation criteria. The Coastal Commission’s definition of wetlands differs from the definition used by the U. S. Army Corps of Engineers, the U.S. Environmental Protection Agency and the Natural Resources Conservation Service. Under normal circumstances, the definition used by those agencies requires all three wetland identification parameters (hydrology, hydrophytic vegetation, and hydric soils) to be met,
whereas the Coastal Commission’s definition, which is similar to U. S. Fish and Wildlife Service’s definition, requires the presence of at least one of those parameters. The Coastal Commission’s definition distinguishes wetlands from uplands by the presence of the following attributes (only one of which needs to be present to define a wetland): (1) the land supports predominantly hydrophytic cover; (2) the soil is predominantly hydric; (3) In the case of wetlands without vegetation or soils, the land is flooded or saturated at some time during years of normal precipitation.

**Sensitive Habitat:** The EIR needs to evaluate and ensure the proposed project avoids impacts to sensitive habitat, such as riparian areas and habitat for sensitive species, to the maximum extent feasible as required by Coastal Act Section 30231. In addition, the biological productivity and water quality of areas including coastal waters, streams, and wetlands, needs to be maintained and restored. This includes minimizing the adverse effects of wastewater discharges, runoff control, and maintaining natural vegetation areas that buffer and protect riparian habitats, and implementing restoration programs if necessary to mitigate for any impacts to habitat.

**Hazards/Geotechnical:** Some of the project components are located adjacent to the ocean. The Coastal Act requires new structures to be set back adequately for the lifetime of the structure (usually 100 years) without the need for shoreline armoring (Coastal Act Section 30235). Therefore, for the project components located adjacent to the ocean, such structures should be sited to avoid the need for shoreline structures over the life of the structure/development.

According to the DEIR, there is a strong likelihood that there could be incidences of flooding throughout the Pajaro Valley in the future. In order to address potential hazards and geologic risks, the EIR (and future project-specific CEQA documents) needs to include a thorough and detailed geotechnical analysis conducted for each project site to include an assessment of the potential risk of flooding and shoreline erosion related to future storm events and sea level rise. This information is necessary to determine the required development setbacks that will ensure that the proposed developments will be safe over the lifetime of the structures, without the need for shoreline armoring. These data will soon be adopted by the Commission to improve coastal management practices and address the effects of climate change related to an increase in the frequency and intensity of storms and changes expected which will increase the risks of coastal erosion and flooding in most coastal locations in California. The EIR should also evaluate the proposed project sites with respect to wave action to assess the potential for flooding or damage from waves, storm surge, tsunamis or seiches, through a wave uprush and impact report prepared by a licensed civil engineer with expertise in coastal processes.

Thank you for the opportunity to comment on the DEIR. Please feel free to contact me at (831) 427-4863 or by email at Karen.Geisler@coastal.ca.gov if you wish to discuss these matters further. With the clarifications described herein, we expect that the final EIR document will provide a sufficient level of detail to allow for a careful analysis of the project for Coastal Act policy conformance issues. We look forward to reviewing the final EIR and also look forward to reviewing and commenting on the future CEQA documents for the individual projects that are covered in this DEIR.
Pajaro Valley Water Management Agency (Basin Management Plan Update)
DEIR Comments
Page 4 of 4

Sincerely,

Karen J. Geisler
Coastal Planner

CC: State Clearinghouse
**LETTER C: CALIFORNIA COASTAL COMMISSION**

**C-1:** Comment noted. The BMP Update covers multiple jurisdictional boundaries. Specific components of the project will be addressed in subsequent project-level CEQA review, including coastal permitting.

**C-2:** Comment noted. Implementation of individual components would require PVWMA to secure permits and approvals from several local, regional, state, and federal agencies. Depending on final design, consultation and permits may be required from various agencies. These potential permits and approvals are presented in Section 2, Project Description. Additionally, PVWMA will conduct additional project-level design studies and CEQA review on the specific projects it proposes to implement. PVWMA acknowledges that the BMP Update serves as the foundation for future site-specific, project-level CEQA documents and that the Coastal Commission will provide additional project-specific comments on these future CEQA documents at the appropriate time. Also, please refer to Master Response #1 regarding program-level EIR versus project-level EIR level of detail and CEQA requirements.

**C-3:** Comment noted. Projects proposed within the EIR will be clearly defined to ensure that appropriate agencies are consulted during permitting. Projects that fall under Coastal Commission jurisdiction would require PVWMA to secure coastal development permits as required from the Coastal Commission. Should the project fall outside the Coastal Commission’s jurisdiction but within the coastal zone, Monterey and/or Santa Cruz Counties would be consulted for coastal development permits, as required.

**C-4:** Comment noted. Projects containing federal components may be subject to the Coastal Commission’s federal consistency procedures. PVWMA fully expects to comply with regulatory requirements under applicable laws. Further, the Agency recognizes the Coastal Commission comments that coastal development permit review is triggered by the extent a project’s non-coastal zone elements impact coastal zone resources.

**C-5:** Comment noted. The PVWMA intends to avoid impacts to agricultural resources to the greatest extent possible. As the BMP Project Update serves as the foundation for the future site-specific project-level CEQA documents, future documents will include site-specific studies on agricultural resources to fulfill the requirements of the project-level CEQA review. Project-level CEQA analysis will consider, potential impacts and mitigation measures to address identified impacts of loss of prime agricultural land, as well as define project alternatives to avoid conversion of agriculture land per the requirements of CEQA.

**C-6:** Comment noted. The PVWMA will be required to conduct several site-specific studies to fulfill the requirements of the project-level CEQA review. This will include a wetland delineation that will demarcate the location of coastal review wetlands and the required setbacks and will include other mitigation measures as required by the site-specific project plans. As described in Section 3.4 of the Draft EIR, the state’s authority in regulating activities in wetlands and waters in the project area resides primarily with CDFW and the Regional Water Quality Control Board (RWQCB). The CDFW provides comment on ACOE permit actions under the Fish and Wildlife Coordination Act. CDFW is also authorized under the California Fish and Game Code Sections 1600-1607 to develop mitigation measures and enter into a Streambed Alteration Agreement (SAA) with applicants that propose a project that would
obstruct the flow or alter the bed, channel, or bank of a river or stream in which there is a fish or wildlife resource, including intermittent and ephemeral streams. The RWQCB must certify that a ACOE permit action meets state water quality objectives (Section 401, Clean Water Act). The Central Coast Region RWQCB will be reviewing this project. Within the Coastal Zone, the County’s Local Coastal Program would apply and wetlands may be subject to review by Santa Cruz County and/or the California Coastal Commission through a Coastal Development Permit process. For projects within the Coastal Zone, the wetland delineation will utilize the Coastal Commission’s wetland delineation criteria.

C-7: The PVWMA intends to avoid impacts to sensitive habitats to the greatest extent feasible. This will be accomplished by conducted site-specific studies to demarcate the location for coastal review wetlands, riparian habitat, and special status species habitat (if present). The project includes buffers between project features and sensitive resources as per the buffers established in Santa Cruz County Code.

C-8: Comment noted. PVWMA will be required to comply with Coastal Act requirements including proper siting of structures adjacent to the ocean and required setbacks consistent with applicable regulations. Project details regarding design and siting are not a part of the programmatic BMP Update. However, the Agency acknowledges that proper siting of structures during the design phase would help ensure that shoreline structures and armoring are avoided during the lifetime of structure.

C-9: Comment acknowledged. Future site-specific CEQA documents will be required to assess flooding hazards, assess consistency with Coastal Act requirements and provide mitigation as appropriate to address potential impacts. See also response F-4 regarding sea level impacts of future site-specific projects. As noted in previous comments and responses, this Coastal Commission letter references requirements for studies and CEQA analysis under future project-level documentation. The Agency acknowledges that this future assessment will be appropriate at the project level. Master Response # 1 addresses the programmatic approach to the BMP EIR and the tiered approach to future environmental analysis. Following adoption of the BMP Update, PVWMA will conduct additional project-level design studies and CEQA review as needed on the specific projects it proposes to implement. Project level CEQA analysis on program actions will be conducted at later dates at such a time that subsequent design information is available and discretionary actions are taken. (See CEQA Guidelines Section 15168, defining “Program EIR”.)
December 13, 2013

Ms. Mary Bannister
Pajaro Valley Water Management Agency
36 Brennan Street
Watsonville, CA 95076

Dear Ms. Bannister:

Subject: Draft Subsequent Program Environmental Impact Report for the Pajaro Valley Water Management Agency Basin Management Plan Update, SCH # 2000062030, Santa Cruz, Monterey and San Benito Counties

The California Department of Fish and Wildlife (CDFW) has reviewed the draft Subsequent Program Environmental Impact Report (SPEIR) for the proposed Pajaro Valley Water Management Agency Basin Management Plan Update (Project). CDFW is submitting comments on the draft SPEIR as a means to inform the Pajaro Valley Water Management Agency (PVWMA), as the Lead Agency, of our concerns regarding potentially significant impacts to sensitive resources associated with the proposed Project. CDFW received an extension to submit comments on the draft SPEIR to December 13, 2013 in an email from you dated December 5, 2013.

CDFW is identified as a Trustee and Responsible Agency pursuant to the California Environmental Quality Act (CEQA) §15386. As a trustee for the State’s fish and wildlife resources, CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants and the habitat necessary for biologically sustainable populations of those species pursuant to California Fish and Game Code §1802. CDFW is also considered a Responsible Agency if a project would require discretionary approval under the California Endangered Species Act (CESA), Native Plant Protection Act, Lake and Streambed Alteration Program, and other provisions of the Fish and Game Code that afford protection to the State’s fish and wildlife trust resources. Pursuant to our jurisdiction, CDFW has reviewed the draft SPEIR and has the following concerns, comments, and recommendations regarding the proposed Project.

Project Location and Description
The proposed Project area covers the geographical jurisdiction of the PVWMA, which includes portions of south Santa Cruz County, north Monterey County, a small area of east San Benito County and includes the City of Watsonville. The Project includes implementation of the following seven primary components and programs: Conservation, Increased Recycled Water Storage at Treatment Plant, Increased Recycled Water Deliveries, Harkins Slough Recharge Facilities Upgrades, Watsonville Slough with Recharge Basins, College Lake with Inland Pipeline to Coastal Distribution System, and Murphy Crossing with Recharge Basins.
The Harkins Slough Recharge Facilities Upgrades component includes installation of new shallow extraction wells at the recharge basin, upgrading the pump station and filters at the slough diversion to improve system operation and recharge infiltration rates, and construction of a new recharge basin.

The Watsonville Slough with Recharge Basins component would divert Watsonville Slough water during high flows from December to May. The water would be stored in the surficial groundwater aquifer at the proposed North Dunes Recharge Basin and or at alternative locations near the existing Harkins Slough Recharge Basin.

The College Lake with Inland Pipeline to Coastal Distribution System component includes the development of the facilities required to store, treat, and deliver the water and construction of a new adjustable weir downstream of the existing low dam. The new outlet weir would raise the College Lake outlet elevation by 2.3 feet to 62.5 feet. This would increase the total storage capacity of the lake from approximately 1,400 acre-feet (af) to approximately 2,000 af. It also would increase the total inundated area from approximately 260 acres to 300 acres.

The Murphy Crossing with Recharge Basins component would divert water from the Pajaro River between December and May. This is when the Pajaro River water quality is within an acceptable range and stream flows are above the required minimum necessary to maintain habitat for steelhead trout (Onchorhynchus mykiss), which is a federally listed species and a State Species of Special Concern. The Project includes the construction of an infiltration gallery, pump station, monitoring wells, recharge basins, and a connector pipeline from pump station to recharge basins.

Lake and Streambed Alteration Agreement
For any activity that will divert or obstruct the natural flow, or change the bed, channel, or bank (which may include associated riparian resources) of a river or stream, or use material from a streambed, CDFW may require a Lake or Streambed Alteration Agreement (LSAA), pursuant to Section 1600 et seq. of the Fish and Game Code, with the applicant. Issuance of an LSAA is subject to CEQA. CDFW, as a Responsible Agency under CEQA, will consider the SPEIR for the Project.

Our records indicate that none of the current diversion operations conducted by the PVWMA are covered under an LSAA. In order for the PVWMA to be in compliance with Fish and Game Code Section 1600 et seq., CDFW recommends that the PVWMA notify CDFW for an LSAA for all ongoing and future water diversion activities. CDFW recommends that the PVWMA submit the LSAA notification(s) prior to approving any additional expansions described in the SPEIR that may further impair conditions. To obtain information about the LSAA notification process, please access our website at http://www.dfg.ca.gov/habcon/1600/ or to request a notification package, contact our Bay Delta Regional Office at (707) 944-5500.

In order for CDFW to issue an LSAA, the final SPEIR must provide a detailed analysis of the potential impacts of diversion activities on instream fisheries resources including State Species of Special Concern steelhead trout and tidewater goby (Eucyclogobius newberryi), impacts to overwintering waterbirds, nesting birds, migratory birds and special-status plant, fish and wildlife species. As such, based on the draft SPEIR, CDFW is unable to fully evaluate to what extent...
ongoing operations are currently impacting steelhead trout and other native fish species, or how much the proposed projects at Harkins and Watsonville sloughs would further impair those resources. The draft SPEIR also does not adequately evaluate whether PVWMA facilities bypass sufficient flows to keep fish in good condition (Fish and Game Code Section 5937). CDFW therefore recommends that the draft SPEIR be revised to thoroughly evaluate whether current operations may be impairing instream flow, and determine whether increases in consumptive uses may cause additional potentially significant impacts to special-status fish species. If potential impacts to special-status fish species are identified as a result of any of the proposed Project activities, the SPEIR should include effective avoidance and minimization measures to reduce those impacts to less-than-significant levels, and mitigation measures for any unavoidable impacts. Through the LSAA notification process, CDFW will be able to evaluate current diversion operations and provide measures to protect instream fisheries resources.

California Endangered Species Act

Please be advised that an Incidental Take Permit (ITP), pursuant to Fish and Game Code Section 2080 et seq. must be obtained if a project has the potential to result in take of species of plants or animals listed under CESA, either during construction or over the life of the project. CESA-listed plant and animals identified within the Project area include the seaside bird's-beak (Cordylanthus rigidus ssp. littoralis), Santa Cruz tarplant (Holocarpha macraedenia), San Francisco popcorn flower (Plagiobothrys diffusus), willow flycatcher (Empidonax traillii), and bank swallow (Riparia riparia). Issuance of a CESA Permit is subject to CEQA documentation. Therefore, the SPEIR must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit.

Plant Surveys and Evaluation of Project Impacts

CDFW considers the information provided in the draft SPEIR as inadequate to address the potential impacts to special-status plant species, rare plants and rare plant communities that could be present at Project sites. CDFW recommends that the Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities, available online at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline=1 be used to develop protocol-level surveys for special-status plants and evaluate potential impacts if sensitive plants are documented during surveys. Results of surveys should be included in the SPEIR.

Mitigation Measures

Bio-1a, page 3.4-41 states the following:

"Wetlands and riparian habitat will be avoided by project construction activities. All facilities and construction activities will be maintained outside the jurisdictional area defined by riparian or emergent wetland vegetation and applicable setbacks and buffers where feasible. Within the Coastal Zone, project improvements will be located 100 feet from coastal review wetlands. Within the City of Watsonville, development will be located 100 feet from riparian areas. Within the unincorporated areas of the County, yet outside the Coastal Zone, a setback of 30 feet and 50 feet will be established adjacent to intermittent and perennial streams, respectively. If
complete avoidance of wetlands and riparian areas is infeasible and/or development occurs within a regulated buffer/setback area, impacts would be minimized through implementation of Mitigation Measures BIO-1b, BIO-1c BIO-1d, and BIO-1e”.

CDFW recommends that the SPEIR specify that the proposed Project shall maintain at least a 100-foot protective buffer from the drip line of riparian vegetation at both perennial and ephemeral streams to the edge of development activities. Appropriate riparian buffers should be considered during the design and planning phases of all proposed Project components. The development buffer helps contribute to creating an adequate stream setback, which plays critical role in the protection and conservation of aquatic habitat for salmonids and other aquatic species. By providing for retention and recruitment of riparian vegetation, setbacks increase shade and flood capacity, woody debris recruitment, and nutrient inputs. By minimizing soil disturbance in streamside zones, allowing for natural fluvial process, and retaining streamside vegetation, stream setbacks help reduce erosion, sedimentation, and greatly aids in bank stabilization.

Bio-1c, page 3.4-42 includes the development of revegetation plans and states that “[R]evegetation will include a 3:1 replacement ratio (or an equivalent replacement strategy as agreed upon by PVWMA and regulatory agencies) for all trees lost as a result of the project to account for the reduced habitat values of smaller trees compared with mature vegetation. Success criteria for replanting will be less than 20 percent mortality of individual species yearly for 5 years.” CDFW recommends that the 3:1 replacement to loss ratio be applied to the acreage of riparian habitat lost and mitigation measures for trees removed should account for their diameter at breast height of each tree. Revegetation plans in the Pajaro River watershed need to address invasive plant species management such as a maximum of five percent of invasive species cover as a success criterion. In addition, success criteria for replanting individual native plant species should be at 20 percent mortality at the end of the five years of monitoring. Cumulatively over five years a mortality rate close to 20 percent can result in a near zero percent survival of all plants established during the initial planting effort.

Bio-21, page 3.4-50 provides multiple mitigation measures to protect fisheries resources during project construction, but does not address impacts to fisheries resources associated with ongoing operations in the post construction period such as water diversion. Unless separate CEQA documents are to be prepared for each of the Project components that include water diversion as an activity, please incorporate instream flow studies that will evaluate habitat losses associated with the proposed Project prior to construction and incorporate additional mitigation measures to address loss of fisheries habitat.

CDFW recommends that PVWMA begin the process of establishing baseline environmental conditions and perform winter waterbird surveys, nesting bird surveys, fish and wildlife surveys and instream flow studies. Data collected from instream flow studies should be used to develop Project component specific bypass flows for all life history stages of salmonids and any other fisheries resources affected by the Project including the Pajaro River Lagoon. CDFW also recommends that the SPEIR incorporate a mitigation measure to develop and implement a plant, fish and wildlife resource adaptive management plan for each Project component before construction. These adaptive management plans should be developed in coordination with the appropriate resource agencies. Adaptive management plans and survey methodologies for baseline conditions establishment should be approved by CDFW before implementation.
CDFW appreciates the opportunity to comment on the Pajaro Valley Water Management Agency Basin Management Plan Update. CDFW staff are available to meet with you to further clarify our comments and provide technical assistance on any changes to the draft SPEIR necessary to protect resources. If you have any questions, please contact Ms. Melissa Farinha, Environmental Scientist, at (707) 944-5579; or Ms. Brenda Blinn, Senior Environmental Scientist (Supervisory), at (707) 944-5541.

Sincerely,

Scott Wilson
Acting Regional Manager
Bay Delta Region

ec: William Stephens, National Marine Fisheries Service – william.stevens@noaa.gov
Chad Mitcham, U.S. Fish and Wildlife Service – chad.mitcham@fws.gov
Jacob Martin, U.S. Fish and Wildlife Service – jacob.martin@fws.gov
LETTER D: CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (CDFW)

D-1: The California Department of Fish and Wildlife’s position regarding the Draft EIR is noted. CDFW is identified as a Trustee and Responsible Agency pursuant to the California Environmental Quality Act (CEQA) §15386. As a trustee for the State's fish and wildlife resources, CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants and the habitat necessary for biologically sustainable populations of those species pursuant to California Fish and Game Code §1802. CDFW is also considered a Responsible Agency if a project would require discretionary approval under the California Endangered Species Act (CESA), Native Plant Protection Act, Lake and Streambed Alteration Program, and other provisions of the Fish and Game Code as identified by the CDFW.

D-2: Comment noted. The CDFW provides a brief summary description of the project components and project location. No response is necessary.

D-3: The CDFW’s role in future projects is noted. CDFW cites Fish and Game Code and requirement for Lake or Streambed Alteration Agreement (LSAA) for “any activity that will divert or obstruct the natural flow, or change the bed, channel, or bank (which may include associated riparian resources) of a river or stream, or use material from a streambed” (Section 1600 et seq. of the Fish and Game Code). PVWMA acknowledges that the BMP Update serves as the foundation for future site-specific, project-level CEQA documents and permit requirements and that CDFW and other agencies will provide additional project-specific comments and permit requirements on these future CEQA documents at the appropriate time. The CDFW will be consulted as a Responsible Agency under CEQA at that time. PVWMA agrees that it should and will submit LSAA notification(s) prior to approving any new or expanded operations subject to the jurisdiction of CDFW.

D-4: Comment noted. The PVWMA operates one surface water diversion site at the downstream outlet of Harkins Slough. The existing PVWMA diversion structure on Harkins Slough is located at the Santa Cruz County Harkins Slough Flood Control Pump Station. In 2002, a diversion valve was constructed by PVWMA at the pump station. The diversion valve allows flows that were formerly pumped over the weir to be diverted to the off-channel Harkins Slough Recharge basins.

On June 8, 2000, prior to CEQA approval and construction of the Harkins Slough Recharge Project, PVWMA received a Permit for Diversion and Use of Water #21039 from the State Water Resources Control Board (SWRCB), which allows the use of up to 2,000 acre-feet per year (AF/Y) of Harkins and Watsonville Slough water from November 1 to May 31. Sediment and vegetation removal at the Harkins Slough diversion site was permitted in fall 2011 by a CDFW LSAA through a collaborative effort between PVWMA, Pajaro Storm Drain Maintenance District and the Resource Conservation District of Santa Cruz County (LSAA 1600-2011-0373-R3 Harkins Slough). The Draft EIR notes that PVWMA will be required to obtain a LSAA from CDFW for upgrades to the Harkins Slough diversion facility, in addition to any future diversion facilities in the BMP project area.

The Agency has also provided the following in response to this comment. PVWMA staff is not aware of other current PVWMA operations that would require an LSAA from CDFW. PVWMA agrees that it should and will submit LSAA notification(s) prior to approving any new or expanded operations if subject to the jurisdiction of CDFW.
D-5: In accordance with Section 15125 of the CEQA Guidelines, the text includes a description of the known physical conditions in the vicinity of the BMP Update as they exist at the time the Notice of Preparation was published, including historical and available data covering existing habitat condition and hydrologic conditions. The Draft EIR utilizes the best available information for the program-level evaluation of potential biological impacts. Steelhead and tidewater goby are not known to use the freshwater portions of the sloughs, upstream of the Shell Road Pump Station, although no detailed fisheries surveys have been done in the Slough Watershed to date. Tidewater goby and steelhead are known to use the Pajaro Lagoon and Pajaro River (D.W. Alley, J. Smith, and G. Kittleson, personal comm. 2013). No detailed fisheries surveys of the lower Watsonville Slough channel downstream of Shell Road are provided, but steelhead and goby are assumed to be present, due to direct connectivity to the Pajaro Lagoon under all hydrologic conditions. The effects of the Shell Road pump station on these species as an upstream barrier is not known at this time. Also see response to D-4 and D-6.

D-6: The PVWMA will be required to conduct species-specific studies to fulfill the requirements of the project-level CEQA review and resource agency permits, including any required CDFW LSAA. The existing PVWMA water rights permit for the diversion on Harkins Slough is for 2000 AF/Y, and was secured at a time when the total predicted outflow from the sloughs was estimated at 7,500 AF/Y (Questa Engineering, 1995).

Suggested species-specific measures for steelhead are included in mitigation measures in the Draft EIR, Section 3.4, and the EIR acknowledges that BMP Update components that proposed to divert surface waters beyond existing entitlements would require future additional project-level CEQA analyses of specific diversion and operation plans to support water rights application and environmental permits. It is assumed that project-level biological studies and analysis for these BMP Update components will be required to support those future permits and biological opinions.

New diversion project design(s) and mitigation measures required by future permits may benefit from the development of the Watsonville Slough Hydrologic Study and Hydrologic Model currently underway through the Resource Conservation District of Santa Cruz County. Project impacts to fisheries, listed species, and overwintering birds from implementation of future BMP projects will be assessed at the project level prior to permitting. Impacts are likely to be better assessed and articulated with the application of the hydrologic model for specific project-level diversion alternatives to be developed during the project-level CEQA process.

The commenter recommends the Draft EIR be revised to “thoroughly evaluate whether current operations may be impairing instream flow, and determine whether increases in consumptive uses may cause additional potentially significant impacts to special-status fish species.”

If at the project design stage, potential significant impacts to special-status fish species are identified as a result of any of the future proposed project activities, the subsequent CEQA document would include effective avoidance and minimization measures to reduce those impacts to less-than-significant levels, and mitigation measures for any unavoidable impacts. Construction and operation of the proposed facilities presented in the Draft EIR would not occur until project design elements and mitigation measures to address CEQA and CESA requirements have been addressed and appropriate permits.
obtained. As noted above, there is not available data to document or evaluate whether current conditions and operations are creating potentially significant impacts to special-status fish species.

Further, the comment suggests that the current operations are creating significant impacts and offers that future operations may cause additional potentially significant impacts. There is no evidence provided by the commenter to determine that there are either current or future significant impacts due to current operations or future project implementation to special-status fish species. The State CEQA Guidelines require that decisions regarding the significance of environmental effects addressed in an EIR be based on substantial evidence and recognize that other evidence suggesting a different conclusion may exist. The Draft EIR and this Final EIR provide a comprehensive evaluation of the project’s environmental impacts at a programmatic level in compliance with CEQA and the State CEQA Guidelines and in accordance with professionally accepted methodology for the evaluation of environmental resources.

D-7: Comment noted. The Draft EIR serves as the foundation for the future site-specific project-level CEQA documents. These future documents will include site-specific studies to fulfill the requirements of the project-level CEQA review. This will include surveys that will ascertain the presence or absence of state listed plants or animals. If such species are documented to occur and impacts to such species cannot be avoided, PVWMA will confer with CDFW and obtain any necessary permits pursuant to Fish and Game Code 2080 et seq.

D-8: Comment noted. The Draft EIR serves as the foundation for the future site-specific project-level CEQA documents. These future documents will include site-specific studies to fulfill the requirements of the project-level CEQA review. This will include protocol-level plant surveys that will ascertain the presence or absence of state listed plants. If such species are documented to occur and impacts to such species cannot be avoided, site-specific mitigation measures will be developed, using the programmatic measures outlined in the Draft EIR as a guide.

D-9: Comment noted.

D-10: Comment noted that CDFW recommends a 100-foot setback to riparian vegetation for both perennial and ephemeral streams; however, the Draft EIR has utilized the approved riparian setbacks as specified in Santa Cruz County Code or the City of Watsonville (as applicable), upon which the project features are located. Use of these adopted setbacks is consistent with adjacent land uses and other land activities regulated within the County and City jurisdiction and are suitable setbacks to protect riparian resources from proposed project activities.

D-11: Comment noted. We concur that riparian acreage replacement should be added to the mitigation measure. The habitat revegetation would include tree plantings such that 3 trees would be planted for every tree that is removed. Neither the Agency, County nor City, have adopted tree replacement ratios based on the size of riparian trees removed. Due to the rapid growth of riparian trees that occur within the project area (i.e., willows and cottonwoods), the use of a straight 3:1 tree replacement ratio is sufficient to provide compensation for tree loss within the project setting. We concur that revegetation plans should address invasive plant species management and a cover threshold has been added to the mitigation measures. We also added text to the mitigation measure to clarify that replanting is required each year that
plantings exceed 20% mortality, such that 80% survival is maintained each year of the 5-year monitoring period.

Mitigation measure 3.4.1c will be amended as follows (new text shown as underlined):

“Revegetation will include a 3:1 replacement ratio for the acreage of riparian habitat lost and for all trees lost as result of the project to account for the reduced habitat values of smaller trees compared with mature vegetation. Success criteria for replanting will be less than 20 percent mortality of individual species yearly for 5 years. Replanting will be conducted each year that plantings exceed 20% mortality, such that 80% plant survival is maintained each year of the 5-year monitoring period. Cover provided by invasive, non-native plant species shall not exceed 5% during each year of the 5-year monitoring period.

D-12: See above.

D-13: Comment noted. The Draft EIR provides mitigation measures to protect fisheries resources during project construction, as these are typical to any construction project that affects stream and wetland habitats that support listed fish and wildlife species. These measures are included to serve as a basis for future project-specific and species-specific mitigation measures that will be developed with CDFW during the project-specific LSAA permit processes. Fish bypass flows and mitigation of potential adverse impacts to wintering waterfowl, nesting birds, and federally listed species will be negotiated in consultation with CDFW and CDFW’s federal counterparts at USFWS and NOAA/National Marine Fisheries Service during project-specific CEQA review and permitting.

D-14: Comment noted. The PVWMA concurs that establishment of baseline environmental conditions is essential to project-level designs and impact assessments. The PVWMA will be required to conduct several site-specific studies to fulfill the requirements of the project-level CEQA review for each component. This will include a undertaking a multi-year wintering waterfowl survey at College Lake to develop baseline information for an adaptive management and mitigation/monitoring plan for use of College Lake as water supply.

For the diversion components, project-level analysis of fisheries flows and fish habitat impacts will be conducted in consultation with the responsible resource agencies. Appropriation of surface water rights through the SWRCB requires that fish bypass flows and mitigation of potential adverse impacts to wintering waterfowl, nesting birds, and federally listed species will be negotiated in consultation with CDFW and CDFW’s federal counterparts at USFWS and NOAA/National Marine Fisheries Service during project-specific CEQA review and permitting.

D-15: This comment is forwarded to decision-makers for further consideration as part of the deliberative process. No further response is necessary.
December 4, 2013

Pajaro Valley Water Management Agency
ATTN: Mary Bannister, General Manager
36 Brennan Street
Watsonville, CA 95076

Subject: Basin Management Plan Update EIR (REF130103)

Dear Ms. Bannister,

The Monterey County land use departments have reviewed the subject application and have the following comments.

Environmental Health Bureau (EHB)

Thank you for the opportunity to review the referenced environmental document. The Environmental Health Bureau (EHB) is pleased that Pajaro Valley Water Management Agency is pursuing projects to help reduce saltwater intrusion, consistent with 2010 Monterey County General Plan policy PS-3.14.

Thank you for the opportunity to comment on the annexation. Feel free to call me at (831) 755-5183 if you have any questions.

Sincerely,

Bob Schubert, AICP
Senior Planner
**LETTER E: MONTEREY COUNTY RESOURCE MANAGEMENT AGENCY**

**E-1:** Comment is acknowledged. No further response is required.

**E-2:** Comment is acknowledged. No further response is required.
December 8, 2013

Pajaro Valley Water Management Agency
Mary Bannister, General Manager
36 Brennan Street
Watsonville, CA 95076

SUBJECT: COMMENTS ON PVWMA BASIN MANAGEMENT PLAN UPDATE DRAFT EIR, October 2013

We are writing to comment on the Draft Basin Management Plan Update and its associated Draft Environmental Impact Report. County staff is very supportive of the proposed projects identified in the draft BMP Update and commend PVWMA for the recent progress toward addressing the overdraft conditions. However, we are concerned that the draft BMP and the DEIR are not clear about all the efforts needed to ensure long-term sustainability of water usage in the Pajaro Valley region. While the stated program objectives, as well as the PVWMA charter are to “prevent further increases in” seawater intrusion, the projects proposed in this BMP seem to stop somewhat short of this goal. We are also concerned that there needs to be more margin of safety built into the BMP to accommodate potential impacts of climate change, land use change and/or errors in the groundwater model.

As indicated in the Summary and Program Objectives, the proposed projects will address 90% of the seawater intrusion and overdraft problems. Page 46 of the Draft BMP states that phase 1 will reduce overdraft by 80% and seawater intrusion by 85%. With the addition of the Murphy Crossing recharge project (in phase 2), 90% of the problem is to be addressed. On page 41 of the Draft BMP, it is indicated that the seven projects to be implemented will eliminate overdraft in the 3 primary aquifers and reduce seawater intrusion to 200 af/yr. That page also suggests that a phase 3 might be implemented, if needed, but there are no clear projects or desired outcomes stated for phase 2 or 3. We do appreciate that page 78 of the Draft BMP lays out a plan for monitoring of groundwater levels and water quality to determine if the management targets are being met, independent of the groundwater modeling. However, we believe that these steps, and the commitment to implement additional projects or management measures to fully eliminate overdraft and intrusion should be more explicitly and prominently addressed in the BMP. These additional measures could also address potential future impacts of climate change.

Neither the draft BMP nor the DEIR seem to address potential impacts of climate change. Although sea level rise has been modeled, climate change will most likely result in increased crop demand, and reduced groundwater recharge, as indicated by the recent USGS assessment for Santa Cruz County (Flint and Flint, 2011). An example of changes in demand caused by climate is the 7,000 af/yr increase in pumping from 2011, a cool wet year, to 2012, a drier year.

We continue to have concerns about how the groundwater model reflects the overall water budget for the basin. For example, page 3.9-9 of the DEIR states that annual recharge is 30,700 af/yr. If average annual pumping is 54,000 af/yr, that would suggest a deficit of 23,300 af/yr. Page 16 of the draft BMP indicates that under baseline conditions, overdraft is 1,400 af/yr and seawater intrusion is 1,900 af/yr. The BMP is based on model output that suggests that 12,000 af/yr is needed to stop overdraft and seawater intrusion. It would be helpful to have a more clear water budget to better understand what is going on and how these numbers relate to each other.

On page 3-9-58 of the DEIR, it is stated that the project will raise groundwater levels. How can that be if the BMP will only reduce the rate of overdraft by 90% and is not intended to bring about basin recovery?

Page 3-9-24: The pump station at Harkins Slough is operated by the Pajaro Storm Drain Maintenance District.
We recognize that it is a programmatic level DEIR and that many of the impacts on fish and biotic resources cannot be fully evaluated until the projects and their operational characteristics are more fully defined. We look forward to offering more comments on the specific projects during project level CEQA review.

Thank you for the opportunity to offer our comments. We look forward to working with PVWMA to fully develop these projects and move into implementation.

Sincerely,

[Signature]

John A. Ricker
Water Resources Division Director
LETTER F:  COUNTY OF SANTA CRUZ ENVIRONMENTAL HEALTH DEPARTMENT

F-1: Comment acknowledged. County staff notes their support of the proposed projects identified in the draft BMP Update and commends PVWMA for the recent progress toward addressing the overdraft conditions. The commenter expresses concern that the BMP Update and the Draft EIR are not clear about all the efforts needed to ensure long-term sustainability of water usage in the Pajaro Valley region. Specific responses to individual comments are provided below.

F-2: This comment cites the stated program objectives, as well as the PVWMA charter and asserts that the BMP does not comply with the project objectives or Agency goals cited. Pursuant to Public Resources Code § 21065 and CEQA Guidelines §15357, and §15378, the definition and objectives of the project are determined by the project proponent, in this case the PVWMA, also the lead agency. It is not the function of an EIR to question or modify the project objectives. The objectives are a “given” that the EIR writers must use as a framework for developing a reasonable range of alternatives, and that decision makers must use in evaluating the feasibility of alternatives and mitigation measures (See CEQA Guidelines, §15124(b)). Some of the comments express disagreement with the objectives adopted by the Agency or question the BMP project meeting the objectives. Such disagreements are policy matters to be resolved by the decision makers; the Draft EIR addresses the impacts of the project and the ability of alternatives to meet some of the most basic of the project objectives cited in the EIR, consistent with CEQA requirements.

The Agency has also provided a response and states that this is not a comment on the EIR but rather the BMP program objectives, their consistency with the PVWMA charter and the “margin of safety” built into them. As stated in the Agency Act, the purpose of the agency is to “efficiently and economically manage existing and supplemental water supplies in order to prevent further increase in, and to accomplish continuing reduction of, long-term overdraft.” The Act further defines Agency objectives as follows (emphasis added):

a. Local groundwater resources should be managed toward the avoidance and eventual prevention of conditions of long-term overdraft, land subsidence, and water quality degradation.
b. Local economies should be built and sustained on reliable, long-term supplies and not long-term overdraft as a source of water supply.
c. Water management programs should include reasonable measures to prevent further increases in the amount of long-term overdraft and to accomplish continuing reduction in long-term overdraft, realizing that an immediate reduction in long-term overdraft may cause severe economic loss and hardship.

The BMP Update goals are consistent with the Agency purpose and objectives to develop reasonable water management programs for the eventual prevention of long-term overdraft, realizing that an immediate reduction in long-term overdraft may cause severe economic hardship. As stated in the BMP and described below, the BMP program objectives are to reduce basin overdraft by 80% and seawater intrusion by 90% by 2025. Numerous projects were considered and the projects best meeting the program objectives were selected. The effectiveness of these projects to balance the basin and reduce overdraft will be monitored and measured through an ongoing groundwater basin-monitoring program. The purpose of the monitoring program is to:
• Understand the impact of conservation (Is pumping basin-wide reduced over a given period of time? Are groundwater levels improving?)
• Understand the impact of delivered water use (Has groundwater production declined in the delivered water zone? How is the decline in groundwater production affecting water levels and water quality?)
• Measure the yield of capital projects (Are capital projects producing the anticipated yield?)
• Determine if new projects need to be considered to solve the remaining basin overdraft and/or seawater intrusion (Are existing facilities, in combination with increased water use efficiency programs, stopping groundwater overdraft and halting seawater intrusion?)

For conservation, it is anticipated that the BMP conservation program would be initiated in 2015 if funding is available, and that it (along with other on-going conservation efforts) would achieve 100% of the savings goal (5,000 AFY) in eight years (by 2023). The PVWMA would continuously monitor basin conditions and by 2020 determine if a minimum of 75% of the conservation goal (reduced pumping) is being met; if not, the PVWMA would revise the program to increase the levels of conservation and water use efficiency. By 2025 the PVWMA would determine whether overdraft is reduced by at least 80% and seawater intrusion is reduced by at least 90%; if not, the PVWMA would begin the process of identifying new projects to make up the shortfall for solving the basin problem.

For new local surface water projects, the monitoring of the effectiveness of these projects would be determined by measuring yield of each project, measuring groundwater production, and monitoring water levels in the aquifers and water quality in the delivered water zone. The process for then determining whether additional, more expensive projects are still required to solve the basin problem would follow a process similar to that identified above for conservation. By 2025 the PVWMA would determine if at least 80% of the basin overdraft and 90% of seawater intrusion problems have been addressed, assuming the full portfolio of Phase 1 projects are implemented. If the PVWMA determines the improvements are not on track, whether due to climate change, land use change, and/or changes in the groundwater model, it would begin the process of identifying new projects for the eventual prevention of conditions of long-term overdraft, land subsidence, and water quality degradation.

F-3: This is not a comment on the EIR but rather the program objectives and adaptive management program as defined in the BMP Update. As stated above, the definition and objectives of the project are determined by the project proponent, in this case the lead agency. It is not the function of an EIR to question or modify the proponent’s or the lead agency’s project objectives.

As stated in the BMP, the BMP program objectives are to reduce basin overdraft by 80% and seawater intrusion by 90% by 2025. In all, 44 projects were considered and the projects best meeting the program objectives were selected. If PVWMA determines (through the monitoring program described above) that the objectives will not be met, whether due to climate change, land use change, and/or changes in the groundwater model, the process of identifying new projects for the eventual prevention of conditions of long-term overdraft, land subsidence, and water quality degradation would begin. The projects may include those that were considered in this BMP Update or new projects. PVWMA is committing to the objectives as stated in the BMP, implementation of the projects to meet the objectives, the monitoring program to measure the effectiveness of the projects and the basin conditions (including basin impacts...
due to climate change), and the adaptive management if the objectives are not being met. The PVWMA considers timing to be premature to commit to potential future projects at this time.

**F-4:** Groundwater demands fluctuate year to year based on weather conditions (short term climate variability) as well as other factors such as variations in agricultural production (type of crops, etc). Groundwater demands will also fluctuate based on effects of weather patterns, including long term climate change. The commenter correctly notes that water use projections have not been adjusted for potential changes due to climate change. However, as noted in Response F-2, the PVWMA monitoring program is designed to measure the impacts to the basin due to changes in water use whether due to conservation, climate change or other crop and water use changes. If climate change impacts lead to increased water use and a failure to meet the BMP objectives as defined in Response F-2 and F-3, other projects that were considered as future alternatives will be reconsidered consistent with the Adaptive Management Program.

The comment also questions the EIR evaluation of Climate Change. Section 3.3.3.4 of the Draft EIR evaluates the project’s cumulative impact on climate change and generation of GHG emissions, while section 3.3.3.5 evaluates the cumulative impacts of Climate Change on the project.

The evaluation of GHG emissions and a project’s individual and cumulative impact on global climate change in CEQA documents is a rapidly emerging trend and currently driven by existing laws and legal challenges to CEQA documents. While GHG emissions are not new phenomena, the impact evaluation method and thresholds with regard to global climate change impacts have not been defined or adopted at the state or local level. In the absence of such guidelines, air quality impact thresholds may be used as the basis for individual and cumulative GHG analysis. The Draft EIR used this approach for evaluating GHG and Global Climate Change impacts, and utilized thresholds established by the San Luis Obispo Air Pollution Control District (SLOAPCD). In accordance with CEQA Guidelines Section 15064.7 and MBUAPCD recommendations, Monterey County has elected to use the SLOAPCD GHG threshold as a project-specific threshold based on use of the substantial evidence gathered by SLOAPCD in their development and approval of GHG thresholds.

In determining whether the project met the thresholds established by SLOAPCD and MBUAPCD, the California Emissions Estimator Model (CalEEMod) was utilized in determining the project’s GHG emissions. Air modelling efforts projected emissions from each component of the BMP and construction related emissions. Based on the results from modeling, it was determined that the project would have a less than significant cumulative impact on climate change.

The impacts of climate change on the BMP Update takes into consideration changes in temperature, precipitation, sea-level rise, and ecosystem effects. As droughts become more common, water demands for irrigation uses will likely increase.

As noted in Chapter 2 of the BMP Update, the modeling approach assumed the rate of sea level rise and was based on the Intergovernmental Panel on Climate Change’s A2 scenario. Between 2000 and 2050, sea levels in Monterey Bay are expected to rise an average of 14 inches (USGS and ESA-PWA, personal communication).
The Draft EIR adequately addressed climate change and utilized recent studies by the Pacific Council on International Policy and the California Ocean Protection Council on Sea Level Rise. According to a recent summary of potential impacts of global climate change in California (Pacific Council on International Policy, 2010), sea level is expected to rise 14-16 inches above current levels by 2050. Over the longer-term, the State recently adopted a 55-inch value for sea level rise by 2100 to be used when planning construction of new or modified critical infrastructure (Resolution of the California Ocean Protection Council on Sea Level Rise, adopted on March 11, 2011). Higher sea levels are expected to increase beach erosion, expose larger areas to coastal flooding, increase the frequency of bar overtopping (leading to increased salinity in coastal lagoons and sloughs) and worsen near-coastal damage from major storms. In addition, sea water intrusion may be exacerbated by the higher sea levels associated with climate change.

The EIR is at a program level and appropriately evaluated the risk of Climate Change and sea-level rise based upon available information. Adaptive management programs included in the BMP Update and PVWMA monitoring programs are designed to both monitor basin levels and measure impacts due to changes in water use. Determining future increases in water use and water demand due to climate change or changes to water demand due to other factors, such as a shift to higher water-demand crops, cannot be ascertained at this time. CEQA requires an agency to engage in forecasting “to the extent that an activity could reasonably be expected under the circumstances. An agency cannot be expected to predict the future course of governmental regulation or exactly what information scientific advances may ultimately reveal” (CEQA Guidelines Section 15144, Office of Planning Research commentary, citing the California Supreme Court decision in Laurel Heights Improvement Association v. Regents of the University of California [1988] 47 Cal. 3d 376).

Monitoring changes in water use and demand is, however, a planned program. This is proposed for evaluating whether water demand change is due to climate change or other factors that may increase potential for sea-level rise and groundwater impacts. The Agency has stated that if climate change impacts lead to increased water use and a failure to meet the BMP objectives as defined in Response F2, other projects that were considered as future alternatives will be reconsidered consistent with the Adaptive Management Program. CEQA does not require an agency to evaluate an impact that is “too speculative” provided that the agency identifies the impact, engages in a “thorough investigation” but is “unable to resolve an issue,” and then discloses its conclusion that the impact is too speculative for evaluation (CEQA Guidelines Section 15145, Office of Planning and Research commentary). Additionally, CEQA requires that impacts be evaluated at a level that is “specific enough to permit informed decision making and public participation” with the “production of information sufficient to understand the environmental impacts of the proposed project and to permit a reasonable choice of alternatives so far as environmental aspects are concerned” (CEQA Guidelines Section 15146, Office of Planning and Research commentary).

F-5: The commenter identifies concerns about how the groundwater model reflects the overall water budget for the basin. Specifically, the commenter cites page 3.9-9 of the Draft EIR which states that annual recharge is 30,700 AF/Y. The commenter asserts that if average annual pumping is 54,000 AF/Y, that would suggest a deficit of 23,300 AF/Y. Page 16 of the draft BMP indicates that under baseline conditions, overdraft is 1,400 AF/Y and seawater intrusion is 1,900 AF/Y. The BMP is based on model
output that suggests that 12,000 AF/Y is needed to stop overdraft and seawater intrusion. The commenter suggests that a more clear water budget to better understand what is going on and how these numbers relate to each other would be helpful.

The value of annual recharge (30,700 AF/Y) stated on page 3.9-9 of the Draft EIR only accounts for areal recharge, neglecting streamflow recharge for example. According to PVWMA staff and BMP hydrologic consultants, therefore, the deficit is lower than the 23,300 AF/Y cited by the commenter.

Initial modeling efforts, completed prior to the development of the BMP Update and using different assumptions, were completed to determine basin conditions and to establish an approximate target for the BMP Update and the consideration of project alternatives. The results of this “Base Case” model simulation suggested an offset in the water budget of approximately 12,000 AF/Y for the entire model domain. That offset of 12,000 AF/Y became the target amount that needed to be addressed through conservation and the development of new water supplies to balance the basin in the BMP Update. After selection of the recommended BMP projects, these projects were simulated using a modified version of the Pajaro Valley Hydrologic Model referred to as the Baseline scenario to determine if, as a group, the projects could achieve the dual goals of stopping storage depletion and seawater intrusion for the area and aquifers of interest. The model results indicate that the projects, when implemented and operated as anticipated, were determined to be adequate to solve 90% of seawater intrusion and 100% of the basin overdraft.

As noted in Chapter 2 of the BMP under, the modeling approach and assumptions are summarized below:

Hydrologic modeling of the Pajaro Valley groundwater basin was conducted using the PVHM (Hanson et al., in review; HydroMetrics 2012). The model was developed by the USGS and the PVWMA between 2005 and 2010 (Hanson et al. 2008; Hanson et al. 2010) and simulates the natural and human components of the hydrologic system and related climatic factors in the Pajaro Valley (Hanson et al., in review). Groundwater flows are simulated using the widely accepted MODFLOW2005 model (Harbaugh 2005). The model incorporates the most recent version of the USGS’s Farm Process (Schmid and Hanson 2009), which allows detailed and realistic simulations of agricultural pumping, based on simulated crop water demand, as well as “non-routed deliveries,” which are used to simulate water delivered from PVWMA water supply facilities.

A baseline scenario was simulated to provide a benchmark to which future scenarios would be compared. The baseline scenario simulated the effects of the previous 34 years of climate and 2011 delivered water volumes into the future. Assumptions in the baseline simulation included 34 years of hydrology, which were based on weather conditions between 1976 and 2009, inclusive, crop distribution, municipal pumping and irrigation efficiency at 2009 levels and deliveries through the CDS at 2011 levels. Reasonably foreseeable sea level rise was incorporated into the PVHM baseline scenario at all offshore model boundaries.

F-6: The commenter questions the language on page 3-9-58 of the Draft EIR, which states the project will raise groundwater levels. The commenter correctly points out a misstatement in the EIR. The BMP will reduce overdraft by 90% by 2025 and is not intended to bring about basin recovery. While groundwater
levels will increase *locally* in the project areas, in general basin-wide groundwater elevations will not increase. The EIR will be corrected on page 3-9.58 to clarify this statement.

**F-7:** The commenter is correct; page 3-9.24 will be corrected to reflect the Pajaro Storm Drain Maintenance District operates the pumps at Harkins Slough. (PVWMA, January 15, 2014)

The text has been revised as requested. Please refer to Section 5.0, Changes to the Draft EIR for the revised text.

**F-8:** Project-level CEQA analysis on program actions will be conducted at a later dates at such a time that subsequent discretionary actions are taken. (See CEQA Guidelines Section 15168, providing a definition of “Program EIR”.) See Master Response #1 also.
December 9, 2013

Mary Bannister, General Manager
Pajaro Valley Water Management Agency
36 Brennan Street
Watsonville, California 95076
EIR@pvwater.org

Subject: Pajaro Valley Water Management Agency – Basin Management Plan Update, October 2013 - DEIR

Ms. Bannister:

Thank you for providing the Monterey Bay Unified Air Pollution Control District (Air District) the opportunity to comment on the above-referenced document. The Air District has reviewed the document and has no comments.

Please let me know if you have questions, I can be reached at (831) 647-9418 ext. 227 or aclymo@mbuapcd.org.

Sincerely,

Amy Clymo
Supervising Air Quality Planner

cc: David Craft, Engineer/Planner
LETTER G:  MONTEREY BAY UNIFIED AIR POLLUTION CONTROL DISTRICT (MBUAPCD)

G-1: The Air District has no comments. No further response is required.
Dear Ms. Bannister:

This office serves as General Counsel for College Lake Reclamation District No. 2049 ("CLRD") and submits these comments on the Pajaro Valley Water Management Agency’s ("PVWMA") above referenced Draft Environmental Impact Report ("DEIR") on its behalf. CLRD is a duly organized reclamation district, which was formed in 1920 and which continues to operate to this date as a State Agency under Water Code § 50000 et. seq. See Kirk v. Flournoy (1974) 36 Cal. App. 3d 553, 557 (a district created by state law is an agency of the state); see also Rodeo Sanitary Dist. v. Board of Supervisors (1999) 71 Cal. App. 4th 1443, 1449-1450 (county’s attempt to use general police power to overrule a state “created and authorized” district’s “traditional legal authority” void as in conflict with state law). The District’s purpose is for reclamation of 320 acres of prime agricultural resource land at College Lake north of Watsonville. The purpose of the annual drainage of College Lake is to enable agricultural use of these lands, which comprise some of the finest farmland in the world. CLRD has been the only agency continually engaged in these operations at College Lake for the past 93 years.

As you are aware, CLRD and representatives from the PVWMA have been in preliminary discussions regarding the potential development of a Memorandum of Understanding ("MOU") to address some of CLRD’s concerns with the portion of the 2012 Basin Management Plan Update ("BMP Project") known as the “College Lake with Inland Pipeline to CDS” component (alternatively referred to as “Component D” in the DEIR, hereinafter the “College Lake Component”).¹ Many of these comments and concerns can be
addressed by successful implementation of an MOU between PVWMA and CLRD, proposed language from which is included in these comments. Nonetheless, an MOU has not been finalized and thus CLRD submits the following comments on the current BMP Project DEIR.

A. Background on CLRD’s Legal Authority over College Lake

CLRD was formed in 1920 and has been the only party managing College Lake since that time. CLRD has the express legal authority under State law to pump the water out of College Lake to reclaim the land for agricultural production. This unique legal authority makes it advantageous for PVWMA to partner with CLRD to obtain the lawfully pumped water that would benefit the aquifer – and hence the entire community. As an “ongoing project” predating the California Environmental Quality Act (Public Resources Code § 21000 et seq. “CEQA”), CLRD’s ongoing improvements and operations are exempt from CEQA Guideline § 15261. See Nacimiento Regional Water Management Advisory Committee v. Monterey County Water Resources Agency (1993) 15 Cal. App. 4th 200.

CLRD can report that its 93 years of management has resulted a win-win-win situation at College Lake:

1. We have a win for agriculture because CLRD reclams a sizeable amount of prime farmland and raises 2 or 3 crops each growing season.
2. We have a win for the fish because there is now a thriving steelhead population using College Lake, its canals and the surrounding waterways (not known to be the case in 1920).
3. We have a win for the waterfowl because College Lake is one of the most heavily used prime waterfowl habitats in the State.

The good news is that we can add one more win to this list – a win for the PVWMA and the aquifer and community it serves. CLRD regularly pumps enough water out of College Lake to provide the amount of water the College Lake Component seeks to pipe down to the Coastal Distribution System.

1 It is CLRD’s understanding that the other “component” of the BMP Project involving College Lake (known as “Expanded College Lake, Pinto Lake, Corralitos Creek, Watsonville Slough, and Aquifer Storage and Recovery”) is not being recommended for approval at this time as part of the DEIR, as it has not been analyzed in the current DEIR and is labeled as a project that may be “potentially added in the future.” (DEIR S-2). If this component is part of the DEIR which is being approved, CLRD directs those comments herein which may be relevant to that component as well. Moreover, if this component is part of the DEIR which is being approved, CLRD hereby requests additional time to address that component, in particular in light of the significant agricultural impacts that could occur as a result of connecting Pinto Lake to College Lake.
Under State Reclamation District Law (Water Code Section 50000, et seq.), “reclamation works” are defined by Water Code § 50013 as:

“such public works and equipment as are necessary for the unwatering, watering, or irrigation of district lands and other district operations.” (emphasis added)

The general powers of a reclamation district under Water Code § 50900 include “do[ing] all things necessary or convenient for accomplishing the purposes for which it was formed.” Specifically, under Water Code § 50932, a reclamation district is empowered to:

“construct, maintain and operate such drains, canals, sluices, bulkheads, water gates, levees, embankments, pumping plants, dams, diversion works, or irrigation works, and all things reasonably necessary or convenient for accomplishing the purposes of the district.”

It is the position of CLRD that the operation and maintenance of its reclamation works (the very purpose of its existence) is a prevailing public interest because inter alia: (1) it is a long vested right; (2) it is a competing and prevailing governmental purpose when it is unwatering land for agricultural purposes2 - particularly where, as here, CLRD has operated and maintained its Reclamation works in a manner which has resulted in a thriving steelhead population; and (3) CLRD’s maintenance and operation of its reclamation works does not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any stream or lake.

B. CLRD’s Status as a Responsible and Trustee Agency

The DEIR fails to properly designate CLRD as a Responsible or Trustee Agency. Likewise, PVWMA has not treated CLRD as such in regards to consultation and other requirements under CEQA. Thus, as a preliminary matter, CLRD formally reiterates its objections raised in its July 26, 2013 letter (copy attached) to PVWMA failing to accord CLRD its legal status as a Responsible Agency and/or a Trustee Agency under CEQA.

There is no requirement that CLRD have permit authority over the BMP Project as a whole to qualify as a Responsible Agency. See Save Our Carmel River v. Monterey Peninsula Water Management Dist. (2006) 141 Cal. App. 4th 677, 701 (emphasis added):

The responsible agency typically has permitting authority or discretionary approval power over some aspect of the project for which a lead agency is primarily responsible. [CITATIONS]. And the “responsible agency may refuse to approve a project in order to

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avoid direct or indirect environmental effects of that part of the project which the responsible agency would be called on to carry out or approve.” (Guidelines, § 15042.)

PVWMA would need CLRD’s prior approval to legally use or interfere with CLRD’s improvements or operations (including any unwatering for agriculture – Water Code §§ 50013, 50932). Without CLRD’s approval, PVWMA would have to condemn all improvements and rights of CLRD. Under these circumstances, CLRD clearly qualifies as a responsible agency.

CLRD is likewise a “Trustee Agency,” which is defined as “a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California.” CEQA Guideline § 15386. CLRD is a State Agency under Water Code § 50000 et seq., whose jurisdiction includes but is not limited to, agricultural and biological resources at College Lake.

Under CEQA, Lead Agencies such as the PVWMA are required to consult with Responsible and Trustee Agencies and “[i]mmediately after deciding that an environmental impact report is required for a project, the lead agency shall send to…each responsible and trustee agency a notice of preparation stating that an environmental impact report will be prepared.” CEQA Guideline § 15082(a). PVWMA failed to timely consult with or provide a Notice of Preparation to CLRD, in violation of CEQA. Furthermore, and most critically, PVWMA failed to consult with CRLD on the scope and substance of the EIR (CEQA Guidelines §§ 15802, 15086(a)(1)) and failed to provide timely opportunity for CLRD to comment on issues relevant to its jurisdiction so that those issues and comments could be incorporated into the DEIR. See Pub. Res. Code § 21080.4(a) (emphasis added):

[Once duly noticed and consulted,] each responsible agency…and [trustee agency] shall specify to the lead agency the scope and content of the environmental information that is germane to the statutory responsibilities of that responsible agency…or [trustee agency] in connection with the proposed project and which, pursuant to the requirements of this division, shall be included in the environmental impact report.

In Schellinger Brothers v. City of Sebastopol (2009) 179 Cal. App. 4th 1245, 1247, the Court of Appeal reaffirmed the requirement for a lead agency to consult with responsible agencies during the environmental review process, stating that:

During the process of preparing the EIR, the local agency drafting the EIR is directed to “consult with, and obtain comments from, . . any public agency that has jurisdiction by law with respect to the project.” (§ 21153, subd. (a)).

Thus, in order to comply with CEQA and to enable CLRD to address the issues relevant to its jurisdiction (which include but are not limited to agricultural and biological resources), PVWMA should address the significant issues raised, project alternatives identified, and mitigation measures proposed by CLRD in this comment letter and thereafter proceed as required by law.
C. Questions Regarding PVWMA’s DEIR Regarding the College Lake Component

CLRD submits the following questions, comments and proposed alternatives and mitigation measures on the DEIR:

1. Will the project description be revised to require that the BMP Project utilize CLRD’s public reclamation improvements and ongoing operations for the College Lake Component? If not, will the resulting conflict with CLRD’s reclamation of agricultural resources, property rights and those of the agricultural land owners within CLRD’s jurisdiction be identified in the EIR as a significant environmental impact and analyzed as such? If not, why not?

2. If the conflict described in item #1 above remains, and is not reduced to a “less-than-significant” environmental impact, will the DEIR be revised to provide such information to the public, and, if so revised, will the DEIR be recirculated and a new 30 day comment period provided? If not, why not?

3. The DEIR identifies only “conversion” of agricultural land to non-agricultural land as a significant impact. (DEIR at 3.2-7). Why is nothing less than permanent conversion of agricultural land considered a significant impact? Why aren’t impacts such as reduced number or crop cycles or an increased period or area of inundation of College Lake even discussed in the DEIR, not to mention considered a significant impact? How can this significance criteria or the failure to address such other potential impacts on agricultural resources or production be consistent with PVWMA’s own enabling act in which the California Legislature established that “[a]gricultural uses shall have priority over other uses under this act within the constraints of state law.” (Pajaro Valley Water Management Agency Act of 1984 § 102(d))?

4. Why are the agricultural resources impacts (those which are identified as “significant” and those not discussed at all) stated to be “unavoidable” when there is the project alternative and/or mitigation measure of continued reclamation and use of agricultural resources utilizing CLRD’s ongoing improvements and operations for the College Lake Component?

5. Why are biological habitat resource impacts related to steelhead migration and waterfowl habitat not analyzed in terms of a project alternative and/or mitigation measure of acquiring water from the continued reclamation and use of agricultural resources utilizing CLRD’s ongoing improvements and operations for the College Lake Component? The DEIR acknowledges that “[e]nvironmental habitat is a major issue of concern for implementation of the [College Lake Component of the] project.” For instance:

   a. As to steelhead, the BMP Update states that “Casserly Creek and two of its tributaries, Banks Creek and Gaffney Creek, are known to support the state and
federally listed south-central California coast steelhead (*Onchorhynchus mykiss*). … A steelhead smolt outmigration study was conducted in the spring of 2011 at the outlet of College Lake (Podlech 2011). While the data for this study were not conclusive, due to the small sample size of collected fish, scale analysis of smolts demonstrated that these fish were rearing in the lake and exhibited substantial recent growth rates. Therefore, **College Lake appears to function as a productive rearing habitat for juvenile steelhead** prior to their outmigration to the ocean and **needs to be managed as such.** Also, as a downstream refuge from high winter flows in the small upper watershed creeks, College Lake contributes to an increase in juvenile winter survival and may aid in overall salmonid population stability and persistence.”

BMP Update at 58-60 (emphasis added).

*Please note that the foregoing major beneficial support of steelhead habitat is the result of the 93 year management of College Lake by CLRD.* The same is true of the beneficial impacts described in the DEIR as follows:

“the existing College Lake dam is typically fully inundated during the winter adult steelhead upmigration period (approximately January through March) under current conditions; therefore, it does not present an adult migration impediment at this time. However, depending on existing hydrology, the proposed raising of the dam by 2.3 feet may delay its overtopping. This could impede adult upmigration…”

As to waterfowl, the BMP Update DEIR acknowledges the significance of the habitat College Lake provides for waterfowl:

“The lake, when filled with rainfall runoff in winter and during the spring drainage period, supports a significant variety of waterbirds, such as ducks, herons, gulls and terns. The lake is especially noted for waterfowl abundance and diversity during the winter and migrant shorebirds during spring drawdown. Based on available, cumulative data, 213 bird species have been documented in the College Lake area (Ebird, 2013).”

DEIR at 3.4-53

*Again, please note that the foregoing major beneficial support of waterfowl habitat is the result of the 93 year management of College Lake by CLRD.* Nonetheless, the DEIR fails to address that the College Lake Component as it is currently envisioned would negatively impact this habitat. The impacts to waterfowl are analogous to those of agriculture: if the lake remains flooded too long to allow production of waterfowl food, or too deep to allow adequate access,
it could substantially impact waterfowl use and benefits from the system. Nutrients and food sources are very important to waterfowl for the expenditures of migration, nesting and brood rearing. Because the lake is so significant to waterfowl overall, this represents a potentially significant impact. The DEIR currently fails to provide any alternatives or mitigation for such potentially significant impacts. However, the alternative project proposed by CLRD, as described below, will address these concerns.

D. CLRD’s Proposed Project Alternatives and/or Mitigation Measures Regarding PVWMA’s Draft EIR as to the College Lake Component

CLRD requests that the EIR include a project alternative (in the form of a revised Project Description for the College Lake Component) and/or mitigation measures as follows. Had CLRD been accorded its legally required status as a Responsible Agency and/or Trustee Agency, there would have been time for PVWMA and CLRD to better consult and possibly have these project alternatives and/or mitigation measures in the DEIR. The essence of CLRD’s request is that PVWMA implement the College Lake Component of its 2012 BMP Update Project to stop seawater intrusion and basin overdraft by acquiring water from the continued reclamation and use of agricultural resources utilizing CLRD’s ongoing improvements and operations. For the reasons set forth above and other reasons and evidence which CLRD can provide if necessary, this approach is environmentally superior.

1. The DEIR Project Description and/or Mitigation Measures Related to Agricultural Resources should be revised as follows:

The current DEIR provides for no mitigation measures for agricultural resources even though the impact to agricultural resources is described as significant and unavoidable. However, the project description could be revised pursuant to an MOU with CLRD so that the objectives of the College Lake Component can be adequately satisfied without significantly altering CLRD’s current improvements and operations. Pursuant to its statutory mission, CLRD has been reclaiming agricultural land since 1920. Therefore there will be no permanent conversion of agricultural lands required because the BMP Project will no longer be raising the existing weir or “low dam,” nor installing an

3 As a general comment, the impacts to agricultural resources are not well described and heretofore in this BMP Update process have been largely ignored. This precludes informed decision making and public review and fails to satisfy the fundamental requirement that an EIR “demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action…[t]he EIR process protects not only the environment but also informed self-government.” Laurel Heights Improvement Assn. v. Regents of University of California (1988) 47 Cal.3d 376, 392; see also CEQA Guidelines § 15003.
expanded pump station. Additionally, based on statements in the DEIR Agricultural Resources Section for the College Lake Component and PVWMA contracting with CLRD, there will no net permanent conversion of agricultural land, even if filtration facilities are installed in the area.

Furthermore, because the College Lake Component would then be implemented under a contract with CLRD utilizing its current improvements and operations, there would be no increased area of inundation at College Lake (previously estimated at 38 acres) and no reduction in the annual number of crop cycles. Therefore there would be no reduction in agricultural productivity due to implementation of the College Lake Component utilizing current CLRD improvements and operations.

The foregoing revised Project Description and/or proposed mitigation measure is required to comply with one of the objectives of the PVWMA established by the State Legislature that “[a]gricultural uses shall have priority over other uses under this act within the constraints of state law.” Pajaro Valley Water Management Agency Act of 1984 § 102(d). Will CLRD’s proposed revised Project Description and/or mitigation measure be implemented, and if not, why not? Further, if not implemented, will the DEIR be revised to inform the public of the reasons (if any) for designing the BMP Project in a manner which fails to prioritize use of the prime agricultural resources at College Lake?

2. The PVWMA 2013 BMP Update Draft EIR Project Description and/or Mitigation Measures Related to Biological Resources should be revised as follows.

As can easily be seen from the quotes from the DEIR under Section C.5 of this comment letter, if the Project Description is revised so that PVWMA acquires the water it seeks through the utilization (under contact with CLRD) of CLRD’s current improvements and operations, adverse environmental impacts to biological resources such as steelhead and waterfowl will be substantially reduced or eliminated. The DEIR Mitigation Measures Related to Biological Resources can then be revised as to Impacts BIO-2m, 2n, and 2o to read as set forth below. One prime basis for these revisions is that the Project Description for College Lake Component would no longer include construction of a new adjustable weir downstream of the existing low dam which new outlet weir would raise the College Lake outlet elevation by 2.3 feet to 62.5 feet. Instead, this College Lake Component would be implemented by contracting with CLRD to continue to operate its reclamation works, including the “low dam” (as it has for over 93 years) in a manner which has resulted in a thriving habitat for steelhead and waterfowl as well. The Mitigation Measures below describe the long-time operation of the CLRD reclamation works, concurrently enabling provision of 2400 AFY or more to PVWMA in a typical rainfall year.
The mitigation measures for biological resources should therefore read: PVWMA shall contract with CLRD to assure that the CLRD takes all necessary actions to assure that neither the operation, nor the maintenance, of the CLRD Reclamation works shall cause the water level of the canal between the pump plant/station and College Lake to fall to a depth of less than eight inches or a width of less than three (3) feet, unless there was inadequate generation of water into the watershed to maintain such standards. PVWMA recognizes that the CLRD is not obligated to maintain flows above what would occur naturally and CLRD commits to continue its past stewardship efforts (screening, buffering etc.) which have resulted in a healthy steelhead population in College Lake and associated canals as found in a report by an Aquatic Ecologist dated October 2011 prepared for the Resource Conservation District of Santa Cruz County.

Furthermore, PVWMA’s contract with the College Lake Reclamation District shall assure that CLRD: (1) performs its maintenance only between August 15th and November 14th (not to exceed a total of fourteen days per year) and (2) performs repair work on the District’s Reclamation works between June 15th and November 14th in any year, but may perform emergency repair of CLRD’s Reclamation works at any time of year. Anytime equipment must be placed in a CLRD canal, CLRD shall install coffer dams to protect fish in the area.

PVWMA’s contract with CLRD shall require that CLRD determine the date of commencement and rate of pumping and draining of College Lake in the manner it has done for the past 93 years so as to continue to provide habitat for steelhead in a manner which has not adversely affected summer rearing habitat (as found by the Resource Conservation District of Santa Cruz County in a report by its Aquatic Ecologist of October 2011). Unimpeded bypass of the weir for flows shall be provided for adult upstream migration from November 15th through the following March 31st each year and for smolt outmigration from November 15th through the following May 1st of each year whenever the District determines that it is consistent with the District’s purposes, but in no event through less than March 31st. This requirement for “unimpeded bypass” does not obligate the CLRD to assure actual flows if there was inadequate generation of water into the watershed.

The Mitigation Measure for BIO 2p will be revised by replacing the words “Salsipuedes Creek” with “the canal” because the area downstream of the existing CLRD “low dam” is not Salsipuedes Creek, but rather a man-made canal.
Thank you for the opportunity to provide comments on this Project.

Sincerely,
WITTWER & PARKIN, LLP

Jonathan Wittwer
General Counsel
College Lake Reclamation District

cc: Mary Bannister, GM of PVWMA (via email)
PWWMA Board of Directors (via email)
Tony Condotti, General Counsel of PVWMA (via email)
Brian Lockwood, PVWMA Environmental Consultant (via email)
CLRD Board of Directors (via email)
July 26, 2013

VIA U.S. MAIL AND EMAIL

Mary Bannister, General Manager
Pajaro Valley Water Management Agency
30 Brennaa St.
Watsonville, CA 95076
bannister@pvwater.org

Re: Basin Management Plan Update – Responsible and Trustee Agency Status of College Lake Reclamation District under CEQA

Dear Ms. Bannister:

This office represents College Lake Reclamation District No. 2049 ("CLRD"). CLRD has Responsible and Trustee Agency status for the Basin Management Plan Update ("BMP Update") project under the California Environmental Quality Act (Public Resources Code § 21000 et seq. "CEQA"). Although the BMP Update identifies College Lake in several projects, e.g., Sulfur Water projects S-3 and S-4. BMP Update at 58-61), CLRD has not yet been properly designated by the Pajaro Valley Water Management Agency ("PVWMA") as a Responsible or Trustee Agency, nor treated as such in regards to consultation and other requirements under CEQA.

Because College Lake and the agricultural land thereunder qualify as a resource under CLRD’s authority, and that resource is affected by the BMP Update, CLRD is both a Responsible and Trustee Agency. CEQA Guidelines §§ 15381, 15386. Under CEQA, Lead Agencies such as the PVWMA are required to consult with Responsible and Trustee Agencies:

As soon as a lead agency has determined that an initial study will be required for the project, the lead agency shall consult informally with all responsible agencies and all trustee agencies responsible for resources affected by the project to obtain the recommendations of those agencies as to whether an EIR or a negative declaration should be prepared.

CEQA Guideline 15063(g) (emphasis added). See also Pub. Res. Code § 21080.3(a).

Further, “[i]mmediately after deciding that an environmental impact report is required for a project, the lead agency shall send to...each responsible and trustee agency a notice of

preparation stating that an environmental impact report will be prepared.” CEQA Guideline 15082(a). PVWMA has thus far failed to consult with or provide a Notice of Preparation to CLRD, in violation of CEQA. In fact, PVWMA has not even sent the 2012 BMP Update document to CLRD. PVWMA needs to comply with these requirements. This will, at minimum, require taking the additional time which will be needed for PVWMA to “catch-up” with the obligations it had, but has not satisfied, as to CLRD as a Responsible Agency and a Trustee Agency.

CLRD must be afforded the rights of a Responsible and a Trustee agency, including but not limited to, the right to consult with PVWMA on the scope of and substance of the EIR (CEQA Guidelines 15802, 15086(a)(1)) and to advise PVWMA on appropriate mitigation measures (CEQA Guideline § 15024(c)). CLRD has considerable concerns regarding the BMP Update and its compatibility with CLRD’s mission. CLRD requests that it be appropriately afforded the opportunity to engage in the CEQA process and raise these concerns as a Responsible and Trustee Agency.

In particular at this time, PVWMA should consult with CLRD on the scope and substance of the EIR. CEQA Guidelines 15802, 15086(a)(1). CLRD should be afforded an appropriate opportunity to comment on issues relevant to its jurisdiction and PVWMA must incorporate these issues into the EIR. See Pub. Res. Code § 21080.4(a) (emphasis added):

[E]ach responsible agency...and [trustee agency] shall specify to the lead agency the scope and content of the environmental information that is germane to the statutory responsibilities of that responsible agency...or [trustee agency] in connection with the proposed project and which, pursuant to the requirements of this division, shall be included in the environmental impact report.

Thank you for your consideration of this matter. Please do not hesitate to contact the undersigned if you have any questions.

Very truly yours,

Letter H Attachments

Mary Bannister, General Manager, Pajaro Valley Water Management Agency
Re: Basin Management Plan Update – Responsible/Trustee Agency Status of CLRD
July 26, 2013
Page 2

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Mary Bannister, General Manager, Pajaro Valley Water Management Agency
Re: Basin Management Plan Update – Responsible/Trustee Agency Status of CLRD
July 26, 2013
Page 2

preparation stating that an environmental impact report will be prepared.” CEQA Guideline 15082(a). PVWMA has thus far failed to consult with or provide a Notice of Preparation to CLRD, in violation of CEQA. In fact, PVWMA has not even sent the 2012 BMP Update document to CLRD. PVWMA needs to comply with these requirements. This will, at minimum, require taking the additional time which will be needed for PVWMA to “catch-up” with the obligations it had, but has not satisfied, as to CLRD as a Responsible Agency and a Trustee Agency.

CLRD must be afforded the rights of a Responsible and a Trustee agency, including but not limited to, the right to consult with PVWMA on the scope of and substance of the EIR (CEQA Guidelines 15802, 15086(a)(1)) and to advise PVWMA on appropriate mitigation measures (CEQA Guideline § 15024(c)). CLRD has considerable concerns regarding the BMP Update and its compatibility with CLRD’s mission. CLRD requests that it be appropriately afforded the opportunity to engage in the CEQA process and raise these concerns as a Responsible and Trustee Agency.

In particular at this time, PVWMA should consult with CLRD on the scope and substance of the EIR. CEQA Guidelines 15802, 15086(a)(1). CLRD should be afforded an appropriate opportunity to comment on issues relevant to its jurisdiction and PVWMA must incorporate these issues into the EIR. See Pub. Res. Code § 21080.4(a) (emphasis added):

[E]ach responsible agency...and [trustee agency] shall specify to the lead agency the scope and content of the environmental information that is germane to the statutory responsibilities of that responsible agency...or [trustee agency] in connection with the proposed project and which, pursuant to the requirements of this division, shall be included in the environmental impact report.

Thank you for your consideration of this matter. Please do not hesitate to contact the undersigned if you have any questions.

Very truly yours,

WITTWER & PARKIN, LLP

Jonathan Wittwer

cc: Anthony Condotti, PVWMA General Counsel
     Allen Harryman, General Manager, CLRD
LETTER H:  COLLEGE LAKE RECLAMATION DISTRICT

H-1:  This comment notes that it is from legal counsel for the College Lake Reclamation District No. 2049 ("CLRD") and provides background on the purpose of the reclamation district, which was formed in 1920. The District’s stated purpose is for reclamation of 320 acres of prime agricultural resource land at College Lake. The purpose of the annual drainage of College Lake is to enable agricultural use of these lands. Comment noted.

H-2:  Comment noted, PVWMA staff responds that they have met with Mr. Harryman of the CLRD numerous times over the past several years, including an initial meeting on November 11, 2011 at which time there was a discussion of deploying sensors at the College Lake Pump house in addition to planning efforts such as the BMP Update and the RCD College Lake Hydrostudy. Since the fall of 2011, staff has met with and/or spoken with Mr. Harryman at least a half dozen times. PVWMA looks forward to the continued discussions with the CLRD toward development of a Memorandum of Understanding (MOU) as referenced in the letter that explores opportunities for both agencies to work together toward their mutually beneficial goals and objectives.

PVWMA acknowledges that the commenter states that many of their comments and concerns can be addressed by successful implementation of an MOU between PVWMA and CLRD. Although, an MOU has not been finalized, conversations are ongoing per the PVWMA staff.

H-3:  Comment noted. PVWMA agrees that it would be advantageous for CLRD and PVWMA to work together toward mutually beneficial goals and objectives and that to the extent that its activities constitute operation of an existing project in existence prior to November 23, 1972, and are not modified in a way that might have a new, significant effect on the environment, its operations would be considered exempt from CEQA review under CEQA Guidelines §15261. As the specific details of the College Lake project are identified as part of the project-level design and project specific CEQA analysis, the concept of PVWMA contracting with CLRD to operate its existing diversion facilities as a component of the project, and any advantages that result therefrom under CEQA, should be fully explored and considered. (PVWMA, January 15, 2014) Also see response H-13.

H-4:  Comment noted. PVWMA looks forward to the continued discussions with the CLRD toward development of an MOU that explores opportunities for both agencies to work together toward their mutually beneficial goals and objectives. PVWMA agrees that it would be advantageous for CLRD and PVWMA to work together to the extent that its activities constitute operation of an existing project in existence prior to November 23, 1972, and are not modified in a way that might have a new, significant effect on the environment, its operations would be considered exempt from CEQA review under CEQA Guidelines §15261. As the specific details of the College Lake project are identified as part of the project-level design and project specific CEQA analysis, the concept of PVWMA contracting with CLRD to operate its existing diversion facilities as a component of the project, and any advantages that result therefrom under CEQA, should be fully explored and considered.

H-5:  The commenter correctly notes that the Expanded College Lake, Pinto Lake, Corralitos Creek, Watsonville Slough, and Aquifer Storage and Recovery project were not included in the primary suite of BMP Update components selected for evaluation as the “proposed project.” Their environmental impacts
are analyzed, along with other “secondary” programs/projects that may be considered in the future depending upon the success of the proposed project, in Chapter 5 as part of the alternatives analysis required by CEQA Guidelines Section 15126.6, and additional, more detailed environmental review would be required prior to its approval.

H-6: PVWMA acknowledges citations to various provisions of the State Reclamation District Law as specifying certain powers of a reclamation district. The commenter’s statement that unwatering land for agricultural purposes is a “prevailing public purpose” is likewise noted, but does not appear to be addressed by the cases cited in Footnote 2 of the letter, nor does the assertion appear to raise a significant environmental issue.

H-7: Under CEQA Guidelines Section 15381, a responsible agency includes “all public agencies other than the lead agency which have discretionary approval power over the project.” PVWMA is unaware of any discretionary approval power of CLRD over the College Lake component or other aspects of the BMP Update nor, absent an agreement between the two agencies, is CLRD contemplated to carry out any aspect of PVWMA’s proposed projects. Nevertheless, PVWMA agrees to treat CLRD going forward as a responsible agency for purposes of providing notice of and seeking comments on any aspects of PVWMA programs or projects that may impact CLRD operations or facilities, and looks forward to continuing to explore opportunities to work cooperatively with CLRD toward both agencies’ mutually beneficial interests and objective. As noted in the response to H-2, since the fall of 2011, staff has met with and/or spoken with representatives of the CLRD at least a half dozen times. Additionally, PVWMA extended the EIR comment period, in part, to afford CLRD additional time to comment on the issues relevant to its jurisdiction, notwithstanding the fact that CLRD does not appear to qualify as a responsible or trustee agency under CEQA for the reasons specified.

H-8: Comment noted. Please see the response provided for Comment H-7.

H-9: Under CEQA Guidelines (Section 15386), a "Trustee agency" means: “a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California.” Trustee agencies include:

“(a) The California Department of Fish and Game with regard to the fish and wildlife of the state, to designated rare or endangered native plants, and to game refuges, ecological reserves, and other areas administered by the department.

(b) The State Lands Commission with regard to state owned "sovereign" lands such as the beds of navigable waters and state school lands.

(c) The State Department of Parks and Recreation with regard to units of the State Park System.

(d) The University of California with regard to sites within the Natural Land and Water Reserves System.”
CEQA Guidelines (Section 15383) further define “state agency” as “a governmental agency in the executive branch of the State Government or an entity which operates under the direction and control of an agency in the executive branch of State Government and is funded primarily by the State Treasury. CLRD does not appear to qualify as a trustee agency under the above definitions. (PVWMA, January 15, 2014)

H-10: PVWMA generally agrees with the statements of law contained in the above paragraph, but disagrees with CLRD’s claims that PVWMA “failed to timely consult with or provide a Notice of Preparation to CLRD, in violation of CEQA”, “failed to consult with CRLD on the scope and substance of the EIR …and failed to provide timely opportunity for CLRD to comment on issues relevant to its jurisdiction so that those issues and comments could be incorporated into the Draft EIR.” In fact, PVWMA extended the EIR comment period, in part, to afford CLRD additional time to comment on the issues relevant to its jurisdiction, notwithstanding the fact that CLRD does not appear to qualify as a responsible or trustee agency under CEQA for the reasons specified above in Response H-2. Also see response to Master Comment # 2 in reference to the adequacy of the public review process under CEQA.

H-11: Comment noted, and PVWMA agrees that it should address significant issues raised, or project alternative or mitigation measure proposed by CLRD, as required by CEQA. As described on page S-4 of the Draft EIR, the Alternatives section of the Draft EIR incorporates, by reference, all previous alternative analyses in past PVWMA BMPs and Local Water Supply Projects EIRs and summarizes the BMP team alternatives analysis process conducted in 2011 to 2012 that considered a wide variety of other projects, programs, and BMP components. For the BMP, project alternatives and summary sheets were developed for 44 projects, that list was then narrowed to the 14 shown in Table S-1 on page S-2 of the Draft EIR. The first seven alternatives are analyzed in detail in Section 3 of the EIR as part of the programmatic analysis in the EIR. The College Lake Project includes construction of a new adjustable weir downstream of the existing low dam. The new outlet weir would raise the College Lake outlet elevation by 2.3 feet and increase the total inundated area by approximately 40 acres. The Draft EIR included Alternative S-3, College Lake with Inland Pipeline to CDS and Alternative S-4, Expanded College Lake, Pinto Lake, Corralitos Creek, Watsonville Slough, and Aquifer Storage and Recovery. The proposed project and alternatives addressing College Lake adequately address, at a program level, the impacts and comparative merits of the alternative in accordance with CEQA. The discussion of proposed project and alternative projects clearly states that the seven secondary components may be pursued in the future if the selected portfolio does not meet the planning-level expectations with respect to supply yield or demand offset, using an adaptive management method of project implementation; however, it would require applicable CEQA compliance prior to future discretionary actions. The Draft and Final EIR provide a comprehensive evaluation of the project’s and the alternatives’ environmental impacts in compliance with CEQA and the State CEQA Guidelines and in accordance with professionally accepted methodology for the evaluation of environmental resources.

PVWMA agrees that it would be advantageous for CLRD and PVWMA to work together to the extent that its existing diversion facilities and activities constitute operation of an existing project in existence prior to November 23, 1972, and are not modified in a way that might have a new, significant effect on the environment. As the specific details of the College Lake project are identified as part of the project-level design and project specific CEQA analysis, the concept of PVWMA contracting with CLRD to
operate its existing diversion facilities as a component of the project, and any advantages that result therefrom under CEQA, should be fully explored and considered. (PVWMA, January 15, 2014)

**H-12:** The project description will not be revised at this time. PVWMA agrees that it would be advantageous for CLRD and PVWMA to work together to the extent that its existing diversion facilities and activities constitute operation of an existing project in existence prior to November 23, 1972, and are not modified in a way that might have a new, significant effect on the environment. As the specific details of the College Lake project are identified as part of the project-level design and project specific CEQA analysis, the concept of PVWMA contracting with CLRD to operate its existing diversion facilities as a component of the project, and any advantages that result therefrom under CEQA, should be fully explored and considered.

As defined in the EIR and in accordance with CEQA, relevant plans, policies and/or guidelines, and agency standards, an impact to prime agricultural land would be considered significant if the project would convert prime farmland, unique farmland, or farmland of statewide importance (farmland). For the College Lake Project, the increased area of inundation and the increased length of time of inundation may reduce agricultural productivity of the land; however, these do not result in a significant impact to agricultural resources in accordance with PVWMA’s significance criteria for the BMP because this inundation does not preclude use of the land for agricultural operations, and therefore, for the purposes of this EIR would not be considered a conversion of farmland to non-agricultural uses. The precise location, dimensions and use of any private property affected by these projects will depend upon meeting environmental concerns, confronting the many issues raised by agencies whose permits or review are required, seeking financing and partnership arrangements, and securing necessary property interests after paying just compensation for such interests.

Nonetheless, as the specific details of the College Lake project are identified as part of the project-level design and project specific CEQA analysis, the concept of PVWMA contracting with CLRD to operate its existing diversion facilities as a component of the project, and any advantages that result therefrom under CEQA, should be fully explored and considered. (PVWMA, January 15, 2014)

**H-13:** As explained in the response H-12, above, conversion of agricultural lands is already identified as a significant and unavoidable impact in the Draft EIR. The Draft EIR identifies “Impact AG-1” as follows: Development of BMP Update components would result in the permanent conversion of agricultural lands. This represents a significant and unavoidable impact. The Draft EIR discloses that future development of the BMP Update components would result in permanent conversion of approximately 30 to 50 acres of agricultural land, “consisting of Prime and Unique Farmland as mapped by the California Department of Conservation due to construction of the Harkins Slough Facilities Upgrades, Watsonville Slough with Recharge Basins, College Lake with Inland Pipeline to CDS, and Murphy’s Crossing with Recharge Basins components as discussed below.” The Draft EIR reports that the permanent conversion of prime, unique or important state farmlands is considered a significant impact and that no feasible mitigation is available. As such, this represents a significant and unavoidable impact and resolution of the “conflict” described in “item #1” would not constitute significant new information or a change to the project, therefore, would not justify recirculation of the Draft EIR and a new 30 day comment period. The BMP proposed project and the CLRD proposal are similar in nature such that the CLRD proposal is a specific design component of the BMP EIR project and its alternatives. The
programmatic EIR considers the impacts and compares the project and all of its alternatives adequately and in consistent level of detail for a programmatic assessment. The proposed project and alternatives addressing College Lake adequately address, at a program level, the impacts and comparative merits of the alternative in accordance with CEQA. The discussion of proposed project and alternative projects clearly states that the seven secondary components may be pursued in the future if the selected portfolio does not meet the planning-level expectations with respect to supply yield or demand offset, using an adaptive management method of project implementation; however, it would require applicable CEQA compliance prior to future discretionary actions. The Draft and Final EIR provide a comprehensive evaluation of the project’s and the alternatives’ environmental impacts in compliance with CEQA and the State CEQA Guidelines and in accordance with professionally accepted methodology for the evaluation of environmental resources. Thus, a new alternative analysis is not considered necessary under this EIR and the definition of CEQA. Also see Master Response # 4 for a discussion of requirements under CEQA for Draft EIR recirculation.

H-14: Program-level biological impacts related to the College Lake Project are limited to the conceptual project design described in the BMP Update and the existing, available biological information at the time of Draft EIR analysis. The PVWMA concurs that establishment of baseline environmental conditions is essential to develop project alternatives suitable for any future project-level CEQA review. Project-level designs and impact assessments will include a "No-Project" alternative, and may include project configurations not yet developed. The PVWMA will be required to conduct several site-specific studies to fulfill the requirements of the project-level CEQA review for each project-level alternative.

H-15: Please refer to Master Response #1 regarding program-level EIR versus project-level EIR level of detail and CEQA requirements.

H-16: Please refer to Master Response #1 regarding program-level EIR versus project-level EIR level of detail and CEQA requirements.

H-17: The data on steelhead in College Lake captured are limited to those collected in the 2011 steelhead smolt outmigrant study (Podlech, 2011). In the Discussion and Recommendations section of the 2011 report Podlech states: "In all, only four steelhead smolts were captured during the 12-day study period. Such a small sample size does not allow for any meaningful statistical analyses of the results. Therefore, no definitive conclusions can be drawn from this study."

The author goes on to say: "...the results of this study suggest that College Lake appears to function as productive rearing habitat for juvenile steelhead prior to their outmigration to the ocean. However, due to the exceedingly low sample size of steelhead smolt data analyzed for this study, the results should not be interpreted as conclusive evidence of extensive utilization of this seasonal waterbody, and a follow-up investigation should be conducted."

There is no data on the adult steelhead migration into or through College Lake at this time. It is anticipated that the ongoing College Lake Hydrological Study being done by the Resource Conservation District of Santa Cruz County will add to the understanding the complex hydrology and hydraulics in the College Lake basin. In addition, for all the diversion projects in the BMP Update project-level analysis of
fisheries flows and fish habitat impacts will be conducted in consultation with, and permitted by, the responsible state and federal resource agencies.

The Draft EIR considered State CEQA Guidelines (including Appendix G), relevant plans, policies and/or guidelines, and agency standards, and developed criteria for determining when a project impact would be considered significant. As listed in Section 3.4, Draft EIR, an impact would be considered significant if the project would:

“…substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species,…” Section 15065 (Mandatory Findings of Significance);

“…substantially affect sensitive wildlife habitats including but not limited to riparian lands, wetlands, bays, estuaries, marshes, and habitats for endangered, rare, and threatened species as defined by Section 15380…”; Section 15206 (b) (5) (Projects of Statewide, Regional, or Areawide Significance) and Section 15380 (Endangered, Rare or Threatened Species);

: “…a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.” Section 15382 (Significant Effect on the Environment).

Section 3.4 of the Draft EIR concluded that none of the proposed BMP Update project components will have a significant effect on the environmental or substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, or threaten to eliminate a plant or animal community. Program-level biological impacts related to the College Lake Project and BMP Update projects are limited to the conceptual project design described in the BMP Update. Site specific studies will be required for project level CEQA analysis.

**H-18:** Comment noted. The duration of flooding and the timing of drawdown affects both access for agricultural uses and wetland plant recruitment and plant composition, which may affect the feeding locations and behavior of waterfowl and wading birds. The increased inundation level at College Lake, as analyzed in the Draft EIR, will create additional shallow water areas around the perimeter of the lake. The duration and extent of those new shallow wetland/flooded habitats may vary by storm event, rain year, demand by the Coastal Distribution System, or agreements not yet developed by the stakeholders and interested parties.

During lake drawdown, annual seasonal wetland plant species are expected to colonize the exposed mudflats as the water level declines. Areas of gradually deeper water will also be exposed as lake drawdown occurs. As all water will eventually be drained from the lake during the summer months, growing conditions would be present for the annual seasonal wetland plant species to colonize the lake bed where agricultural use is not present.
H-19: Comment noted. Program-level biological impacts related to the College Lake Project are limited to the conceptual project design described in the BMP Update and the existing, available biological information at the time of Draft EIR analysis. In accordance with Section 15125 of the CEQA Guidelines, the text includes a description of the known physical conditions in the vicinity of the BMP Update as they exist at the time the Notice of Preparation was published, including historical and available data covering existing habitat conditions. No formal study of waterfowl use at College Lake has been done, to date. Avian use data available through E-bird, the Santa Cruz Bird Club and knowledgeable local observers provides an extensive species list, but does not reflect the level of detail necessary to analyze potential impacts associated with increases in depths under the conceptual design.

The PVWMA concurs that establishment of baseline environmental conditions is essential to develop project alternatives suitable for any future project-level CEQA review. To this end, the PVWMA has initiated a 2014 College Lake Waterfowl Survey to develop a long term wintering waterfowl and mitigation monitoring program

Mitigation Measure 3.4.2i will be revised to consider the proposed new mitigation language, suggested below, to develop an Adaptive Management Plan for College Lake Waterfowl Management and Multi-species Mitigation. The language suggested by the commenter is generally included as a new mitigation labeled Mitigation Measure 3.4.2i-1:

To mitigate impacts to existing waterfowl or waterfowl habitat at College Lake, an Adaptive Management Plan for waterfowl management and multi-species mitigation will be developed with the consultation of the state and federal resource agencies and College Lake stakeholders. The Adaptive Management Plan for waterfowl management and multi-species mitigation at College Lake will develop multi-year baseline waterfowl population and habitat use data for future project design, environmental permitting and CEQA impact analysis of project-level alternatives. To the extent practical, it will integrate the results of ongoing College Lake hydrology and hydraulic analyses, as well as future consultations with state and federal agencies on fish flows and fish bypass criteria.

Mitigation Measure Mitigation Measure 3.4.2i: Nesting Bird Surveys and Mitigation Measure Mitigation Measure 3.4.2j: Nesting Bird Surveys and subsequent are unchanged.

Refer to the Changes to the Draft EIR Section, 5.0, following this section.

H-20: Please refer to Master Response #1 regarding program-level EIR versus project-level EIR level of detail and CEQA requirements.

H-21: Please refer to Master Response #1 regarding program-level EIR versus project-level EIR level of detail and CEQA requirements.

H-22: The Draft EIR describes impacts to agricultural resources of the College Lake project with as much specificity as can reasonably be provided until project-level design and project specific environmental review can be completed. The BMP Update notes that CLRD’s impoundment on the south side of the lake causes inundation of approximately 234 acres of the basin and helps prevent water from Salsipuedes
Creek from entering the lake, and explains that CLRD’s current operations dewater the lake in the spring to allow farming to take place during summer months. The project description includes construction of a new adjustable weir downstream of the existing low dam that would increase the total storage capacity of the lake from approximately 1,000 AF to 1,700, AF, and would increase the total inundated area from approximately 234 to 272 acres. As defined in the EIR and in accordance with CEQA, relevant plans, policies and/or guidelines, and agency standards, an impact to prime agricultural land would be considered significant if the project would convert prime farmland, unique farmland, or farmland of statewide importance (farmland). For the College Lake Project, the increased area of inundation and the increased length of time of inundation may reduce agricultural productivity of the land; however, these do not result in a significant impact to agricultural resources in accordance with PVWMA’s significance criteria for the BMP because this inundation does not preclude use of the land for agricultural operations, and therefore, for the purposes of this EIR would not be considered a conversion of farmland to non-agricultural uses. Additional details about potential impacts to agricultural resources for example, the precise acreage of inundated area or the actual increase of time during which the lakebed will be inundated and unavailable for agricultural uses, will not be available until a more detailed, project-level analysis is undertaken.

H-23: Please refer to Master Response #1 regarding program-level EIR versus Project-Level EIR level of detail and CEQA requirements.

The project description will not be revised at this time. The College Lake Project includes replacement of the existing weir with a new adjustable weir downstream of the existing low dam. The new outlet weir would raise the College Lake outlet elevation by 2.3 feet, increase the total storage capacity of the lake from approximately 1,000 AF to 1,700 AF capacity, and increase the total inundated area from approximately 234 to 272 acres. As described above, these do not result in a significant impact to agricultural resources in accordance with PVWMA’s significance criteria for the BMP because this inundation does not preclude use of the land for agricultural operations, and therefore, for the purposes of this EIR would not be considered a conversion of farmland to non-agricultural uses. However, those design and operational details will be refined during detailed design and project specific CEQA analysis. Note this is not considered a new alternative, since the proposed approach suggested is a component of an alternative already proposed and analyzed at the appropriate level of detail in the Draft EIR, and design level details are not available at this time and would not impact the level of analysis conducted or the impacts presented in the program-level Draft EIR.

Nonetheless, PVWMA appreciates the CLRD’s thorough review of the College Lake project and the recommendations regarding project design and operation. PVWMA looks forward to continued work with the CLRD to develop a project that meets the project objectives and minimizes project related impacts.

H-24: Comment noted. The program-level project description in the Draft EIR is provided by the PVWMA-approved BMP Update. The Draft EIR serves as the foundation for the future site-specific project-level CEQA documents and may serve as the catalyst for negotiations amongst stakeholder and future agreements that will shape project alternatives. These future documents and agreements will include site-specific studies to fulfill the requirements of the project-level CEQA review. This will include surveys that will ascertain the presence or absence of state listed plants or animals. If such species
are documented to occur and impacts to such species cannot be avoided, PVWMA will confer with CDFW and obtain any necessary permits pursuant to Fish and Game Code 2080 et seq. and with the USFWS and NOAA/National Marine Fisheries Service for consultation and compliance with the Federal Endangered Species Act.

At this time, there is insufficient data on the steelhead population in College Lake and the Casserly Creek Watershed to characterize it a "healthy steelhead population. On the contrary, the October 2011 Podlech report cited in comment "...the results of this study suggest that College Lake appears to function as productive rearing habitat for juvenile steelhead prior to their outmigration to the ocean. However, due to the exceedingly low sample size of steelhead smolt data analyzed for this study, the results should not be interpreted as conclusive evidence of extensive utilization of this seasonal waterbody, and a follow-up investigation should be conducted."

**H-25:** Comment noted. The PVWMA intends to avoid impacts to sensitive habitats and species to the greatest extent feasible. This will be accomplished by conducting site-specific studies in consultation with the state and federal resource agencies responsible for natural resource protection and the College Lake stakeholders. PVWMA will confer with CDFW and obtain any necessary permits pursuant to Fish and Game Code 2080 et seq. and with the USFWS and NOAA/National Marine Fisheries Service for consultation and compliance with the Federal Endangered Species Act.
Pajaro Valley Water Management Agency: Comment on 2012 BMP DEIR (Please reproduce and provide all my attached exhibits to be included with this email as my complete comment, thank you, DD)

From Douglas Deitch, Executive Director, Monterey Bay Conservancy, 501 Mission Street, Santa Cruz, Ca., 95060 ph. 831-476-7662

Dear Sirs,

In 1998, the County of Santa Cruz Planning Department and Environmental Health Service developed and presented it's first study on resources, monitoring, and management of Santa Cruz County water. In this study, water use in the Pajaro Valley was estimated to be 70,000 a/f/yr. 
(Please see Exhibit- 1998 Sentinel Article) The current DEIR quantifies the average "current" yearly use at around 55,000a/f/yr. 

Sustainable aquifer yield, quoting the study, was stated in the 1998 Sentinel article covering this on March 19, 1998 as being around one half of this 70,000 a/f/yr but was later specifically quantified in 2000 at 24,000 a/f/yr by Lyndel Melton of RMC by "Technical Memorandum for Subtasks 6.1 and 6.2" - "6.1, Baseline Conditions and Basin Sustainable Yield Analysis" (Please see Exhibit @ www.pogonip.org/WaterDocs/PVWMATechnicalMemorandum.pdf ).

It is my understanding from PVWMA GM Bannister this morning by phone call that no current basin sustainable yield analysis has been performed or represented in the current BMP and DEIR and no current figure for basin sustainable has been developed and/or is currently extant.

However, in Chapter 2 on page 16 (Please see: Exhibit C), the DEIR claims that, to quote:

"* Overdraft in the Alluvial aquifer, the Upper Aromas aquifer, and the Lower Aromas aquifer (the aquifers of interest) is approximately 1,400 af per year * Seawater intrusion in the Alluvial aquifer, the Upper Aromas aquifer, and the Lower Aromas aquifer (the aquifers of interest) is approximately 1,900 af per year"

I must question the accuracy and validity of these representations given the figures presented over many years and a number of previous BMPs previously developed by PVWMA.

Since there is no "current figure" for basin sustainable yield now presented, if one uses the prior 2002 developed figure of 24,000 a/f/yr with the current average water use of 55,000 a/f/yr, the "overdraft" appears to be 55,000 a/f/yr minus the sustainable yield of 24,000a/f/yr for an "Overdraft" figure of 31,000 a/f/yr, well over 20 times!!! the 1400/a/f/yr claimed in the current DEIR. This represents a yearly overdraft of approximately 130% (well over 2 times prior represented sustainable yield). This is an enormous and incredible discrepancy and difference.
In 1998, the County water study concluded that the 46,000 a/f/yr overdraft then (70k a/f/yr use then in 1998 minus Basin Sustainable Yield then of 24/k/a/f/yr) was causing up to 15,000 a/f/yr of salt water intrusion resource loss yearly then in Pajaro.

Using this same ratio now it would appear that the current apparent 31,000 a/f/yr OVERDRAFT now would be causing a yearly resource loss to salt water intrusion of approximately 10,000 a/f/yr as opposed to the "approximately 1,900 af per year" claimed in the current DEIR.

My question: How does an aquifer which the late Marc Reisner, author of Cadillac Desert, speaking here in Pajaro in 1998, claimed had the "worst salt water intrusion problem in the World" then in 1998, losing up to 15,000 a/f/yr of resource to salt water intrusion in 1998 ... magically and all of a sudden, 15 years later in 2013, only have a salt water intrusion resource loss around one tenth the 15,000 a/f/yr loss in 1998 of "Seawater intrusion in the Alluvial aquifer, the Upper Aromas aquifer, and the Lower Aromas aquifer (the aquifers of interest) is approximately 1,900 af per year"?

Also, please see the 1993 BMP (@www.pogonip.org/WaterDocs/EnvironmentalImpact.pdf) and the discussion on "Demand Management Only Alternative" in 1993 where it is stated that retirement of "6500 acres of coastal area land from irrigated agriculture could allow long-term sustainable pumping of 50,000a/f/yr", still 5,000 a/f/yr LESS than the current average use EVEN AFTER FALLOWING AROUND 25% OF PAJARO'S IRRIGATED FARMLANDS!....

How can the results and claims in the prior BMPs jive with the current claims and projections under the current DEIR and BMP? Seems impossible.

Finally, since 1998 I have been requesting permission to present my demand management only solution to the PVWMA board and agency, most recently in the Ad Hoc Committee Process over the last two years, but have consistently been ignored, except by RT Hansen, the UGSG hydrologist who helped develop the current BMP. Please see: www.pogonip.org/WaterDocs/98USGSTechnicalMemorandum.pdf. I am still happy and available to present this to you.

Has the DEIR determined and analyzed what would now be required in respect to fallowing irrigated current farmlands now, maybe as a "no project" analysis, to bring water use in Pajaro down to what is finally determined and then represented, hopefully in the DEIR, as being within the local sustainable yield of the basin in concert with other available and sustainable water supplies in the PVWMA, and can this analysis please also be performed to give a complete picture of all available alternatives?

Respectfully,
Douglas Deitch
ED/MBC
TECHNICAL MEMORANDUM
May 1, 1968

From: R. T. Hansen
U.S. Geological Survey, Water Resources Division, California District

Letter I Attachments
I Attachments

Final Program
Environmental Impact Report
Basin Management Plan
State Clearing House No.: 9302-3035

VOLUME 1: Revised Draft EIR

Pajaro Valley Water Management Agency

Letter I Attachments
executing the BMP. The No Project Alternative is defined as no remedial action. That is to say, no plans, policies, programs, or projects would be undertaken by the PVWMA or any other body or individual in the Basin. Ground water would continue to be the source of water for agricultural irrigation, industrial and commercial use, and domestic residential use. Ground water use would increase to meet higher future water demand. The Basin's overdraft condition would worsen Sea water intrusion would continue to advance under the coastal lands at the current rate of 10,000 acre-feet per year or higher. Irrigation with ground water would continue along the coast area until the salt content in the soils built up to the point where agricultural crops could not grow. Domestic wells along the coast would also become unusable as the sodium content increased. No substitute water supplies would become available other than purchasing bottled water.

1.2.4 Demand Management Only Alternative

Section 10.2.4, Demand Management Only Alternative, of the BMP contains a more detailed discussion. This alternative would use only demand management measures to achieve the Agency's water management objectives: to balance water use and supply in the Basin and progressively decrease seawater intrusion. The Basin would be brought into balance through mandatory basin-wide pumping controls only for residential, agricultural, and industrial users. Ground water modeling has indicated that it would be necessary to reduce ground water use by 60 percent from current levels. All users in the Basin would receive only 40 percent of their current needs by the year 2040. Since municipal and industrial uses comprise 23 percent of current use, the major reduction would fall on agricultural users. In effect, this would reduce agricultural operations by 40 to 60 percent and halt or reduce current levels of municipal and industrial development (refer to the following socioeconomic discussion). This Alternative represents the most probable scenario if the State Water Resources Control Board were to intervene. State intervention would occur as a result of the PVWMA's failure to implement a BMP, which is in essence what would occur under this Alternative. The State by statutory adjudication would institute someone to regulate and oversee the appropriation of water in the Basin, resulting in stringent pumping controls.

There are however, other ways the Demand Management Alternative could be formulated which would involve the acquisition of land or water rights to meet overdraft reduction goals. The BMP considered a demand management element which involved the acquisition of land to meet overdraft reduction goals. The retirement of 6,500 acres of coastal area land from irrigated agriculture could allow long-term sustainable pumping of 90,000 A.F.F.Y. This water could be shared by the remaining Basin users. Although cutbacks in water use would not be as severe as under pumping controls, it was estimated that agricultural productivity would be reduced by at least 25 percent.

It should be noted that either approach to the Demand Management Alternative would conflict with one of the primary BMP alternatives formulation criteria; provide for needs of all Basin water users. For this reason, as well as other economic and environmental reasons, demand management alternatives were not pursued further in the BMP. However, the EIR evaluates a Demand Management Alternative to meet the requirements of CEQA; analyzing a full range of alternatives, even if an alternative does not meet project objectives.

1.3 IMPACTS AND MITIGATION MEASURES

Impacts and mitigation measures of the BMP Alternatives, the No Project Alternative, and the Demand Management Only Alternative are summarized in Table 1-1 below and in more detail in Table 1-2 at the end of this section.

1.3.1 BMP Alternatives

In summary, most of the BMP's Alternatives impacts can be reduced to less than significant levels except for one-time localized losses of Important Farmland, and, in some cases, the potential for local losses of biological resources. BMP Alternatives would balance water supply with demand and reduce the annual rate of seawater intrusion by 90 percent. The annual equivalent cost of the Preferred Alternative would be $3.8 million. The annual equivalent cost of the other BMP Alternatives range from $4.1 million to $7.0 million.

In contrast the No Project Alternative would not balance supply and demand, would not halt seawater intrusion, could reduce the Basin's productive agricultural acreage by 3,000-6,000 acres (approximately 10-20 percent of the Basin's agricultural land), and would be a significant soils and land use impact. This could gradually reduce the Basin's economy by 10-20 percent of 1990 levels by year 2040, including the loss of 1,200-2,400 jobs, and at full impact it could cost the Basin $60.5-$127 million annually in lost agricultural revenues.
an immediate 50% reduction in water to the agricultural sector, the annual cost of such a reduction would be $504 million annually in lost economic production, including the loss of 6,000 jobs. This stands in contrast to the $3.8 million annual equivalent cost of the BMP. The cumulative cost calculated on a net present value basis at a real interest rate of 5% would be about $9 billion over the planning period. Although this Alternative would not cause a loss of Prime Farmland, it would eliminate the possibility of keeping half the acreage of the Basin in agricultural production. This would not be a significant soils impact, but it would be inconsistent with State and local land use plans and policies to support and maintain agriculture. This alternative would also be growth reducing, due to the 50% shrinkage of the Basin’s economy.

5.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The comparison developed in section 5.4 indicates that the Demand Management Only Alternative is the environmentally superior alternative. Of the BMP alternatives, it would appear that the significant unavoidable biological impacts divide the six alternatives into two groups, those that have significant unavoidable biological impacts — Alternatives 8, 8A, and 2 — and those that do not have them — Alternatives 5, 10, and 11. Assuming that the summary table accurately reflects the impacts of each element and alternative, then the latter set of BMP alternatives would be environmentally superior to the former set. The magnitude of the difference separating the two groups remains difficult to assess, but appears not to be large. Although significant unavoidable biological impacts may be associated with College Lake, the losses, regrettable as they may be, would be locally limited and not part of an on-going, expanding, environmentally devastating, ecosystem-wide operation.

5.6 NEW ELEMENTS

Since the preliminary screening of BMP alternatives was completed, new elements have been suggested for consideration and on-going suggestions are in the future. The requirements of a planning process and the imperative to make a decision by a given point in time inevitably result in incomplete consideration of some possibilities. However, the BMP planning process is designed to make the chances of missing an important option very small, and to accommodate subsequent suggestions as they arise. The method for accomplishing this is to consider new suggestions in relationship to the past analysis of elements. If the new suggestion is similar to an earlier element and does not contain any fundamentally new advantages, then it is considered a variation on the theme of an earlier analysis and no further review is conducted. However, if a new suggestion is
Introduction

The Pajaro Valley Water Management Agency (PVWMA) is in the process of refining and analyzing the potential alternative water supply scenarios to alleviate the long-standing groundwater overdraft and seawater intrusion problems in the Pajaro Valley. As part of this process, it is critical to have a clear understanding and knowledge of what the magnitude of the overdraft and seawater intrusion rates are for the present state of the groundwater basin. Additionally, it is important to understand and define the sustainable yield of the Basin, as the future water supply alternative will depend on the sustainable yield from the local groundwater basin.

As documented in numerous groundwater studies conducted over the past several years, the Pajaro Valley groundwater basin is in an overdraft condition. In addition, the rate of seawater intrusion to the groundwater basin has been increasing over the same period. In general, a combination of both overdraft condition and seawater intrusion has limited the source of local fresh water supply to sustain the long-term agricultural and urban economy of the Valley.

The Pajaro Valley Integrated Ground and Surface Water Model (PVIGSM) has been developed to assist in:

- Gaining knowledge on the historical conditions of the groundwater basin,
- Evaluate the present state of the groundwater basin,
- Estimate the sustainable yield of the basin, and
- Evaluate the impact of potential alternative water supply scenarios on the integrated surface water and groundwater system.

In order to estimate the sustainable yield of the basin, the present conditions of the groundwater basin must be evaluated and quantified. This present condition is called the "Baseline Condition".

The purpose of this memorandum is to present:
1. The assumptions and results from the Baseline Condition analysis; and
2. The definition of the basin sustainable yield, and document the sustainable yield analysis procedure, assumptions, and results for the groundwater basin.

Baseline Conditions

The Baseline Condition is different than the historic condition. The historic condition, as utilized in the model calibration process and summarized in Technical Memorandum No. 3, PVIGSM Recalibration Process and Results, is a summary of actual conditions that have resulted from changes in land and crop use and historic hydrologic conditions. The Baseline Condition defines the state of the groundwater basin based on the current level of land and water use during a set of hydrologic conditions that include normal, above normal, and below normal rainfall conditions.

This section describes the assumptions and results for the state of the basin under the Baseline Conditions.

Hydrologic Conditions

In order to define the present state of the basin, a long-term hydrologic period that contains a sequence of various rainfall conditions is required. This will provide a good basis to evaluate the state of the basin during most critical drought conditions, when water supplies are stressed to the limit, as well as wet conditions, when water supplies are more available and may operate under less stressful conditions.

The hydrologic period used during model calibration was 1964-97. This hydrologic period contains a reasonable distribution of normal, above normal, and below normal conditions. In order to allow enough time for the simulation model to adjust to changes in the water supply scenarios, the 1964-97 monthly hydrologic cycle is repeated to develop a sequence of 68 year hydrology for baseline and alternative scenarios. Figure 1 shows the annual rainfall patterns during the 68-year hydrologic sequence. A less preferable alternative to this 68-year hydrologic sequence is to develop a synthetic hydrologic sequence, which would be statistically representative of the climatic condition of the area. However, since there are sufficient historical records available to develop a long-term hydrologic sequence, historical data are used in the model.

Although there are no official year type classifications for the Central Coast hydrologic basins, the following year types have been defined for the purposes of this study:
The long-term average annual rate of seawater intrusion is estimated as 10 TAF/yr.

**Groundwater Levels and Seawater Intrusion**

The baseline condition simulations show that during the 68 years of hydrologic simulation, the average groundwater levels in the basin remain fairly steady. Figure 9 shows the average and minimum groundwater levels in the PVWMA area. Figure 9 shows that an initial adjustment in regional average groundwater levels occurs during the first year of simulation. The remaining period has reasonably steady groundwater levels, fluctuating due to the hydrologic condition. Figure 9 also shows that the minimum groundwater levels in the PVWMA area occur at approximately 5 to 10 feet below mean sea level. This condition carries a constant intrusion of seawater into the groundwater basin.

Figures 10(a-d) show contour maps of groundwater levels after 68 years of simulation, for each aquifer layer. The contour range shows the groundwater levels under the Baseline Conditions, in layers 1, 2, and 3 in the Valley floor area are generally at or below sea level. In addition, a cone of depression would persist in the Pajaro River mouth and Beach Road area. The Cornelia and foothill area would also experience a cone of depression, especially in the Lower Aquifera formation.

The long-term average annual subsurface flows between the subregions are shown in Figure 11. Although the magnitude of flows is somewhat different from the historical calibration, the figure indicates no major change in the direction of subsurface flows between the subregions in the Valley.

As indicated earlier, the long-term average rate of seawater intrusion is estimated to be 10 TAF/yr under the Baseline Conditions. This rate, of course, not constant over time. The annual fluctuations during the historical period and Baseline Conditions are shown in Figure 12(a). Note that the rate of seawater intrusion has been increasing over the historical period. It is noteworthy that the rate of seawater intrusion is not the same in the different geologic units. Figures 12(a) and (b) also show the annual fluctuation of seawater intrusion by each layer. Based on Figure 12(b), if the current conditions, as assumed under the Baseline Conditions, continue for the next 68 years, approximately an additional 680,000 AF of fresh groundwater will be lost due to seawater intrusion. This is in addition to the 220,000 AF already lost over the past 34 years (1964-97).

Figure 13 shows the long-term average annual rate of seawater intrusion in each of the model coastal subbasins. Note that the subsurface flux to the Monterey Bay still occurs in the Purisima formation in the San Andreas subbasin. However, the rate is fairly insignificant.

**Basin Sustainable Yield Analysis**

This section presents results of the analysis of the basin sustainable yield. Basin sustainable yield is defined as the long-term amount of groundwater extraction from the aquifer system, without causing an adverse impact on the quantity and/or quality of the groundwater basin.

In an integrated groundwater and surface water system, the sustainable yield of the basin is the amount of withdrawal from the system without causing adverse impact on the groundwater and/or surface water system. In this case, the following points should be considered:

- The groundwater and surface water system act as an integrated system, such that excessive pumping and/or surface water diversion would impact the entire hydrologic system in the basin.
- Groundwater generally pumped from wells adjacent to the river system may withdraw water recharged from the stream system. As such, the lowering of groundwater levels adjacent to the stream system would reduce additional recharge to the stream, causing smaller surface water supplies available for downstream beneficial uses.
- Excessive surface water diversions that take place upstream would decrease the available surface water supplies for downstream beneficial use.
- In alluvial valleys, such as the Figure River basin, seawater intrusion generally has a gradual interface. However, once intruded, the aquifer is considered unusable, and recovery of seawater intruded areas is considered a nearly impossible task.

The sustainable yield of the basin is the yield that can be obtained while eliminating seawater intrusion. In this regard, raising the groundwater levels in the coastal area is possibly the most effective means of stopping and/or reversing the seaward movement of seawater.

**Basin Yield Analysis Methodology and Results**

In order to determine the sustainable yield of the integrated groundwater and surface water system, the groundwater pumping in the basin was projected at various rates. Appropriate PV/IGSM simulations were performed, and the state of the hydrologic system was monitored for each level of pumping.

The monitoring indicators are: seawater intrusion, change in groundwater storage, and groundwater recharge from the stream system. The first and second indicators are to monitor the state of seawater intrusion and the groundwater system, and the last indicator is intended to monitor the state of the surface water and stream system.

In order to properly evaluate the impact of pumping reduction on the hydrologic system in the basin, two pumping reduction scenarios were considered. The first scenario considers a basin-wide pumping reduction. In this scenario, pumping is reduced uniformly throughout the basin. It is noteworthy that the long-term average annual groundwater pumping in the entire PVWMA area is estimated to be 69 TAF/yr under the Baseline Conditions. The second scenario considers a pumping reduction along the coastal area only.

A) Basin-wide Pumping Reduction: This scenario assumes that the basin-wide pumping is reduced uniformly. No changes to land use and or water use patterns or their
magnitudes are made. It is assumed that, when pumping is reduced, the water needs are not reduced, and water needs are met by a source of water from outside the basin.

Figures 14 (a-c) show the effect of groundwater pumping reduction in both scenarios, for basin-wide and coastal pumping reduction. As shown on Figure 14(a), a 65 percent reduction in basin-wide groundwater pumping would not nearly stop the rate of seawater intrusion. This reduction is approximately 45 TAF/yr. That is, to stop the seawater intrusion, the basin-wide groundwater pumping should be reduced to approximately 24 TAF/yr. Figure 14(b) shows that a 65 percent reduction in basin-wide groundwater pumping would have a positive effect on the rate of change in groundwater storage as well.

As shown on Figure 14(c), the 65 percent reduction in groundwater pumping would reverse the rate of stream recharge to the groundwater basin. Under the new groundwater pumping levels, the groundwater levels will be high enough to cause the streams to become gaining in most reaches, causing increased streamflows.

The 65 percent reduction in groundwater pumping in general has positive impacts on the hydrologic conditions in the valley, however, this reduction may not be viable from an economic standpoint. The 1993 Pajaro Valley Basin Management Plan (BMP) had suggested that for economic viability of any alternative water supply scenario, a 1000 AFWyr threshold for seawater intrusion be maintained. Figure 14(a) shows that a 65 percent reduction in groundwater pumping would result in approximately 1000 AFWyr seawater intrusion. That is, the groundwater pumping should be maintained at approximately 38 TAF/yr to meet the 1,000 AFWyr seawater intrusion threshold. Based on Figures 14(b) and 14(c), this level of groundwater pumping would still have positive impacts on the rate of change in groundwater storage and streamflows.

Figure 15 shows the impact of pumping reductions on regional average groundwater levels, over time. Figure 16 shows the impact of groundwater pumping reduction on the rate of seawater intrusion, over time.

b) Coastal Pumping Reduction - In this case, the groundwater pumping in the production wells located to the west of highway 1 are reduced incrementally. However, as in Scenario A, the agricultural and urban water needs in the coastal area are not reduced, but are met with an outside source of water, such as import water or desalinated water.

Figure 14(a) also shows that an 83 percent reduction in coastal groundwater pumping would nearly stop the seawater intrusion. This is approximately 17 TAF/yr reduction in coastal groundwater pumping. Although seawater intrusion can be limited with a minimum reduction in coastal groundwater pumping of 17 TAF/yr, a groundwater pumping reduction of 20 TAF/yr was considered. The basin-wide groundwater pumping will, therefore, be 49 TAF/yr.

As shown on Figure 14(b), the 83 percent reduction in coastal pumping would have a positive impact on the rate of change in groundwater storage as well. The new rate of change in groundwater storage is 2.5 TAF/yr, which indicates a recovery in groundwater levels, although not as fast as in Scenario A. Figure 14(c) shows that the reduction in coastal groundwater pumping would not impact the stream recharge conditions significantly. In Scenario B, the groundwater system would still benefit from approximately the same recharge rate as in the Baseline Condition.

Based on the suggestion in the 1993 Pajaro Valley Basin Management Plan (BMP) for the economic viability of any alternative water supply scenario, the 1000 AFWyr threshold for seawater intrusion is also analyzed under this coastal pumping reduction case. Figure 14(a) shows that a 70 percent reduction in groundwater pumping would result in approximately 1000 AFWyr seawater intrusion. That is, the groundwater pumping should be maintained at approximately 55 TAF/yr to meet the 1,000 AFWyr seawater intrusion threshold. Based on Figures 14(b), this reduction in groundwater pumping would still have positive impact on the rate of change in groundwater storage. Figure 14(c) shows that the stream recharge conditions would not be impacted significantly.

Figure 17 shows the impact of coastal pumping reductions on regional average groundwater levels, over time. Figure 18 shows the impact of coastal groundwater pumping reduction on the rate of seawater intrusion, over time.

Summary and Conclusions

The PVKSIM was used to analyze the present conditions of the integrated groundwater and surface water system in the Pajaro Valley, and to develop estimates of the scale and magnitude of the overdraft and seawater intrusion. In addition, two scenarios were developed to evaluate the level of pumping reduction that would be required to stop seawater intrusion. The resulting sustainable yield of the groundwater basin for the two scenarios was developed.

The present conditions of the basin are analyzed under the “Baseline Condition”. The Baseline Conditions assume current levels of land and water use and irrigation practices continue for next several decades. The impact of this level of water use and groundwater pumping is evaluated during a 68-year hydrologic cycle.

Results of the Baseline Condition analysis shows that in the long-term, a total of 59 TAF/yr enters the groundwater basin in the PVWMA area. During the same period, groundwater pumping from the basin in the PVWMA area is estimated to be 69 TAF/yr. Since the long-term groundwater pumping exceeds total recharge into the basin, the groundwater basin would be in overdraft condition by approximately 10 TAF/yr. The long-term average annual rate of seawater intrusion is estimated as 10 TAF/yr. This rate will fluctuate during the wet and dry hydrologic cycles, ranging between 8 to 14 TAF/yr.

In order to alleviate the basin from overdraw conditions and stop seawater intrusion, two pumping reduction scenarios were considered. Scenario A considered a basin-wide pumping reduction and Scenario B assumed that the pumping reduction would take place in the coastal areas west of Highway 1.

Under the basin-wide pumping reduction scenario, it is concluded that a 45 percent reduction in pumping would reduce the rate of seawater intrusion to about 1,000 AFWyr, and a 65 percent
Under the coastal pumping reduction scenario, it is concluded that a 65 percent reduction in the coastal groundwater pumping would reduce the rate of seawater intrusion to about 1,000
AC/Fy, and an 83 percent reduction in coastal groundwater pumping would nearly stop the
seawater intrusion. That is the sustained groundwater pumping in the basin should be approximately 55 TAF/yr and 50 TAF/yr for the 1,000 AFYr and 0 AFYr seawater intrusion
thresholds, respectively. Under the coastal groundwater pumping reduction scenarios, the
change in groundwater storage will become positive, however, the stream recharge to
groundwater will not be impacted significantly.
Model results from the baseline simulation indicate the following current conditions:

- Overdraft in the Alluvial aquifer, the Upper Aromas aquifer, and the Lower Aromas aquifer (the aquifers of interest) is approximately 1,400 af per year
- Seawater intrusion in the Alluvial aquifer, the Upper Aromas aquifer, and the Lower Aromas aquifer (the aquifers of interest) is approximately 1,900 af per year

Reduction would nearly stop the seawater intrusion. That is, the sustained groundwater pumping in the basin should be 58 TAF/yr and 24 TAF/yr for the 1,000 AF/yr and 0 AF/yr thresholds for seawater intrusion, respectively. Under the basin-wide groundwater pumping reduction scenarios, the change in groundwater storage will become positive and the stream recharge to groundwater will be reduced, resulting in increasing streamflows and stream outflows to the Bay.

Under the coastal pumping reduction scenario, it is concluded that a 65 percent reduction in the coastal groundwater pumping would reduce the rate of seawater intrusion to about 1,000 AF/yr, and an 83 percent reduction in coastal groundwater pumping would nearly stop the seawater intrusion. That is, the sustained groundwater pumping in the basin should be approximately 55 TAF/yr and 30 TAF/yr for the 1,000 AF/yr and 0 AF/yr seawater intrusion thresholds, respectively. Under the coastal groundwater pumping reduction scenarios, the change in groundwater storage will become positive, however, the stream recharge to groundwater will not be impacted significantly.
The county study concluded that groundwater use in the Pajaro basin is now approximately 70,000 acre feet per year while the safe yield of the basin is half that amount. The volume of seawater now moving into south county coastal aquifers is now about 16,000 acre feet a year. That amount is more water than is delivered annually by all water districts in Mid-County, Scotts Valley and the San Lorenzo Valley, the study said.
I

Letter I Attachments

WATER USE

Pajaro Valley water use for 2000 to 2011 is shown in Figure 2-10. The five-year average for groundwater use from 2007-2011 is approximately 39,300 af. The five-year average from 2007-2011 for total water use, including delivered water and City of Watsonville surface water use, is 58,609 af.

The City of Watsonville’s stated goal regarding water demand is to have no net increase in groundwater use (SNP Joint Meeting, August 2012). As shown in Figure 2-11 below, although population growth has continued to increase over the past fifteen years, urban water use has remained relatively constant, due to water conservation programs. The City plans to continue to achieve no net increase in groundwater use in the future through a combination of expanded water conservation and increased surface water supply.

Table 2-1 (following page) presents a detailed breakdown of water use within the Pajaro Valley from 2000-2011. The table identifies groundwater, surface water, and delivered water separately. The “other wells” category represents 95% of agricultural wells, with the remaining wells including mutual wells and a number of wells used for non-agricultural purposes.

WATER QUALITY

Water resources in the Pajaro Valley include both surface water and groundwater. Currently, groundwater is the predominant source for users. However, since surface water represents potential sources in the future, it is important to understand the current state of general water quality in the basin. The main water quality standards that apply are outlined in the Basin Plan for the Central Coast Basin, prepared by the California Regional Water Quality Control Board, Central Coast Region (2011). This plan, as mandated
LETTER I:  DOUGLAS DEITCH, MONTEREY BAY CONSERVANCY

I-1: This comment letter initially provides quotations, citations and excerpts from specified sources. These citations are listed in the letter. Refer to individual responses below which address these citations. Note many of these citations are from studies that have been superseded in more recent years by data and updated analysis as provided below. Overall, the comment letter references modeling results that have since been updated using more accurate land and water use estimates and projections. The current average groundwater use for the Pajaro Valley is approximately 55,000 AF/Y. Current modeling efforts documented an offset in the water budget of approximately 12,000 AF/Y. That offset of 12,000 AF/Y became the target amount that needed to be addressed through conservation and the development of new water supplies to balance the basin in the BMP Update. After selection of the recommended BMP projects, these projects were simulated using the Pajaro Valley Hydrologic Model to determine if, as a group, the projects could achieve the dual goals of balancing the basin and stopping seawater intrusion. The model results indicate that the projects, when implemented and operated as anticipated, were determined to be adequate to solve 90% of seawater intrusion and 100% of the basin overdraft.

I-2: See response above. Also, it should be noted that the comment letter cites a 1998 County of Santa Cruz Planning Department and Environmental Health Service initial study as a source for an estimated 70,000 AF/Y of water use in the Pajaro Valley. The commenter notes that the Draft EIR quantifies the average "current" yearly use at around 55,000 AF/Y. The commenter is correct; the Draft EIR identifies groundwater, surface water, and delivered water for Pajaro Valley water use through the years 2001 to 2012 (See Draft EIR Table 2.2 totals below). The five-year average from 2007-2011 for total water use, including delivered water and City of Watsonville surface water use, is cited in the Draft EIR as 55,605 AF.

Source documentation for this water use is PVWMA data which is considered a preferred source than the citation listed by the commenter.

Table 2-2 Pajaro Valley Water Use (AF) from Draft EIR

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<tbody>
<tr>
<td>Sum of Water Usage (AF)</td>
<td>55,313</td>
<td>55,283</td>
<td>56,343</td>
<td>59,478</td>
<td>52,682</td>
<td>52,129</td>
<td>59,726</td>
<td>62,606</td>
<td>57,404</td>
<td>50,047</td>
<td>48,192</td>
<td>55,397</td>
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</tbody>
</table>

Draft EIR, Page 2-6. Source Cited: PVWMA Data

This source is considered a viable and documented source for water use. Groundwater extraction facilities (i.e. – wells) that pump more than 10 AF/Y are metered. The Agency runs a metering program that includes regular hardware inspections and calibration checks. Municipal wells are also metered. Rural residential water use is estimated based on a study conducted in 2010 of three water districts metered deliveries (see Proposition 218 Service Charge Report – Appendix A, March 2010).

The commenter references modeling results that have since been updated using more accurate land and water use estimates and projections. The current average groundwater use for the Pajaro Valley is
approximately 55,000 AF/Y. Current modeling efforts documented an offset in the water budget of approximately 12,000 AF/Y. That offset of 12,000 AF/Y became the target amount that needed to be addressed through conservation and the development of new water supplies to balance the basin in the BMP Update. After selection of the recommended BMP projects, these projects were simulated using the Pajaro Valley Hydrologic Model to determine if, as a group, the projects could achieve the dual goals of balancing the basin and stopping seawater intrusion. The model results indicate that the projects, when implemented and operated as anticipated, were determined to be adequate to solve 90% of seawater intrusion and 100% of the basin overdraft. (PVWMA, January 15, 2014)

I-3: Modeling results completed for the 2002 BMP using the PVIGSM, an older model which has since been replaced with the PVHM, stated that 24,000 was the “sustainable yield” under conditions that were present at the time. Results also showed that the yield could be doubled to 48,000 AF/Y by reducing groundwater extractions at the coast. That analysis helped lead to the development of the Coastal Distribution System and supplemental water supply facilities that produce irrigation water for coastal ranches.

The commenter references modeling results that have since been updated using more accurate land and water use estimates and projections. The current average groundwater use for the Pajaro Valley is approximately 55,000 AF/Y. Current modeling efforts documented an offset in the water budget of approximately 12,000 AF/Y. That offset of 12,000 AF/Y became the target amount that needed to be addressed through conservation and the development of new water supplies to balance the basin in the BMP Update. After selection of the recommended BMP projects, these projects were simulated using the Pajaro Valley Hydrologic Model to determine if, as a group, the projects could achieve the dual goals of balancing the basin and stopping seawater intrusion. The model results indicate that the projects, when implemented and operated as anticipated, were determined to be adequate to solve 90% of seawater intrusion and 100% of the basin overdraft. The complex model considers many factors including project yield, project location, and project delivery areas. These complexities cannot be accurately represented in a sustainable yield figure.

I-4: The commenter references modeling results that have since been updated using more accurate land and water use estimates and projections. The current average groundwater use for the Pajaro Valley is approximately 55,000 AF/Y. Current modeling efforts documented an offset in the water budget of approximately 12,000 AF/Y. That offset of 12,000 AF/Y became the target amount that needed to be addressed through conservation and the development of new water supplies to balance the basin in the BMP Update. After selection of the recommended BMP projects, these projects were simulated using the Pajaro Valley Hydrologic Model to determine if, as a group, the projects could achieve the dual goals of balancing the basin and stopping seawater intrusion. The model results indicate that the projects, when implemented and operated as anticipated, were determined to be adequate to solve 90% of seawater intrusion and 100% of the basin overdraft.

I-5: The commenter references modeling results that have since been updated using more accurate land and water use estimates and projections. The current average groundwater use for the Pajaro Valley is approximately 55,000 AF/Y. Current modeling efforts documented an offset in the water budget of approximately 12,000 AF/Y. The model results indicate that the projects, when implemented and operated as anticipated, were determined to be adequate to solve 90% of seawater intrusion and 100% of the basin
overdraft. The complex model considers many factors including project yield, project location, and project delivery areas. These complexities cannot be accurately represented in a sustainable yield figure.

I-6: The commenter questions the current and prior BMPs conclusions reached and the Draft EIR based upon the BMP conclusions based upon the above. See previous responses 1-5 above.

I-7: The commenter questions the current and prior BMPs conclusions reached and the Draft EIR based upon the BMP conclusions based upon the above. See previous responses 1-5 above.

I-8: The commenter questions the current and prior BMPs conclusions reached and the Draft EIR based upon the BMP conclusions based upon the above. See previous responses 1-5 above.

I-9: The commenter questions the current and prior BMPs conclusions reached and the Draft EIR based upon the BMP conclusions based upon the above. See previous responses 1-5 above.

I-10: Comment noted.

I-11: An EIR must include a discussion of the “no project” alternative and its impact. The No Project alternative is defined as no remedial action. By definition it includes no plans, policies, programs, projects, or components that would be undertaken by the PVWMA or any other body or individual in the Basin relative to development of BMP components considered by this EIR. The discussion of the “no project” alternative allows the public and the decision-makers to assess the effects of approving the project versus the effects of not approving the project.

As defined in the BMP EIR, the no project alternative assumes groundwater, recycled water, and Harkins Slough diversions (up to 2,000 AF/Y) would continue to be the source of water for agricultural irrigation. Industrial, commercial, and domestic residential use of water within the City of Watsonville would continue as in the current condition The Basin's overdraft condition is anticipated to continue without implementation of the BMP Update. Seawater intrusion would continue to advance beneath the coastal lands at the current rate of 1,900 AF/Y or higher. On coastal acreage that do not receive delivered water, irrigation with groundwater would continue until the salt content in the soils builds up to the point where existing agricultural crops typical of the area could not grow. Production of more salt tolerant crops may occur; however, the economy of the area would change. This alternative assumes with continued overdraft and encroaching seawater, wells would eventually become unusable and lands would be fallowed. This would represent a significant impact due to loss of agricultural lands that may be affected by seawater intrusion and that are not served by the coastal distribution system.

However, the land fallowing alternative was considered in the BMP Update as Project D-3 and defined as the fallowing of 8,000 acres of coastal land. The fallowing alternative was determined to be politically and economically unacceptable and screened from further consideration by the BMP committee (PVWMA, January 15, 2014). Also, see Master Response # 3 - Adequacy of Alternatives.
Please find comments attached. Please incorporate in the following order: Comments, Attachment 1, Attachment 2.

Thank you for the opportunity to comment and for all of your initiatives in this matter.

Sincerely,

Jerry Busch
Dear Ms. Bannister:

I am writing to request that the Subsequent Program Environmental Impact Report (EIR) for the PVWMA Basin Plan be improved to adequately describe the multiple wildlife and wetland resources of College Lake, to analyze the potential impacts to those resources, and to impose mitigation and monitoring measures to reduce potential impacts to less than significant.

Regarding any obligatory or necessary impact analysis that is deferred by the program EIR to the project EIR, I also would like to request that the EIR state explicitly that the identified analysis shall be addressed in the project EIR.

**Biotic Resources**

The EIR fails to provide the full context of College Lake’s significance to birds. The importance of the site is detailed by available sources, including the report, “The Importance of College Lake for Birds,” prepared for the Pajaro Valley Water Management Agency by Suddjian Biological Consulting Services (Attachment 1). That report states in paragraph one:

> “College Lake is one of the most significant freshwater wetlands for birds in the Monterey Bay Region.”

In fact, College Lake is one of the most important wetlands to waterfowl on the Pacific Coast. According to bird counts posted on ebird (Attachment 2), only four wetlands on the West Coast support more waterfowl: Humboldt Bay National Wildlife Refuge, Arcata Marsh and Wildlife Sanctuary, Morro Bay State Park and Gray’s Harbor National Wildlife Refuge area in Washington. Of these, only two, Humboldt Bay and Arcata Marsh, are more important to tipping ducks such as mallard, pintail, widgeon and teal. Regionally, waterfowl use of College Lake exceeds all other wetlands, including Watsonville Slough, Elkhorn Slough and Pescadero Marsh. In none of these comparable wetlands could a water storage impoundment could be proposed without finding the environmental impacts potentially significant.

The lake also supports hundreds to thousands of shorebirds, such as least sandpiper and semipalmated plover, that feed extensively over the exposed soils of the lake twice a year: in April and May before planting, and in August-November during fall migration and residency. The fallow fields, marshland and transition areas between wetlands and uplands around College Lake create one of the County’s richest sparrow habitats, with a high of fourteen species observed around the lake, including Bryant’s savannah sparrow, a California Species of Special Concern (SSC). College Lake possesses high raptor diversity, including species such as golden eagle, bald eagle, peregrine falcon and merlin that are attracted by water birds. Numerous other raptor species are attracted by the high concentrations of songbirds and small mammals around the lake. Predatory mammals such as coyote (a keystone predator), bobcat, foxes and others occur. The synergistic relationship of upland and bottomland habitats could be adversely affected for many wildlife species if flooding is retained through the spring breeding season.
The EIR’s analysis of College Lake’s avian-related ecological processes is comprised of primarily of the following paragraph:

"The data reflect the conversion from deep winter ponding to willow lacustrine habitat to mudflat as the lake bottom is pumped dry for active farming. This conversion appears to have resulted in important wintering and spring migration habitats for waterfowl and wading birds."

The benefit to waterfowl has relatively little to do with “deep winter ponding,” willow habitat or mudflat, and no lacustrine habitat exists on site; rather, the value stems primarily from seasonal marshland and fallow fields. Historically, much of the volume of College Lake drained naturally out Salsipuedes Creek, according to Reclamation District personnel. The referenced pumping is necessitated significantly by sediment buildup in the Salsipuedes and Corralitos creek channels that causes College Lake to back-up to higher elevations each year. Contrary to inference in the EIR, the weir is not used to impound water; it is used to prevent backflow from Corralitos Creek into the lake’s ditch system. Future bench excavations in Corralitos Creek should require maintenance of the Salsipuedes Ditch, to restore more natural hydrology.

The value of College Lake to waterfowl is significantly related to four important factors:

1. The lake’s seasonal nature and extensive shallow-water habitat.
2. The presence of marsh vegetation, fallow fields and occasional crop residues that provide food sources for waterfowl.
3. The extensive area of open water, which allows waterfowl to loaf and avoid disturbance.
4. The proximity of other regional wetlands, which provide additional food and cover.

Both fallow fields and natural marshes on the site are rich in nutritious food plants highly selected by many waterfowl, including fat hen (Atriplex patula-hastata) and smartweeds (Polygonum punctatum, P. persicaria).

The significance of College Lake rises as the value of other regional wetlands to waterfowl declines. Waterfowl habitat has decreased and shifted in Watsonville Slough in the last two decades, as the period of seasonal inundation has extended from less than six months to 9-11 months. Prolonged inundation alters plant species composition and reduces the extent and diversity of emergent vegetation. Exposed substrates in Watsonville Slough now often resemble lake-bottom habitat. Water depth has also increased, reducing the ability of tipping ducks to reach seeds, aquatic insects and vegetation on the bottom. At Elkhorn Slough and Pescadero Marsh, waterfowl habitat is declining due to past and continuing projects to convert fresh and brackish marshland to salt marsh. Both Elkhorn Slough and Watsonville Slough are jeopardized by sea-level rise, which can exacerbate flooding and salt-marsh expansion. College Lake is increasingly important to waterfowl, particularly in low-rainfall years when seasonally flooded habitat is less widely available.

**Wetlands**

Currently, about 15 acres of emergent marshland and more than 60 acres of seasonally flooded riparian forest exist at College Lake. Contrary to EIR characterizations, both of these habitats are palustrine (seasonal) wetlands, according to the classification system cited by the EIR consultants (Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the...
United States. Also, the EIR’s discussion of wetland classification twice refers erroneously to “willow water,” which should be corrected to “shallow water”).

The College Lake wetlands also meet the Federal definition:

*The term wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.*

If agricultural activity ceased, College Lake’s farmlands would revert to wetlands, as evidenced by the wetland plants that rapidly emerge in fallowed fields.

The riparian woodlands on the site comprise a large block of continuous habitat important to songbirds. Like other wetlands in the Pajaro Valley, riparian habitats have experienced significant declines in recent years, caused by flood control projects in the Pajaro River and die-offs from hyper-inundation in Watsonville Slough.

The riparian habitat at College Lake is fairly good quality in parts, with glades of mature willow, box elder, dogwood and cottonwood trees over smartweed, fat hen, nettle and other understory plants. Guilds of chestnut-backed chickadees, ruby-crowned kinglets, Townsend’s warblers and downy woodpeckers populate these woodlands in winter, and some of these birds stay on to breed. The woods provide breeding habitat for yellow warbler, a BSSC species, and sleeping perches for predatory birds such as red-tailed hawk, red-shouldered hawk and great-horned owl. At least two open ponds in this habitat support tules, cattails, smartweeds and other emergent plants, attractive to waterfowl in winter. Edge habitats between the forest, adjacent marshland and fallow fields provide habitat to yellow-rumped warblers, sparrows, hawks, swallows and wrens; in winter, waterfowl feed on fat hen and other plants in the forest edges.

In California, where more than 90 percent of coastal wetlands have been lost, wetland habitat is recognized and protected by local, state and federal laws.

**Due to the significance of College Lake to waterfowl and other birds, the EIR must provide a more accurate and complete characterization of its habitats, ecological processes and regional significance to waterfowl and other wildlife.**

**Impacts**

The impact potential of the proposed impoundment is related to the depth and duration of inundation.

When impounded water is too deep, waterfowl cannot access food. Tipping ducks cannot reach bottom material deeper than about 10 inches. Shorebirds require depths less than that. Retention of impounded water through April and May, the peak of shorebird spring migration, will significantly reduce or eliminate shorebird activity during this period, when peak populations currently reach thousands of birds. Filling the lake to capacity by the end of December would reduce waterfowl ability to access lake substrates, which could affect populations of tipping ducks. Loss of shorebirds and waterfowl may, in turn, impact predatory birds.

The duration of flooding can affect the ability of marsh plants to germinate, reach maturity or set seed. Seeds are necessary to provide protein, minerals and vitamins to migratory birds. Many high value
waterfowl food plants, such as *Atriplex*, *Polygonum* and *Echinocloa*, require warm temperatures to germinate and cannot tolerate flooding beyond a certain duration. Excessive inundation periods can also drown riparian plants, as has occurred in Watsonville Slough. Affected riparian habitat can experience reductions in diversity and quality, through the loss of trees and understory plants less tolerant of flooding, such as cottonwoods and box elder. If the inundation period is too prolonged, the riparian forest can die out altogether.

Prolonged water storage can also result in sedimentation impacts on the wetland substrate. Sediment is considered a contaminant under federal law.

The loss of available shallow, seasonally flooded habitat for waterfowl and shorebirds, loss of food plants and crop residue, and reduction of riparian habitat, should be considered potentially significant impacts by the EIR, separately and cumulatively.

**Mitigation and monitoring measures**

Establish a mitigation and monitoring program with the objective of allowing no significant decrease of waterfowl within the project area. Please consider adding the following elements to the EIR’s mitigation and monitoring requirements.

**Monitoring measures:**

1. Monitor winter waterfowl populations from 2013 through 2015 to establish a baseline of use. Take a weekly inventory of the numbers and location of waterfowl utilizing the lake from November 1 through March 31. Sample feeding behavior. Correlate use with water depth, substrate physiography and food availability.

2. Continue to monitor winter waterfowl populations during and after construction of the new dam. Implement management measures as necessary to maintain current waterfowl populations.

3. To evaluate the availability of waterfowl food plants and the potential for habitat enhancement, survey of plant resources of College Lake, including location and cover percentage of dominant species, and correlate with inundation patterns.

**Mitigation measures:**

1. The PVWMA shall manage the timing of water withdrawals to insure that the reservoir is drained annually in time to allow production of waterfowl food by agricultural crop residue, passive colonization, direct planting or habitat enhancement measures, on minimum 80% of non-riparian inundation area. The reservoir shall be operated so as not to adversely impact the riparian woodland species composition.

2. Impacts to existing wetlands and associated waterfowl populations shall be avoided through operational measures. If impacts can’t be avoided, they shall be mitigated to the greatest extent feasible, in accordance with Federal law.
3. The dam spillway shall be designed with flashboards or other adjustable features to facilitate fish passage, to allow passive backflow from Corralitos Creek, and to allow winter discharges from the lake as appropriate to sustain shallow inundation areas.

4. During the fall / winter inundation process, water levels shall be managed for maximal benefit of waterfowl and shorebirds, consistent with providing statutory fish flows and adequate water storage for summer distribution to farmers. Allow water to be released from the reservoir for this purpose prior to reaching capacity, if justified by hydrologic models and water inputs from season to season.

5. If offsite mitigation is required to mitigate loss of palustrine wetlands or to filter or catch sediment, the PVWMA shall pursue, or develop partnerships to pursue, acquisition and management of available agricultural land adjacent to the project area. Management should include continued agricultural production or wetland restoration.

6. The PVWMA shall prepare and implement an integrated management plan for College Lake to maximize biotic values in conjunction with water resource operation. The plan shall incorporate monitoring and adaptive management to maintain waterfowl and other wildlife populations. The plan shall analyze ecological processes, provide programs to enhance biomass and species diversity, and establish protocols adjust management measures in response to monitoring results and target outcomes. At minimum, the management program shall evaluate methods and feasibility of the following habitat maintenance and enhancement measures:

- Burning, selective vegetation removal / tree cutting, disking, livestock grazing, recontouring and other measures to control invasive species and foster waterfowl food production in palustrine habitats, with initial focus on existing disturbed, weedy habitats, willow forests, retired ag land and wetland / upland transition habitats.

- Improving waterfowl food production through winter cover crops, habitat enhancement during growing season and allowing crop residues to remain until spring planting. Subsidize these activities in accordance with costs to farmers.

- Controlling lake water levels to maximize shallow, freshwater habitats accessible to tipping ducks during winter months. Evaluate the feasibility of using water in Corralitos Creek to augment flows from Casserly Creek, including engineering analysis as appropriate. Evaluate whether this could provide a hydrologic basis for delaying full impoundment of the College Lake storage basin until late winter or spring, to prolong shallow inundation for tipping ducks.

- Evaluate waterfowl food plant habitat requirements and apply to operation of the College Lake impoundment to maximize productivity to the greatest extent feasible.

- Evaluate conjunctive management of cultivated bottomland and non-cultivated habitat in adjoining uplands to provide forage, cover and transition habitat for waterfowl and other wildlife.

- Consider establishing a levee, weir and pump system across the two upper branches of the lake and adjacent to the riparian forest habitat to:
o Prolong the period of shallow inundation in upper branches by segregating from main reservoir

o Enhance palustrine habitat quality, diversity and food value by allowing earlier spring drawdowns

• Evaluate the preceding measures in light of the rate structure to insure adequate revenues to implement all mitigation measures described herein.
The Importance of College Lake for Birds

Prepared by David L. Saddjian
July 15, 2003

College Lake is one of the most significant freshwater wetlands for birds in the Monterey Bay region. Its importance for wintering waterfowl and spring migrant shorebirds is at times unmatched by other local freshwater sites. The riparian forest of Casserley Creek is also of regional significance.

I have been surveying birds at the lake since 1987 and compiling observations from other local observers. A large database of bird observations has been gathered. Most visits have occurred from December to early May. I am presently preparing a report summarizing the occurrence of birds at the lake. This note provides a brief overview of the value and importance of the lake for birds.

The seasonally flooded aquatic habitat of college lake attract a wide variety of ducks, geese, grebes, herons, egrets, shorebirds, terns, other waterbirds, and raptors. The adjacent upland habitats (deciduous riparian forest, oak woodland, eucalyptus groves, scrub, grassland, and agricultural fields) support a broad array of additional species. The seasonal nature of the lake is key and critical to its value to birds. It is this feature that makes the lake far more productive than any other of the permanent lakes in the surrounding area. The agricultural fields with the remains of crop plants and weeds provide excellent foraging habitat for ducks and other waterbirds when they are gradually flooded by winter storms. The exposed mud and shallows left by the receding water in spring attract large numbers of shorebirds, herons and egrets, terns and other migratory species.

Over 210 species of birds have been recorded at College Lake and its adjacent upland habitats. These include over 28 species of waterfowl, more than any other single site in Santa Cruz County. Waterfowl typically number in the hundreds to thousands during winter, depending on flooding conditions. Among the most common species are Northern Pintail, Northern Shoveler, Green-winged Teal, American Wigeon, Canvasback, Ring-necked Duck and Ruddy Duck. American Coot is also abundant in winter. Herons and egrets are most numerous in spring, when the receding waters provide the best foraging habitat. Many dozens are often present then, including Great Blue Heron, Great and

Snowy egrets, and Black-crowned Night-Heron. Small numbers of shorebirds winter at the lake (mostly Least Sandpiper, Killdeer, and Wilson’s Snipe), but their numbers are impressive if exposed mud and shallow water are available during the peak of migration in April and early May. At this time there are hundreds to thousands of shorebirds that have been observed at the lake, with the most numerous being Western and Least sandpipers, Dunlin, Long-billed Dowitcher, Whimbrel and Semipalmated Plover. Gulls frequent the lake in winter and spring to bathe and drink, and Caspian and Forster’s terns forage there in spring. Many hundreds of swallows (five species) forage over the lake.

The abundance of waterfowl and diversity of upland habitats attract a variety of raptors. Peregrine Falcons, Merlin and Osprey are regular winter visitors. Other species include nesting White-tailed Kite, Red-shouldered and Red-tailed hawks, American Kestrel, and Barn Owl, and wintering Cooper’s and Sharp-shinned hawks and Northern Harrier.

The upland habitats and partially flooded vegetation support abundant wintering landbirds and moderate numbers of breeding birds. Notable among the winter landbird assemblages are many hundreds to thousands of sparrows, with a high 14 species recorded around the lake. Small numbers of Loggerhead Shrike, a declining species, visit in winter. The breeding birds of the riparian corridor of Casserley Creek merit further study, but in the past have included Yellow Warbler, a state species of special concern.

A few management issues are worthy of attention. (1) Although the flooded agricultural fields attract large numbers of waterbirds, it is unknown how chemical pesticides used on those fields (or elsewhere in the watershed) might affect the birds. (2) The adjacent upland habitats play a significant synergistic role in the value of the lake and its attraction for waterbirds. Some natural habitats have recently been converted to agricultural use, and potential exists for restoration of natural habitats in some areas. (3) Several areas of riparian habitat (or land that might support it) are infested with the aggressive non-native giant reed (Arundo donax). (4) The timing of the spring draw down of the lake is presently driven by agricultural concerns, but its timing might be adjusted to a minor degree to benefit migrant shorebirds and other species. (5) The lake presently does not offer any opportunities for breeding waterbirds.
Total Numbers of Waterfowl, Top Twelve Pacific Coast Sites

Ebird Data: Sum of High Counts for All Species

<table>
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<tr>
<th>Site</th>
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<tr>
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<td>Marsh Bay</td>
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<td>Bolinas Lagoon</td>
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<td>El River Mouth</td>
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<tr>
<td>Tipton Slough</td>
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</table>
LETTER J:  JERRY BUSCH

J-1: Comment noted.

J-2: Comment noted. The program-level project description in the Draft EIR is provided in the BMP Update. The Draft EIR serves as the foundation for the future site-specific project-level CEQA documents. Fish bypass flows and mitigation of potential adverse impacts to wintering waterfowl, nesting birds, and federally listed species will be negotiated in consultation with CDFW and CDFW’s federal counterparts at USFWS and NOAA/National Marine Fisheries Service during project-specific CEQA review and permitting.

Program-level biological impacts related to the College Lake Project are limited to the conceptual project design described in the BMP Update and the existing, available biological information at the time of Draft EIR analysis. The PVWMA concurs that establishment of baseline environmental conditions is essential to develop project alternatives suitable for any future project-level CEQA review. Project-level designs and impact assessments will include a "No-Project" alternative, and may include project configurations not yet developed. The PVWMA will be required to conduct several site-specific studies to fulfill the requirements of the project-level CEQA review for each project-level alternative.

J-3: Comment noted.

J-4: The PVWMA concurs that College Lake is a seasonally-significant waterfowl habitat and that establishment of baseline environmental conditions is essential to develop project alternatives suitable for any future project-level CEQA review. To this end, the PVWMA has initiated a 2014 College Lake Waterfowl Survey to develop a long term wintering waterfowl and mitigation monitoring program

(As noted above in comment H-20)
Mitigation Measure 3.4.2i will be revised as follows:

Mitigation Measure 3.4.2i: Develop Adaptive Management Plan for College Lake Waterfowl Management and Multi-species Mitigation.

To mitigate impacts to existing waterfowl or waterfowl habitat at College Lake, an Adaptive Management Plan for waterfowl management and multi-species mitigation will be developed with the consultation of the state and federal resource agencies and College Lake stakeholders. The Adaptive Management Plan for waterfowl management and multi-species mitigation at College Lake will develop multi-year baseline waterfowl population and habitat use data for future project design, environmental permitting and CEQA impact analysis of project-level alternatives. To the extent practical, it will integrate the results of ongoing College Lake hydrology and hydraulic analyses, as well as future consultations with state and federal agencies on fish flows and fish bypass criteria.

J-5: Comment noted. As noted in the Draft EIR College Lake is acknowledged to be a significant coastal freshwater resource, in particular for wintering waterfowl. The high value of College Lake for waterfowl is due to the transition from deep water to shallow water over the extent of the lake basin during drawdown, not the deep water conditions as the comment interprets. The dewatering of the lake basin

Denise Duffy & Associates, Inc.  4-80  Pajaro Valley Water Management Agency  
BMP Update Final EIR
creates a gradual exposure of shallow water and emergent vegetation at the upper reaches and a range of depths across the central waterbody throughout the winter and spring that are beneficial to a wide range of waterfowl and shorebirds.

At present, there has been no formal waterfowl population and habitat use study for College Lake. Development of an Adaptive Management Plan for College Lake Waterfowl Management and Multi-species Mitigation will require evaluation of both the avian populations that use the lake and potentially competing fish flow requirements and fisheries management conditions required for threatened South Central Coast steelhead.

J-6: Comment noted. The Draft EIR identifies the presence of fresh water emergent wetlands within College Lake. The Draft EIR used vegetation type as per CaCodes (CDFW (2010) and mapped the College lake area as supporting coastal freshwater marsh at least seasonally (i.e., during the winter inundation months and until cropland uses occur). Areas mapped as freshwater marsh would also likely meet the definition is a palustrine (seasonal) wetlands by Cowardin; however, a wetland delineation using this classification system was not conducted during preparation of the Draft EIR. As the Draft EIR serves as the foundation for the future site-specific project-level CEQA documents, future documents will include site-specific studies to fulfill the requirements of the project-level CEQA review. This will include a wetlands delineation as per federal criteria, which includes use of the Cowardin classification system. The Draft EIR states “The Pajaro River, Harkins Slough, Watsonville Slough, and College Lake are considered to be defined as navigable waters under ACOE Open water below Ordinary High Water Mark and associated vegetated wetlands would be jurisdictional under Section 404 of the Clean Water Act”; however, a wetland delineation, conducted as per federal criteria, will determine the exact extent of federal Waters of the U.S., including wetlands, pending confirmation by federal regulatory agencies. Typos in the Draft EIR that refer to “willow water” are corrected to be “shallow water”.

J-7: Comment noted.

J-8: Comment noted. The riparian habitat present at the upper reaches of College Lake supports a range of avian species. The PVWMA intends to avoid impacts to sensitive habitats to the greatest extent feasible. As proposed, the College Lake project will result in periodic inundation of some riparian habitat that is currently on the margin of backwater impacts. Due to the proposed continued draining of the Lake, impacts to the existing riparian habitats is not expected to be significant.

J-9: Comment noted. At present, there has been no formal waterfowl and wading bird population and habitat use study for College Lake. Development of an Adaptive Management Plan for College Lake Waterfowl Management and Multi-species Mitigation will require evaluation of both the avian populations that use the lake and potentially competing fish flow requirements and fisheries management conditions required for threatened South Central Coast steelhead. In addition, the ultimate use of the waters diverted from College Lake will also be affected by supply needs in the Coastal Distribution System. The goal of an Adaptive Management Plan for College Lake Waterfowl Management and Multi-species Mitigation is the development of project alternatives suitable for any future project-level CEQA review.
J-10: Comment noted. The duration of flooding and the timing of drawdown affects plant recruitment and plant composition. Typically, a variety of annual plants, such as smartweed, are capable of germinating on exposed mudflats when surface water is drained and soil temperatures are adequate for seed germination. The increased inundation level at College Lake, as analyzed in the Draft EIR, will create additional shallow water areas around the perimeter of the lake (areas not now, but inundated in future). During lake drawdown, annual seasonal wetland plant species are expected to colonize the exposed mudflats as the water level declines. Areas of deeper water will also be exposed as lake drawdown occurs. As all water will eventually be drained from the lake during the summer months, growing conditions would be present for the annual seasonal wetland plant species to colonize the lake bed where agricultural use is not present. We acknowledge the commenter’s concern about excessive inundation periods drowning riparian plants, such as occurred to cottonwood and box elder in Watsonville Slough; however the proposed project does not retain water in the lake year-round. The higher inundation level will be of short duration (when riparian trees plants are mostly dormant) and all water will eventually be drained during the summer months, such that plants will be not inundated during the primary growing season. As such, so significant impacts to riparian trees and understory vegetation is anticipated.

J-11: Comment noted. Riparian trees and understory plants area adapted to sedimentation from periodic and temporary flooding/inundation. Most riparian tree species produce more adventitious roots than species typically found in upland habitats, and are well known for their ability to develop roots from older trunks, particularly in response to inundation and/or sedimentation.

J-12: No significant reduction in riparian habitat is anticipated by proposed project. Impacts to shallow, seasonally flooded habitat for waterfowl and shorebirds will be evaluated in the Adaptive Management Plan for College Lake Waterfowl Management and Multi-species Mitigation. The goal of an Adaptive Management Plan for College Lake Waterfowl Management and Multi-species Mitigation is the development of project alternatives suitable for any future project-level CEQA review.


J-15: The timing of water withdrawals and subsequent water levels in College Lake will require evaluation of both the avian populations that use the lake and potentially competing fish flow requirements and fisheries management conditions required for threatened South Central Coast steelhead. In addition, the ultimate use of the waters diverted from College Lake will also be affected by supply needs in the Coastal Distribution System. The goal of an Adaptive Management Plan for College Lake Waterfowl Management and Multi-species Mitigation is the development of project alternatives suitable for any future project-level CEQA review. The design and construction of future dam spillway structures will require that PVWMA confer with CDFW and obtain any necessary permits pursuant to Fish and Game Code 2080 et seq. and with the USFWS and NOAA/National Marine Fisheries Service for consultation and compliance with the Federal Endangered Species Act.

J-16: See above.
**J-17:** The implementation of any new water supply facility on College Lake will require that PVWMA confer with CDFW and obtain any necessary permits pursuant to Fish and Game Code 2080 *et seq.* and with the USFWS and NOAA/National Marine Fisheries Service for consultation and compliance with the Federal Endangered Species Act.

**J-18:** Comment noted.

**J-19:** Comment noted. To mitigate impacts to existing waterfowl or waterfowl habitat at College Lake, an Adaptive Management Plan for waterfowl management and multi-species mitigation will be developed with the consultation of the state and federal resource agencies and College Lake stakeholders. The language proposed by the commenter is included as a new mitigation. Please see Section 5.0, Changes to the Draft EIR. See also response H-20.

Mitigation Measure 3.4.2i will be revised as suggested by the commenter:

Mitigation Measure 3.4.2i: Develop Adaptive Management Plan for College Lake Waterfowl Management and Multi-species Mitigation.

To mitigate impacts to existing waterfowl or waterfowl habitat at College Lake, an Adaptive Management Plan for waterfowl management and multi-species mitigation will be developed with the consultation of the state and federal resource agencies and College Lake stakeholders. The Adaptive Management Plan for waterfowl management and multi-species mitigation at College Lake will develop multi-year baseline waterfowl population and habitat use data for future project design, environmental permitting and CEQA impact analysis of project-level alternatives. To the extent practical, it will integrate the results of ongoing College Lake hydrology and hydraulic analyses, as well as future consultations with state and federal agencies on fish flows and fish bypass criteria.
Hi Mary,
My first email didn't get through, so I am using your email address.
Thank you,
Sandy

PVWMA
Attn: Mary Bannister
36 Brennan Street
Watsonville, CA 95076
EIR@pvwater.com

I am taking this opportunity to comment on the BMP EIR. I appreciate all the work that went into this process.

I understand that individual projects will require project EIRs. However, since they will tier off of this Program EIR I think it is important to specify issues that will need to be addressed at that time.

This EIR, as required by law, has taken a fairly detailed look at how the projects will affect special-status species. Although avian resources at College Lake are mentioned, I would like to see a clearer commitment to maintaining or enhancing College Lake resources for use by waterfowl. For example, protection of waterfowl preferred food plants should be considered during any clearing or re-vegetation efforts.

I am not a bird expert, but I appreciate the importance of our lakes and wetlands for these species. I am convinced that College Lake can be managed both for seasonal use by waterfowl and for water resources.

Thank you,

Sandra Baron
LETTER K:  SANDRA BARON

K-1: Comment noted.

K-2: Comment noted.

K-3: The PVWMA concurs that College Lake is a seasonally-significant waterfowl habitat and that establishment of baseline environmental conditions is essential to develop project alternatives suitable for any future project-level CEQA project review. To this end, the PVWMA has initiated a 2014 College Lake Waterfowl Survey to start to develop a long term wintering waterfowl and mitigation monitoring program. See response H-20 and Section 5.0, Changes to the Draft EIR. A new mitigation measure is provided to develop an adaptive management plan for College Lake waterfowl management and multi-species mitigation.

K-4: Comment noted.
COLLEGE LAKE - DIVISIONAL CONCEPT — An Alternative

Presented by Ted Remde to PVWMA November 20, 2013

The accompanying diagram depicts College Lake divided into two parts and separated by an earth-filled levee. The smaller part is designated as a Wetland and Wildlife Habitat with Casserly Creek free-flowing thru it adjacent to the Levee from the northern inlet of the Lake Basin to a southern outlet near the existing Weir. The larger portion on the opposite side of the levee is designated as a Reservoir. The Distribution Pipeline provides Lake water to the surrounding farmland.

The purpose of this Concept is four-fold: (1) Separated Wetland and Preservation of Wildlife Habitat, (2) Separated Water Storage and Local Distribution System, (3) Sustainment of most Farm Land under current conditions, and (4) Potential Alternative Plan cost-savings. Corresponding benefits include: Reduction of underground pumping, silt removal facilitation, basin enlargement by cut and fill excavation, basin expansion by land acquisition, possible cost off-sets by County and State funding for improvement of Paulsen Road and Extension access to the Fairgrounds, Interlaken Subdivision flood protection (elongated- raised -berm), and recreational interaction with adjoining Fairgrounds (connecting hiking trails on levee and around Habitat).

The project is foreseen as providing potential cost saving as compared to the plan described in the 2012 Basin Management Plan Update. Transporting the water is expensive in either scenario, but localized use seems more practical. And too, is there a need for additional water piped from College Lake to the treatment plant and/or the CDS directly? Supply and demand CDS data seems to indicate current supply is adequately meeting demand. What are the variables of demand to predict supply?

While water has previously been pumped directly from the Lake to adjacent farmland for the production of row crops, current regulations require filtration and probably treatment of extracted water. It may be possible, however, to minimize the cost of treatment and filtration by installation of on-site detection and eradication devices and a variation in extraction systems – a vertical float system, for instance, rather than horizontal drainage. It may be beneficial to reconstruct a Weir and pump station and a south-of-Lake distribution system in addition to one at the north end. A Filtration System could be devised to service both systems.

Also, of concern is the prospect of steelhead fish entering the Reservoir. A diversion spill-dam at the northern end of the lake may be structured in such a way as to minimize that possibility.

A divided Lake has both environmental and functional benefits. Hopefully, the Concept will be given consideration in the effort to restore ground water.
COLLEGE LAKE - DIVISIONAL CONCEPT

- Existing Weir and Pump House
- South Lake Dispersement System
- Wetland Habitat
- Reservoir, Potential Capacity 3000 acre feet
- Farmland Retrieval 250 acres
- Wildlife Habitat
- Casserly Creek Course (uninterrupted)
- North Lake Filtration Installation
- Silt Collection and Diversion Basin
- Paulsen Road Bridge
- College Lake Basin Expansion Area Potential Capacity 1000 acre feet Farmland Retrieval
- Paulsen Road Water Dispersement System
- Paulsen Road Reconstruction with Silt base
- Santa Cruz County Fairground and Habitat Access Trail
- Potential Site Acquisitions
- Letter L Attachment
Letter L:  Ted Remde

L-1:  The comment provides a conceptual diagram of an alternative for College Lake for the BMP Update. This conceptual plan proposes dividing College Lake into two sections with a natural, earth-filled levee running north-south. The levee would create a 3,000 AF capacity reservoir on the west side of the levee while the smaller portion on the east would be designated as wetland. The wetland portion of the lake would support wildlife habitat and allow Casserly Creek to flow through, adjacent to the levee, from north to south. Water in the reservoir would support local farmland. The proposal suggests securing surrounding lands at the northwest and southeast of the site to allow for basin expansion through cut and fill excavation. Additional improvements include the development of restoration and trails habitat area.

This alternative concept was provided to the PVWMA for their review. The Agency responds with acknowledgement of the level of effort presented in the comment and requests the commenter to please refer to Master Response #1 regarding program-level EIR versus project-level EIR level of detail and CEQA requirements. PVWMA appreciates the thorough review of the College Lake project and the recommendations regarding project design and operation. However, those design and operational details will be refined during detailed design and project-specific CEQA analysis. PVWMA looks forward to continued work with the commenter to develop a project that meets the project objectives and minimizes project related impacts. (PVWMA, January 15, 2014)

The Draft and Final EIR provide a comprehensive evaluation of the projects and the alternatives’ environmental impacts in compliance with CEQA and the State CEQA Guidelines and in accordance with professionally accepted methodology for the evaluation of environmental resources. The CEQA Guidelines state that an EIR need not consider every conceivable alternative to a project. Alternatives considered must include those that offer substantial environmental advantages over the proposed project and may be feasibly accomplished in a successful manner considering economic, environmental, social, technological, legal or other factors. The EIR is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. Please refer to Master Response #3 regarding Alternatives. This alternative or variations thereof suggested by commenters would not result in a new significant impact beyond those previously analyzed in this Draft EIR or substantially lessen the extent of a previously identified significant impact.

L-2:  Total water demand in the Delivered Water Zone greatly exceeds the current available supply of supplemental water available to be delivered through the Coastal Distribution System (CDS). PVWMA metering data verifies this existing demand. Additionally, modeling has shown that providing water to the impacted coastal zone offers the greatest benefit to protecting against seawater intrusion. The comment stating that “The project is foreseen as providing potential cost saving as compared to the plan described in the 2012 Basin Management Plan Update” is not a comment on the EIR but a comment on the cost benefit of the project. Under CEQA, an environmental document should discuss the economic effects of a project only where such effects have the potential to cause a physical change in the environment. The environmental analysis here has not identified any physical change or potentially significant impacts to the physical environment that is anticipated or reasonably likely to result from any economic effects of the project or any project alternative. This comment is directed to the PVWMA Board for their consideration during project deliberations. (PVWMA, January 15, 2014)
L-3: Please refer to Master Response #1 regarding program-level EIR versus project-level EIR level of detail and CEQA requirements.

PVWMA appreciates the thorough review of the College Lake project and the recommendations regarding project design and operation. However, those design and operational details will be refined during detailed design and project specific CEQA analysis. PVWMA looks forward to continued work with the commenter to develop a project that meets the project objectives and minimizes project-related impacts. (PVWMA, January 15, 2014)

L-4: The commenter opines on the proposed conceptual approach or alternative and its benefits to steelhead. There is no data on the adult steelhead migration into or through College Lake at this time. In addition, for all the diversion projects in the BMP Update, project-level analysis of fisheries flows and fish habitat impacts will be conducted in consultation with, and permitted by, the responsible state and federal resource agencies at the time of project-level design.

The State CEQA Guidelines (see CEQA Guidelines §15126) address requirements for an EIR’s selection and evaluation of alternatives to a project, and focuses alternatives to those which could eliminate significant adverse impacts of the project, or reduce them to a level that is less-than-significant.

Please refer to Master Response #1 regarding program-level EIR versus project-level EIR level of detail and CEQA requirements.
Potential impacts

Ebird data indicate that College Lake is one of the most intensively used wintering habitats for migratory waterfowl on the Pacific Coast. The wetland's value to waterfowl, particularly tipping duck species, stems from several factors — shallow, open, freshwater habitat, food provided by agricultural crop residues and marsh vegetation, and large area to minimize flushing.

The increased height of the weir and its use to impound water could reduce the extent of shallowly flooded habitat during fall and winter months when waterfowl are present, a potentially significant impact for tipping ducks. Water storage could reduce waterfowl food production in several ways: by reducing the area of emergent marsh habitat, by reducing crop production, or by increasing sedimentation. The potential impact of the proposed College Lake alternative on the lake’s avian resource is potentially significant.

Mitigation and monitoring

Establish a mitigation and monitoring program with the objective of allowing no significant decrease of waterfowl within the project area.

Monitoring measures:

1. Monitor winter waterfowl populations from 2013 through 2018 to establish a baseline of use. Take a weekly inventory of the numbers and location of waterfowl utilizing the lake from November 1 through March 31. Sample feeding behavior and correlate with water depth and food availability.

2. Continue to monitor winter waterfowl populations during and after construction of the new dam. Implement management measures as necessary to maintain current waterfowl populations.

Mitigation measures:

1. The PVWMA shall manage the timing of water withdrawals to insure that the reservoir is drained annually in time to allow production of waterfowl food by agricultural crop residue, direct planting or habitat enhancement, on minimum 80% of inundation area.

2. The PVWMA shall itself pursue, or develop partnerships to pursue, acquisition and management of available agricultural land adjacent to the project area. Management shall include continued agricultural production or wetland restoration.
3. The dam spillway shall be designed to allow passive backflow from Corralitos Creek. This could provide a hydrologic basis for delaying full impoundment of the College Lake storage basin until late winter or spring, to prolong shallow inundation for tipping ducks.

4. The PVWMA shall prepare and implement an integrated management plan for College Lake to maximize biotic values in conjunction with water resource operation. The plan shall incorporate monitoring and adaptive management to maintain waterfowl and other wildlife populations. The plan shall analyze ecological processes, provide programs to enhance biomass and species diversity, and establish protocols to adjust management measures in response to monitored outcomes. At minimum, the management program shall evaluate methods and feasibility of the following habitat maintenance and enhancement measures:

- Evaluate burning, selective vegetation removal / tree cutting, manual tilling, livestock disturbance, recontouring and other measures to control invasive species and foster waterfowl food production in palustrine habitats, with initial emphasis on disturbed, weedy habitats, willow forests and wetland / upland transition habitats.
- Work with farmers to enhance waterfowl food production through winter cover crops, habitat enhancement during growing season and beneficial crop residues.
- Evaluate cooperative management of agricultural activities and non-cultivated habitat in adjoining uplands to provide forage and cover for waterfowl and other wildlife
- Control lake water levels to maximize shallow, freshwater habitats accessible to tipping ducks during winter months. Evaluate the feasibility of using water in Corralitos Creek to augment flows from Casserly Creek, including engineering analysis as appropriate.
- Consider establishing a levee, weir and pump system on the two upper branches of the lake to:
  - Prolong the period of shallow inundation in upper branches by segregating from main reservoir
  - Enhance palustrine habitat
### Total Numbers of Waterfowl, Pacific Coast Locations

**Ebird Date:** Sum of High Counts for All Species

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Letter M Attachments
**Letter M Attachments**

**Ratings for Tipping Duck Species, Top Ten Pacific Coast Sites**

*Bird Data. Rating for each site is \( T \times Q / 1,000, \)
Where \( T = \text{sum of high counts for all species} \)
\( Q = \text{number of species observed} \)

*To prevent unusually high counts from single species from skewing the data, the highest count was omitted.*

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Tipping ducks species that occur regularly in California include mallard, pintail, gadwall, American wigeon, wood duck, northern shoveler, cormorant teal, blue-winged teal and green-winged teal. Number of species was a measure of overall diversity and included all duck species observed; not only among tipping ducks, but also including geese, tundra ducks, vagrants and hybrids. High count totals were limited to tipping ducks.
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<th>San Joaquin Wildlife Sanctuary (map)</th>
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LETTER M:  JERRY BUSCH

M-1: The comments have already been considered or addressed in this Final EIR. Please refer to response J-5.

M-2: The comments have already been considered or addressed in this Final EIR. Please refer to response J-5.

M-3: The comments have already been considered or addressed in this Final EIR. Please refer to response J-14.

M-4: The comments have already been considered or addressed in this Final EIR. Please refer to response J-15.

M-5: The comments have already been considered or addressed in this Final EIR. Please refer to response J-16.

M-6: The comments have already been considered or addressed in this Final EIR. Please refer to response J-19.
My name is Allen Harryman and I am the President of the Board of the College Lake Reclamation District.

Our Reclamation District was formed in 1920 and has been the only party managing College Lake since that time. Our Reclamation District has the authority under state law to pump the water out of College Lake to reclaim the land for agricultural production. This is a unique kind of legal authority which would make it advantageous for PVWMA to partner with our Reclamation District to obtain the pumped water that would benefit the aquifer – and hence the entire community.

We have managed College Lake for 93 years now and are proud to report that we have a win-win-win situation going on out there

1. We have a win for agriculture because we reclaim a sizeable amount of prime farmland and raise 2 or 3 crops each growing season.
2. We have a win for the fish because we have a thriving steelhead population using College Lake, its canals and the surrounding waterways.
3. We have a win for the waterfowl because we have one of the most heavily used prime waterfowl habitats in the State.

The good news is that we can add one more win to this list – a win for the PVWMA and the aquifer and community it serves. We regularly pump enough water out of College Lake to provide the amount of water your College Lake Project seeks to pipe down to the Coastal Distribution System.

We have recently been discussing with your staff how our current operations could provide the needed water while keeping the wins for agriculture, fish and waterfowl in place. We are very encouraged by these discussions. We will be having further discussions with your staff and technical and legal people. We hope your Board will support these efforts. Thank you.
LETTER N:  ALLEN HARRYMAN, PRESIDENT OF COLLEGE LAKE RECLAMATION DISTRICT

N-1:  Comment noted. Please refer to response H-1.

N-2:  Comment noted. Please refer to response H-4.

N-3:  Comment noted. Please refer to response H-4.

N-4:  Comment noted. No further response is required.
Public Hearing Comments for the Draft Environmental Impact Report for the BMP Update

The following is a summary of the public hearing comments on the Draft Environmental Impact Report for the BMP Update, as provided from a transcript prepared by the PVWMA. Comments from the public pertaining to the EIR have been summarized below based upon a review of the tape of the hearing, as well as notes from the hearing.

In the majority of oral testimony presented below, members of the public provided a written letter or set of comment as part of their testimony. The letters were for the most part, specifically following the public testimony. The written testimony and the responses to comments provided are located in the preceding set of letters and responses on the Draft EIR. As such, the responses to the public testimony for the majority of the items presented have already been addressed.

The following identifies the public testimony, the speakers and then provides the location where the responses are provided in the preceding responses section. Where the testimony brings up a new item that has not been presented and responded to in previous sections, responses are provided below.

<table>
<thead>
<tr>
<th>Public Hearing Speakers</th>
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<tbody>
<tr>
<td>Ted Remde</td>
<td>See Responses under Letter L</td>
</tr>
<tr>
<td>Charlie Banivac for Alan Harryman</td>
<td>See Responses under Letter N</td>
</tr>
<tr>
<td>Jerry Busch</td>
<td>See Responses under Letter J</td>
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Note: only comments specific to the EIR and BMP have been included in this section.

**Public Hearing Comments by Speaker**

**Ted Remde**

My name is Ted Remde, and I was here a month or so ago and made a few comments, and I've put all those comments into a better format today, I think, and I'd like to pass a couple things out if I may, first to the Board and then to the public if they'd like. I'm speaking to the College Lake portion of the Basin Management Draft Plan. There seems to be only one concept that’s been put forth so far, and that's the direct pipeline from College Lake to the treatment plant in the coastal distribution system. I question the necessity of that. In the research that I've done and in speaking with Brian Lockwood and Mary Banister, it seems that the current output from the treatment plant and well output in that area seems to be satisfying the need; in other words, the need hasn't exceeded supply and Mary has indicated even that there’s times when the growers have to be persuaded to use the treated water. If that's the case-if demand hasn't exceeded supplies-that means there's an excess of supply or at least it hasn't aroused the compassion of the people who use it to use it more. I don't foresee how that's going to change because I don't think there's a whole lot more farmland that's going to be put into production than is currently being farmed. And it's a 28 million dollar-plus expenditure to get the pipeline from College Lake down there and if the water isn't needed, it's a waste. So I've come up with a concept and bounced it off a few folks, and they seem to think it has some merit and it's worth pursuing an alternative. Cost-wise, I don't know if it's going to be less; I think it will be. But it will have to be analyzed, and so I'm going to read this to you to keep me on track and save some time.
The accompanying diagram which you have in front of you depicts College Lake divided into two parts and separated by an earth-filled levy. That would be probably (a) rock-lined or steel casing-lined levy. The smaller part is designated as a wetland and wildlife habitat with Casserly Creek free flowing through it adjacent to the levy from the northern inlet of the lake basin to a southern outlet near the existing weir. In other words, it would bypass the weir if there is a weir there at all and needed at all. The larger portion on the opposite side of the levy from the habitat side is designated as a reservoir. The distribution pipeline, you'll notice, is at the northern, not the southern end, and provides lake water to the surrounding farmland. That's just a portion of what could be a pipeline. It could be expanded all the way up to Casserly Road to Green Valley Road—I haven't depicted anything because frankly, I don't know how it would lay out. The purpose of this concept is four-fold:

1. It separated a wetland and preservation of wildlife;
2. Separated wetland and water distribution system;
3. Sustainment of most farmland under current cultivation; and

Corresponding benefits include reduction of underground pumping, silt removal facilitation, basin enlargement by cut-and-fill excavation, basin expansion by land acquisition, possible cost offsets by county and state funding for improvement of Paulsen Road, and extension access to the Fairgrounds. Inner Lake and subdivision flood protection with an elongated and raised burm which effectively raises the basin height, increasing the capacity of the lake and recreation interaction with the adjoining Fairgrounds connecting the hiking trails on levy and around the habitat. The project is foreseen as providing potential cost savings as compared to the plan described in the 2012 Basin Management Plan Update. Transporting the water is expensive in either scenario but localized use seems more practical, and two, is there a need for additional water—and we talked about that-piped from College Lake to the treatment plant and the coastal distribution system? Supply and demand CDS data seems to indicate current supplies adequately meeting demand. What are the variables of demand to predict supply? While water has previously been pumped directly from the lake to the adjacent farmland for the production of rural crops. Current regulations require filtration and probably treatment of extracted water. It may be possible, however, to minimize the cost of treatment and filtration by installation of an on site detection and eradication devices and a variation of extraction systems. For example, a vertical-flowed system rather than the horizontal discharge system. It may be beneficial to reconstruct a weir and pump station and a south-of-lake distribution system in addition to the one at the north end. I'm not speaking of taking it much further than probably (inaudible) Drive or the opposite direction over toward Corralitos. A filtration system could be devised to service both systems; in other words, a north lake system and a south lake system. Also of concern is the prospect of steelhead fish entering the reservoir. The purpose being that the reservoir is strictly for water storage and not as a habitat. A diversion spill dam at the northern end of the lake could be constructed in such a way as to minimize that possibility.

A divided lake has both environmental and functional benefits. Hopefully the concept will be given consideration in the effort to restore groundwater. Are there any questions?

Charlie Banivac (sp). Alan Harryman, on behalf of Alan Harryman, President of the College Lake Reclamation District
My name is Charlie Banivac (sp). Alan Harryman the President of the College Lake Reclamation District is ill this evening, so he asked me to speak to you.

My wife, Jana Brakavich-Banivac is going on the Board in December and she also is ill and asked me to speak to you.

Our reclamation district was formed in 1920 and has been the only party managing College Lake since that time. Our reclamation district has the authority under state law to pump water out of College Lake to reclaim the land for agricultural production. This is a unique kind of legal authority which would make it advantageous for PVWMA to partner with our reclamation district to obtain the pumped water that would benefit the aquifer and hence, the entire community. We have managed College Lake for 93 years now and are proud to report that we have a win-win-win situation going on out there.

Number one: We have a win for agriculture because we retain a sizable farmland and raise numerous crops each growing season.

Number two: We have a win for the fish because we have a thriving steelhead population using College Lake, its canals and surrounding waterways.

Number three: We have a win for the water foul because we have one of the most heavily used prime water foul habitats in the state.

The good news is that we can add one more "win" to this list: A win for the PVWMA and the aquifer and community it serves. We regularly pump enough water out of College Lake to provide the amount of water your College Lake project seeks to pipe down to the coastal distribution system. We have recently been discussing with your staff how our current operations could provide the needed water while keeping the wins for agriculture, fish and water foul in place. We are very, very encouraged by these discussions and will be having further discussions with your staff and legal people. We hope your board will support these efforts. Thank you.

Jerry Busch

Good evening, I’m Jerry Busch, one of the founding members of the Watsonville Wetlands Watch, but here today representing only myself. The College Lake Wetland is one of the most important habitats on the entire Pacific Coast for water foul. I base this statement on a review of (inaudible) data for all of the lakes, estuaries and wetlands on the West Coast. Based on total numbers of water fowl and diversity of species, only four water bodies rate higher than College Lake: Humboldt Bay, Arcata Marsh, Grey's Harbor in Washington and Morro Bay. And only two - Humboldt Bay and Arcata Marsh - rate ahead of College Lake in value to the nine Tipping Duck species that regularly occur in the state. Regionally, College Lake ranks higher for water fowl than Pescadero Marsh, Elkhorn Slough, Salinas River mouth and the entire Watsonville slough system, although the greatest value is in concert with all of these together. Most other wetlands that rank close to College Lake are wholly or partially protected as state or national preserves. If it was not for the impending development of a water source on the College Lake wetlands, I would be actively pursuing its acquisition. Even with water development, a partnership with a land trust or public wildlife agency could be appropriate to maintain the wetlands' natural values in conjunction with water management and help guide monitoring, enhance public access and promote continued agricultural use. Part of the reason for the high rating of College Lake for water fowl is fresh water. More than 90% of the coastal wetlands in California, and an even
higher percentage of the fresh water wetlands along the coast of have been lost to a variety of types of development. The great scarcity and value of coastal fresh water wetlands is universally recognized by public organizations and by many private groups, and underscores the critical importance of preserving College Lake wetland habitat values. The intense water fowl use of the College Lake wetlands is related to shallow inundation: Tipping Ducks can access food no deeper than about ten inches below the surface, and the gradual ebb and flow of shallow flooding across the marsh habitat and drowned agricultural fields throughout the winter provides excellent access. This moving lens of shallow habitat cumulatively covers much more area than would a reservoir facility that is maintained at a static depth. Because of the rarity of this freshwater wetland and its value to avian and other wildlife, its loss, or even the loss of the food source production should be considered a potentially adverse impact by the EIR. If sedimentation resulting from water impoundment rendered agriculture unfeasible, or the growing period was shortened sufficiently to discourage agriculture activity, food availability would plummet. Since the EIR provides no numbers on the acreage of jurisdictional wetlands or the effect of impoundment on water fowl food, the agency should consider the potential loss as significant and insert programmatic mitigation measures. The commitment by the PVWMA to draw down the proposed impoundment early enough in the year to allow one crop rotation, at least, is critical to maintaining the avian resources on the College Lake wetlands. Perhaps equally important would be the commitment by the agency to fill the lake as slowly as possible in the winter to maximize the period of shallow inundation for the benefit of tipping water fowl.

As an alternative to relying solely on Casserly and Green Valley creeks to fill the reservoir, please include in the FEIR consideration of filling the lake at the tail end of winter, and utilizing water from Corralitos Creek where the mean flow of February, March and April is over 10,000 acre feet and naturally backflows into the basin. When originally constructed in the 1920s, the weir was required only to dry out a small pond in the middle as it was described to me; the rest of the lake area was a natural wetland. One way of compensating for loss of shallow habitat itself would be to establish as a programmatic mitigation measure a program to plant water fowl food as a cover crop during the non-growing season. The weir should be operated to allow time for the plants to set seed at least, and if not that, at least to germinate. Farmers should also be encouraged to leave crop residues in place over winter if possible. The water fowl that use the lake provide usable nitrogen and phosphorous for the growing season.

I would like to request that the water fowl food enhancement program be included as a mitigation measure in the EIR. The FEIR should require a mitigation and monitoring plan premised on no significant decrease of water fowl use, preferably within the project area. And, mandate a preconstruction monitoring program to determine the baseline water fowl use with the post-construction program to monitor water fowl numbers and feeding behavior. The FEIR should program mitigation measures necessary to maintain and increase water fowl numbers based on monitoring and adaptive management. Another option to the measures I’ve described is to place low levies and pumps below the northern arms of the wetlands to protect shallow habitats in the upper reaches. These levies could be camouflaged with willow planting and would provide the secondary benefit of inhibiting sediment and pollution flow into the wetland. Similar check-downs installed in Hanson Slough have resulted in significant improvements to water quality downstream and have produced good quality riparian habitats surrounding the ponded area. So, if you have these low levies or low berms in the upper reaches of the lake, you can maintain those at lower levels that are accessible to groups of water fowl, particularly Tipping Ducks. By requiring a monitoring program for College Lake water fowl and mandating an adaptive management program that explores water and habitat mechanisms to minimize adverse impacts, the FEIR will establish a commitment by the PVWMA to manage this very valuable wetland resource in a way that sustains its biological productivity, both for wildlife and for agricultural production. I
strongly support the agency in pursuing these measures and working them into the EIR so that they are established and represent to the public what the agency intends to do here. I look forward to working with the PVWMA to enshrine these resource goals in the environmental documents and to develop policies and programs that, moving forward, allow development of the watershed's water supply while maintaining and expanding the conjunctive uses that are currently working so well for the farmers and wildlife. Thank you.

CAVANAUGH: Jerry, I'm curious, the birds and wildlife you're talking about, now that's an ephemeral lake so they move to another area, or are these migratory birds?

BUSCH: Yes, these are migratory birds that are wintering here, and then there's a group or a wave that moves through in the late winter, but they're here December through February.

CAVANAUGH: I'm surprised that's such an important wetlands for birds.

BUSCH: I knew it was important because I've seen the numbers previously, but I was surprised by the results myself. By using Google maps and looking at the aerial views of all these wetlands, most of the larger wetlands on the coast are either brackish or saltwater wetlands and Watsonville Slough is really blessed with extensive shallow freshwater wetlands; even Elkhorn Slough was primarily freshwater, so you can imagine that maybe the direct inspiration for naming this Pajaro Valley came from seeing a condor's wings but there had to be incredible numbers of water fowl just darkening the skies here before European settlement.

--End of Public Comment/Public Hearing Session--
O:   PUBLIC HEARING TESTIMONY, EIR COMMENTS MEETING, NOVEMBER 20, 2013

O-1: The comments have already been considered and addressed in the Final EIR. Please refer to response Letter L.

O-2: The comments have already been considered and addressed in the Final EIR. Please refer to response Letter L.

O-3: The comments have already been considered and addressed in the Final EIR. Please refer to response Letter N.

O-4: The comments have already been considered and addressed in the Final EIR. Please refer to response Letter J.
The following section provides revision to the text of the Draft EIR, in amendment form. The revisions are listed by page number. All additions to the text are presented in underline, and all deletions are shown in strikeout.

Page 3.4-28, the fourth bullet point under Primary Constituent Elements (PCEs) is revised as follows:

- Estuarine areas that provide uncontaminated water and substrates; food and nutrient sources to support growth and development; and connected willow shallow water areas and wetlands to conceal and shelter juveniles. Estuarine areas include coastal lagoons that are seasonally stable, predominantly freshwater-flooded habitats that remain disconnected from the marine environment except during high streamflow events, and tidally-influenced estuaries that provide a dynamic willow shallow water environment.

Page 3.4-31, the discussion on the coastal review wetland definition is revised as follows:

- Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface of the land or is covered by willow shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes (at least 50 percent of the aerial vegetative cover); (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by willow shallow water at some time during the growing season of each year.

Page 3.4-42, Mitigation Measure BIO-1c is revised as follows:

BIO-1c: Where impacts to mixed riparian or willow riparian forest occurs, revegetation measures will be developed as part of a revegetation plan approved by CDFW, RWQCB, and if applicable, USACE and/or California Coastal Commission, pursuant to regulatory agency permitting. The revegetation plan will include specific plans for the revegetation of impacted riparian forest, and for restoration of nearby creek riparian habitat, as appropriate. Upon approval by Santa Cruz County and other applicable agencies, the PVWMA may choose to coordinate with the Natural Resources Conservation Service (NRCS) and the Santa Cruz County Resource Conservation District (RCD) to develop and implement the required riparian revegetation, including providing funds to the RCD for their implementation of the revegetation. Revegetation measures will include the use of locally obtained plant materials, detailed descriptions of installation methods, after-installation care, weed control measures, success criteria, and corrective measures if the success criteria are not met. Revegetation will include a 3:1 replacement ratio (or an equivalent habitat replacement strategy as agreed upon by PVWMA and regulatory agencies) for the acreage of riparian habitat lost and for all trees lost as result of the project to account for the reduced habitat values of smaller trees compared with mature vegetation. Success criteria for replanting will be less than 20 percent mortality of individual species yearly for 5 years. Replanting will be conducted each year that plantings exceed 20% mortality, such that 80% plant survival is
Changes to the Draft EIR

Denise Duffy and Associates, Inc.

Page 3.4-47, the following text is added to the end of Mitigation Measure BIO-2i:

BIO-2i.1: Develop Adaptive Management Plan for College Lake Waterfowl Management and Multi-species Mitigation. To mitigate impacts to existing waterfowl or waterfowl habitat at College Lake, an Adaptive Management Plan for waterfowl management and multi-species mitigation will be developed with the consultation of the state and federal resource agencies and College Lake stakeholders. The Adaptive Management Plan for waterfowl management and multi-species mitigation at College Lake will develop multi-year baseline waterfowl population and habitat use data for future project design, environmental permitting and CEQA impact analysis of project-level alternatives. To the extent practical, it will integrate the results of ongoing College Lake hydrology and hydraulic analyses, as well as future consultations with state and federal agencies on fish flows and fish bypass criteria.

The Management Plan will be specific to the level of impact and mitigations under site-specific and project implementation conditions. However, the following standards will apply as defined during project-level design, regulatory review and CEQA analysis: The Management Plan should include terms and conditions from applicable permits and agreements as appropriate and define provisions for monitoring assignments, scheduling, and responsibility. The Management Plan should also include habitat replacement and revegetation, protection during ground-disturbing activities, performance standards, maintenance criteria, and monitoring requirements for temporary and permanent impacts consistent with mitigation in this EIR and regulatory requirements during project-specific review. The Management Plan will be in conformance with the biology mitigation measures from this EIR, and will also include terms and conditions consistent regulatory requirements as applicable from the USFWS, USACE, SWRCB, and CDFW permits during project design and permitting as applicable. The Management Plan will be prepared for project level project implementation as determined needed through future CEQA review and consultation with agencies as required under CESA and ESA.

The above change is reflected in Table S-2, Summary of Significant Impacts and Mitigation Measures on Page S-11, attached as Appendix A.

Page 3.9-9, under the second and third paragraph under Groundwater Recharge and Flow, the following clarifying text is added to the discussion of groundwater recharge estimates. This text clarifies that the discussion addresses previous studies in the basin and is not intended to conflict with the groundwater recharge estimates from the BMP.

Groundwater Recharge and Flow

Groundwater recharge was estimated at 40,550 acre-feet according to HEA (1978) and at 30,770 acre-feet according to the USGS in their work on the Pajaro Valley Hydrologic Model (personal communication). (Note: This notation and discussion addresses previous studies in the basin and

maintained each year of the 5-year monitoring period. Cover provided by invasive, non-native plant species shall not exceed 5% during each year of the 5-year monitoring period.

The above change is reflected in Table S-2, Summary of Significant Impacts and Mitigation Measures on Page S-8. Revised Summary Table S-2 is attached as Appendix A.
is not intended to conflict with the more current groundwater recharge estimates from the BMP as discussed further in this chapter and as reported in the BMP Update). Rainfall is the major source of groundwater recharge in the Pajaro Valley, principally through the sandy and very sandy soils of the primary recharge areas. The main area of groundwater recharge by rainfall infiltration in the Pajaro Valley area is north, east and west of Corralitos. This area is underlain by the Purisima Formation and the Aromas Red Sands. There is also a secondary area that is favorable for rainfall infiltration between the Pajaro River and Corralitos. This area is underlain by the Purisima Formation, Aromas Red Sands and terrace deposits.

Percolation through all stream beds in the valley provides an average annual recharge estimated between 10,400 acre-feet (HEA, 1978) and 14,470 acre-feet (USGS, personal communication), which is a significant portion of total recharge to the Pajaro Valley aquifers. (Note: This notation and discussion addresses previous studies in the basin and is not intended to conflict with the recharge estimates from the BMP as discussed further in this chapter and as reported in the BMP Update). According to Muir (1972), the best area for surface infiltration and artificial recharge is in the bed of the Pajaro River from Pajaro Gap to Murphy Crossing. The streambed and soil is predominantly sand in this area, and there is no confining clay layer. Water recharged would be expected to flow into the alluvium, terrace deposits, Aromas Red Sands and the Purisima Formation. Other favorable areas include the streambeds and adjacent soils in and along Corralitos and Casserly Creeks, and in Green, Pleasant and Larkin Valleys. About 60 percent of channel-percolation recharge is through beds of these creeks draining the Santa Cruz Mountains north and east of Watsonville, and about 40 percent from the Pajaro River (Hecht and others, 2010). These areas correspond with the primary recharge areas noted in Figure 3.9-7.

Page 3.9-24, the first and second paragraphs are revised as follows to clarify the maintenance authority and operation of the pumps at Harkins Slough as described below:

Harkins Slough is an earthen drainage channel, which carries irrigation and precipitation runoff from primarily agricultural lands in the vicinity of the City of Watsonville towards the Pacific Ocean. Harkins Slough discharges to Watsonville Slough under high flow events but is hydrologically controlled and impeded during much of the year by a concrete block weir structure. While this leaky weir structure somewhat limits tidal backflows from the mouth of Watsonville Slough and limits flooding upstream, it does not completely stop freshwater flows from moving downstream, along and out of Harkins Slough. Originally, the main purpose of the weir was to prevent flows from going to Harkins Slough. However, during current periods of low flow (most of the year) most of the flow from Watsonville Slough flows through the weir and upstream into Harkins Slough. In addition, at moderate to high flows stormwater passes to Harkins Slough across the Knox Property. In the past, the Santa Cruz County Public Works Department Pajaro Storm Drain Maintenance District operated the Harkins Slough pump station at this location to manage flooding of agricultural fields by pumping water from Harkins Slough over the concrete weir to Watsonville Slough.

Since 2002, freshwater winter flows for groundwater recharge and irrigation use have been diverted from the slough. The PVWMA Pajaro Storm Drain Maintenance District pumps water is pumped from Harkins Slough to a sand filter facility adjacent to the pump station before it is
delivered via pipeline to a recharge basin approximately one (1) mile away. The water is allowed to percolate and is then withdrawn through wells to meet irrigation demand. This short term subsurface storage allows PVWMA to use surface water supplies while helping to reduce seawater intrusion within the basin. Water is typically diverted from December to May, beginning after the winter rains have sufficiently reduced the salinity of the surface water to appropriate levels. A water rights permit from SWRCB allows for up to 2,000 acre feet per year (AFY) to be withdrawn from Harkins Slough or Watsonville Slough.

Page 3.9-24, the footnote referencing the information above is revised and deleted as shown below:

The pump station is owned by the Santa Cruz Storm Maintenance District (L. Gutierrez, personal communication, September 9, 2013).

Page 3.9-58, the discussion of localized changes in groundwater levels in the middle of the page is revised as follows:

Impact HWQ-3: Overall, the BMP Update will raise groundwater levels locally in the project areas; however, basin-wide groundwater elevations will not increase. Higher groundwater levels will result in reduced pumping costs and marginally greater pumping rates from existing pumps in wells. Therefore, the BMP Update has an overall beneficial impact on from reduced pumping costs and marginally greater pumping rates from existing pumps in wells, and a beneficial impact by raising groundwater levels in localized project areas but not basin wide. The College Lake component of the BMP Update, however, may seasonally reduce groundwater levels from their baseline elevations at localized areas downstream of the lake. In these areas, project operation could decrease the annual production rate of existing nearby irrigation wells due to localized drawdown. Under extreme conditions, existing or planned land use(s) may not be fully supported. If pumping rates are reduced to the extent that land uses cannot be fully supported, this would represent a potentially significant impact that can be reduced to a less-than-significant level with mitigation. This impact, however, is unlikely; and would only occur locally only in some years and seasons.

The above change is reflected in Table S-2, Summary of Significant Impacts and Mitigation Measures on Page S-21. Revised Summary Table S-2 is attached as Appendix A.

Page 5-14, Add footnote to 5.5.5 Expanded College Lake, after first paragraph:

Added Footnote on College Lake concept proposal raised during Draft EIR review: An alternative concept to divide College Lake was proposed during the public review period for the Draft EIR. This conceptual alternative was raised by Ted Remde and fully described in Letter L in Section 4 of this Final EIR. The proposed design suggests an alternative be considered that divides College Lake into two sections with a natural, earth-filled levee running north-south. The proposal includes a levee and the creation of a 3,000 AF capacity reservoir on the west side of the levee with a smaller portion on the east to be designated as wetland. A number of details are provided in the proposal regarding measures to address off-site water treatment and water filtration. The existing
alternatives addressing College Lake adequately address, at a program level, the impacts and comparative merits of the alternatives in accordance with CEQA. Alternative projects and components may be pursued in the future if the selected alternative portfolio does not meet the planning-level expectations of the BMP. Future alternatives would require applicable CEQA compliance prior to future discretionary actions.
Appendix A
Final EIR Revised Summary Table S-2
**Final EIR Revised Table S-2 Summary of Significant Impacts and Mitigation Measures**

KEY TO APPLICABLE COMPONENTS: (A) Increased Recycled Water Storage at Treatment Plant, (B) Harkins Slough Recharge Facilities Upgrades, (C) Watsonville Slough with Recharge Basins, (D) College Lake with Inland Pipeline to Coastal Distribution System (CDS), (E) Murphy Crossing with Recharge Basins

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<td><strong>3.1 Aesthetics</strong></td>
<td>AE-1a: PVWMA shall use design elements to enhance visual integration of the proposed above-ground facilities with their surroundings. Proposed structures shall be painted low-glare earth-tone colors that blend with the surrounding terrain, unless colors otherwise specified by regulatory agencies, such as purple facilities for recycled water systems. <strong>(Applicable Components: A, D, and E)</strong></td>
<td>AE-1b: PVWMA shall use design elements and landscaping to enhance visual integration of the College Lake pumping and filtration facilities with their surroundings. Proposed facilities shall be painted low-glare earth-tone colors that blend closely with the surrounding terrain. Vegetation shall be planted at proposed facilities to provide screening from views of the facilities from Highway 152. <strong>(Applicable Component: D)</strong></td>
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<td><strong>Impact AE-1:</strong> Implementation of the BMP Update and future construction of identified BMP Update components would not generally alter the visual character of the sites or surrounding area, although some of the structural development may be visible. This represents a potentially significant impact that will be reduced to a less-than-significant level with the incorporation of mitigation measures. <strong>(Applicable Components: A, D, and E)</strong></td>
<td>AE-1c: PVWMA shall shield the weir with vegetation to minimize textural contrasts with the surrounding vegetation using grasses, shrubs and trees typical of the immediately surrounding area. <strong>(Applicable Component: D)</strong></td>
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<td><strong>3.2 Agriculture &amp; Land Use</strong></td>
<td>No feasible mitigation is available; this impact is significant and unavoidable. <strong>(Applicable Components: B, C, D, and E)</strong></td>
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<td><strong>Impact AG-1:</strong> Implementation of BMP Update components would result in the permanent conversion of agricultural lands. This represents a significant and unavoidable impact. <strong>(Applicable Components: B, C, D, and E)</strong></td>
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| **3.3 Air Quality & Greenhouse Gas**                                  | **Mitigation Measure AQ-1:** The construction contractor shall implement a dust program that includes the following elements:  
  - Water all active construction sites at least twice daily  
  - Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard  
  - Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites  
  - Sweep daily (with water sweepers) all paved access roads, paved parking areas and paved staging areas at construction sites  
  - Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets. | |
| **Impact AQ-1:** Implementation of the BMP Update components would temporarily generate criteria air pollutants, particularly PM_{10}, and may expose sensitive receptors to substantial pollutant emissions during construction. This is a potentially significant impact. With mitigation measures identified in this EIR, the impact would be reduced to a less-than-significant level. **(Applicable Components: A, B, C, D, and E)** | | |
Final EIR Revised Summary

Final EIR Revised Table S-2 Summary of Significant Impacts and Mitigation Measures
KEY TO APPLICABLE COMPONENTS: (A) Increased Recycled Water Storage at Treatment Plant, (B) Harkins Slough Recharge Facilities Upgrades, (C) Watsonville Slough with Recharge Basins, (D) College Lake with Inland Pipeline to Coastal Distribution System (CDS), (E) Murphy Crossing with Recharge Basins

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<td>- Hydroseed or apply (non-toxic) soil binders to inactive construction areas. However, do not apply these measures in operating agricultural fields under cultivation unless requested by the grower</td>
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<td>- Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).</td>
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<td>- Limit traffic on unpaved roads to 15 mph</td>
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<td>- Install sandbags or other erosion control measures to prevent silt runoff to public roadways</td>
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<td>- Replant vegetation in disturbed areas as quickly as possible</td>
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<td>- The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints. The name and telephone number of such persons shall be provided to the APCD Compliance Division prior to the start of any grading, earthwork or demolition. (Applicable Components: A, B, C, D, and E)</td>
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3.4 Biological Resources

Impact BIO-1: Construction of BMP Update components could result in impacts to potentially jurisdictional wetlands/waters of the U.S. and streambeds and banks under the jurisdiction of the U.S. Army Corps of Engineers, Department of Fish and Wildlife, Regional Water Quality Control Board, and/or California Coastal Commission. Potential direct impacts could occur from the loss of riparian or wetland vegetation and/or fill of wetlands or waters. Indirect impacts could occur due to sedimentation of rivers, creeks, or channels during or following construction activities, and impacts to and their function as wildlife and fishery habitat. This represents a potential significant impact which can be reduced to a less-than-significant level with the following mitigation measures. No operational impacts to wetlands or riparian

BIO-1a: Wetlands and riparian habitat will be avoided by project construction activities. All facilities and construction activities will be maintained outside the jurisdictional area defined by riparian or emergent wetland vegetation and applicable setbacks and buffers where feasible. Within the Coastal Zone, project improvements will be located 100 feet from coastal review wetlands. Within the City of Watsonville, development will be located 100 feet from riparian areas. Within the unincorporated areas of the County, yet outside the Coastal Zone, a setback of 30 feet and 50 feet will be established adjacent to intermittent and perennial streams, respectively. If complete avoidance of wetlands and riparian areas is infeasible and/or development occurs within a regulated buffer/setback area, impacts would be minimized through implementation of Mitigation Measures BIO-1b, BIO-1c BIO-1d, and BIO-1e. (Applicable Components: B, C, D, and E)

BIO-1b: Standard measures to maintain water quality and to control erosion and sedimentation will be implemented. These measures include:
- Restrict trenching across all waterways to low-flow periods.
- Exclude water from around the section of trench that is within the actively flowing channels. This will further reduce the potential for sediment or other pollutants to enter the waterways and impact downstream resources. The diversion will consist of water pillows, rock, sandbags, or other structural methods deemed most effective by the project engineer.
- Place sediment curtains downstream of the construction zone to prevent sediment disturbed during trenching activities from being transported and deposited outside of the construction zone.
Final EIR Revised Summary Table S-2 Summary of Significant Impacts and Mitigation Measures

KEY TO APPLICABLE COMPONENTS: (A) Increased Recycled Water Storage at Treatment Plant, (B) Harkins Slough Recharge Facilities Upgrades, (C) Watsonville Slough with Recharge Basins, (D) College Lake with Inland Pipeline to Coastal Distribution System (CDS), (E) Murphy Crossing with Recharge Basins

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| vegetation are anticipated due to the BMP Update. (Applicable Components: B, C, D, and E) | • Locate spoil sites so they do not drain directly into the waterways. If a spoil site drains into a channel, catch basins will be constructed to intercept sediment before it reaches the channels. Spoil sites will be graded to reduce the potential for erosion.  
• Prepare and implement a spill prevention plan for potentially hazardous materials. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting of any spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching the creek channels.  
• Store equipment and materials away from the waterways, outside existing levees or at least 50 feet from waterways, but within the pipeline right-of-way. No equipment or materials will be deposited within 100 feet of wetlands.  
• Provide proper and timely maintenance for vehicles and equipment used during construction to reduce the potential for mechanical breakdowns leading to a spill of materials into or around the creeks. Maintenance and fueling will be conducted in an area that meets the criteria set forth in the spill prevention plan (i.e., away from the creeks).  
• Prior to construction, install temporary construction fencing at the perimeter of the construction zone to prevent inadvertent equipment access or construction staging within adjacent riparian forest and/or coastal marsh habitats. This fencing will be signed in the field as “SENSITIVE HABITAT AREA — NO CONSTRUCTION ACCESS”. Monitor construction activities to verify compliance with the perimeter fencing and limits of construction access and staging and implement remedial action if non-compliance is noted.  
• Restrict limbing of riparian forest trees; if trees are limbed for construction access, document the impact and provide compensation as per Mitigation Measure BIO-1c. (Applicable Components: B, C, D, and E) |

BIO-1c: Where impacts to mixed riparian or willow riparian forest occurs, revegetation measures will be developed as part of a revegetation plan approved by CDFW, RWQCB, and if applicable, USACE and/or California Coastal Commission, pursuant to regulatory agency permitting. The revegetation plan will include specific plans for the revegetation of impacted riparian forest, and for restoration of nearby creek riparian habitat, as appropriate. Upon approval by Santa Cruz County and other applicable agencies, the PVWMA may choose to coordinate with the Natural Resources Conservation Service (NRCS) and the Santa Cruz County Resource Conservation District (RCD) to develop and implement the required riparian revegetation, including providing funds to the RCD for their implementation of the revegetation. Revegetation measures will include the use of locally obtained plant materials, detailed descriptions of installation methods, after-installation care, weed control measures, success criteria, and corrective measures if the success criteria are not met.
## Final EIR Revised Table S-2 Summary of Significant Impacts and Mitigation Measures

**KEY TO APPLICABLE COMPONENTS:** (A) Increased Recycled Water Storage at Treatment Plant, (B) Harkins Slough Recharge Facilities Upgrades, (C) Watsonville Slough with Recharge Basins, (D) College Lake with Inland Pipeline to Coastal Distribution System (CDS), (E) Murphy Crossing with Recharge Basins

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| Revergetation will include a 3:1 replacement ratio (or an equivalent habitat replacement strategy as agreed upon by PVWMA and regulatory agencies) for the acreage of riparian habitat lost and for all trees lost as result of the project to account for the reduced habitat values of smaller trees compared with mature vegetation. Success criteria for replanting will be less than 20 percent mortality of individual species yearly for 5 years. Replanting will be conducted each year that plantings exceed 20% mortality, such that 80% plant survival is maintained each year of the 5-year monitoring period. Cover provided by invasive, non-native plant species shall not exceed 5% during each year of the 5-year monitoring period. BIO-1d: Where impacts to coastal freshwater marsh occurs, revegetation measures will be developed as part of a revegetation plan approved by CDFW, RWQCB, USACE, and/or California Coastal Commission, pursuant to regulatory agency permitting. Upon approval by Santa Cruz County and other applicable agencies, the PVWMA may choose to coordinate with the Natural Resources Conservation Service (NRCS) and the Santa Cruz County Resource Conservation District (RCD) to develop and implement the required wetland revegetation, including providing funds to the RCD for their implementation of the revegetation. The revegetation plan will include specific plans for the revegetation of impacted coastal marsh, and for restoration of nearby wetland habitat, as appropriate. Revegetation measures will include the use of locally obtained plant materials, detailed descriptions of installation methods, after-installation care, weed control measures, success criteria, and corrective measures if the success criteria are not met. Revegetation will include a 3:1 replacement ratio (or an equivalent habitat replacement strategy as agreed upon by PVWMA and regulatory agencies) for impacted wetlands. If natural recovery is a viable strategy, then a wetland plant cover exceeding 50% should be attained after two growing seasons. Mitigation may occur via restoration, creation, or preservation of wetlands. Mitigation will occur at a site acceptable to permitting agencies and pursuant to Project permit requirements. If the compensatory mitigation includes restoration, enhancement, or creation of wetlands, a qualified biologist will monitor the designated wetland mitigation area for a minimum of five years to ascertain if the wetland mitigation is successful. Annual reports will be submitted to permitting agencies by December 31 of each monitoring year, describing the results of the monitoring and any remedial actions needed to achieve a minimum 3:1 habitat replacement ratio or equivalent for permanent impacts to wetlands and other waters. (Applicable Components: B, C, D, and E) BIO-1e: Where construction and/or facilities are placed within a riparian or wetland development setback area, indirect impacts to adjacent riparian and wetland vegetation will be minimized. Where feasible, buffer plantings of native trees and shrubs will be installed between the facility and the adjacent wetland or riparian area.
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| **Impact BIO-2:** Construction and operation of BMP Update components could result in a substantial adverse effect, either directly or through habitat modifications on; or substantially reduce the number or restrict the range of any wildlife species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Impacts could occur due to increased sedimentation in streams, dewatering of pools, reducing the wetted extent (including exposing CRF egg masses to desiccation or predation), habitat loss through vegetation removal, destruction of nests and burrows, and other construction disturbance. This represents a potentially significant impact; however, the impact would be reduced to a less-than-significant level with incorporation of the following mitigation measures. **(Applicable Components: B, C, D, and E)** | BIO-2: *Mitigation Measure BIO-2:* During the development of BMP Update components, PVWMA will implement conservation measures during construction activities to avoid and minimize incidental take and significant impacts on individuals, populations, or habitat of special-status wildlife species to the maximum extent practicable. The following general measures will be incorporated into the planning and construction of BMP Update components, as appropriate, to ensure that the effects of the BMP Update are avoided, minimized, and mitigated.

Suggested species-specific measures for CA red-legged frog, WPT, and steelhead are included, as well, although BMP Update components that proposed to divert surface waters beyond existing entitlements would require future additional project-level CEQA analyses of specific diversion and operation plans to support water rights application and environmental permits. It is assumed that project-level biological studies and analysis for these BMP Update components will be required to support those future permits and biological opinions.

BIO-2a: During project activities, all trash that may attract predators will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas. **(Applicable Components: B, C, D, and E)**

BIO-2b: All refueling, maintenance, and staging of equipment and vehicles will occur at least 65 feet from any riparian habitat or water body. The Agency will ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the Agency will ensure that the contractor has prepared a plan to allow a prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur. **(Applicable Components: B, C, D, and E)**

BIO-2c: The spread or introduction of invasive exotic plant species will be avoided to the extent practicable. When practicable, invasive exotic plants in the project areas will be removed. **(Applicable Components: B, C, D, and E)**

BIO-2d: Prior to any on-site work in areas where special-status species may occur, a qualified biologist will conduct a tailgate training session in which all construction personnel will receive training regarding measures |
### Final EIR Revised Table S-2 Summary of Significant Impacts and Mitigation Measures

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<td>(below) that are to be implemented to avoid environmental impacts. This training will include a presentation of the potential for sensitive species to occur at the site and measures to protect habitat including aquatic habitat and avoid impacts to the species. All personnel working on the site will receive this training, and will sign a sign-in sheet showing they received the training. <strong>(Applicable Components: B, C, D, and E)</strong></td>
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<td>BIO-2e: Prior to the commencement of work, the limits of the work area (including haul routes, access ramps, storage areas and material stockpiles) will be clearly marked with orange construction fencing to prevent workers from impacting habitat outside the work area. No work will occur outside the designated marked work areas. <strong>(Applicable Components: B, C, D, and E)</strong></td>
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<td>BIO-2f: Each morning before work begins on any components in or within 100 feet of a suitable habitat area (defined as: riparian habitat, USACE jurisdictional wetlands or &quot;other waters&quot; of the U.S., or sensitive habitats identified in subsequent USFWS Biological Opinions and CDFW 1600 Lake and Streambed Alteration Agreements), a qualified monitor will survey the work site and habitat immediately surrounding the active work site for conditions that could impact special-status species, and will remain on-site whenever work is occurring that may adversely impact special-status species and their habitats. No work will be allowed to begin each morning until the monitor has inspected the work site. <strong>(Applicable Components: B, C, D, and E)</strong></td>
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<td>BIO-2g: A USFWS-approved biologist or biological monitor will permanently remove from within the project area(s), any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes to the extent practicable. <strong>(Applicable Components: B, C, D, and E)</strong></td>
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<td>BIO-2h: Upon locating individuals of special-status species that are dead or injured as a direct result of activities conducted by the City, initial notification will be made to the USFWS’s Division of Law Enforcement at (916) 978-4861 (Sacramento) within three working days of its finding. The USFWS Field Office within whose area of responsibility the specimen is recovered will also be notified. Written notification will be made within five calendar days and include the date, time, and location of the carcass, a photograph, cause of death, if known, and any other pertinent information. <strong>(Applicable Components: B, C, D, and E)</strong></td>
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<td>BIO-2i: Nesting Bird Surveys. Prior to any project construction activities, the project proponent will take the following steps to avoid direct losses of nests, eggs, and nestlings and indirect impacts to avian breeding success:</td>
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<td>• If construction activities occur only during the non-breeding season, between August 31 and February 1, no surveys will be required.</td>
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<td>• During the breeding bird season (February 1 through August 31), a qualified biologist will survey construction areas in the vicinity of the project site for nesting raptors and passerine birds not more than 14 days prior to any ground-disturbing activity or vegetation removal. Surveys will include all potential habitats</td>
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<td>within 500 feet (for raptors) of activities and all on-site vegetation including bare ground within 250 feet of activities (for all other species). If results are positive for nesting birds, avoidance procedures will be adopted, if necessary, on a case-by-case basis. These may include implementation of buffer areas (minimum 50-foot buffer for passersines and 250-foot minimum buffer for raptors) or seasonal avoidance. <strong>(Applicable Components: B, C, D, and E)</strong></td>
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**BIO-2i.1:** Develop Adaptive Management Plan for College Lake Waterfowl Management and Multi-species Mitigation. To mitigate impacts to existing waterfowl or waterfowl habitat at College Lake, an Adaptive Management Plan for waterfowl management and multi-species mitigation will be developed with the consultation of the state and federal resource agencies and College Lake stakeholders. The Adaptive Management Plan for waterfowl management and multi-species mitigation at College Lake will develop multi-year baseline waterfowl population and habitat use data for future project design, environmental permitting and CEQA impact analysis of project-level alternatives. To the extent practical, it will integrate the results of ongoing College Lake hydrology and hydraulic analyses, as well as future consultations with state and federal agencies on fish flows and fish bypass criteria. The Management Plan will be specific to the level of impact and mitigations under site-specific and project implementation conditions. However, the following standards will apply as defined during project-level design, regulatory review and CEQA analysis: The Management Plan should include terms and conditions from applicable permits and agreements as appropriate and define provisions for monitoring assignments, scheduling, and responsibility. The Management Plan should also include habitat replacement and revegetation, protection during ground-disturbing activities, performance standards, maintenance criteria, and monitoring requirements for temporary and permanent impacts consistent with mitigation in this EIR and regulatory requirements during project-specific review. The Management Plan will be in conformance with the biology mitigation measures from this EIR, and will also include terms and conditions consistent regulatory requirements as applicable from the USFWS, USACE, SWRCB, and CDFW permits during project design and permitting as applicable. The Management Plan will be prepared for project level project implementation as determined needed through future CEQA review and consultation with agencies as required under CESA and ESA.

**BIO-2j (CRT):** The following measures for avoidance and minimization of adverse impacts to California Red-
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| Legged Frog (*Rana draytonii*) (CRF) during construction of the BMP Update components are those typically employed for construction activities that may result in short-term impacts to individuals and their habitat. The focus of these measures is on scheduling activities at certain times of year, keeping the disturbance footprint to a minimum, and monitoring. Consultation with the USFWS will be conducted and a Biological Opinion developed for each BMP Update component that requires a USACE Section 404 Wetland Permit. Ongoing and future CRF studies in the project area may result in site-specific conditions that would be integrated into the future project-level BMP Update component designs, permitting and operations. CRF-1. The Agency will annually submit the name(s) and credentials of biologists who would conduct activities specified in the following measures. No project activities will begin until the Agency receives approval from the Service that the biologist(s) is qualified to conduct the work. CRF-2. A USFWS-approved biologist will survey the work site 48 hours prior to the onset of activities. If CRF, tadpoles, or eggs are found, the approved biologist will determine the closest appropriate relocation site. The approved biologist will be allowed sufficient time to move them from the work site before work activities begin. Only USFWS-approved biologists will participate in activities associated with the capture, handling, and moving of CRF. CRF-3. Before any activities begin on a project, a USFWS-approved biologist will conduct a training session for all construction personnel. At a minimum, the training will include a description of the CRF and its habitat, the importance of the CRF and its habitat, general measures that are being implemented to conserve the CRF as they relate to the project, and the boundaries within which the project may be accomplished. Brochures, books and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions. CRF-4. A USFWS-approved biologist will be present at the work site until such time as all removal of CRF, instruction of workers, and disturbance of habitat have been completed. After this time, the biologist will designate a person to monitor on-site compliance with all minimization measures and any future staff training. The USFWS-approved biologist will ensure that this individual receives training outlined in measure WPT-2 and in the identification of CRF. The monitor and the USFWS-approved biologist will have the authority to stop work if CRF are in harm’s way. CRF-5. The number of access routes, number and size of staging areas, and the total area of the activity will be limited to the minimum necessary to achieve the project goal. Routes and boundaries will be clearly demarcated, and these areas will be outside of riparian and wetland areas to the extent practicable. Should...
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<td>the Agency demonstrate a need to conduct activities outside this period, the Agency may conduct such activities after obtaining the Service’s approval.</td>
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<td>CRF-7. If a work site is to be temporarily dewatered by pumping, intakes will be completely screened with wire mesh not larger than five millimeters (mm) to prevent CRF from entering the pump system. Water will be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow will be removed in a manner that would allow flow to resume with the least disturbance to the substrate.</td>
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<td>CRF-8. The Declining Amphibian Populations Task Force’s Fieldwork Code of Practice will be followed to minimize the possible spread of chytrid fungus or other amphibian pathogens and parasites.</td>
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<td>BIO-2k (WPT): The following measures for avoidance and minimization of adverse impacts to western pond turtle (Actinemys marmorata) (WPT) during construction of the BMP Update project elements are those typically employed for construction activities that may result in short-term impacts to individuals and their habitat. The focus of these measures is on keeping the disturbance footprint to a minimum and aggressive monitoring of WPTs before vegetation removal and during the construction and revegetation phase.</td>
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<td>WPT-1. The Agency will annually submit the name(s) and credentials of biologists who would conduct activities specified in the following measures. No project activities will begin until proponents have received approval from CDFW that the biologist(s) is qualified to conduct the work.</td>
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<td>WPT-2. A CDFW-approved biologist will survey the work site 48 hours prior to the onset of activities. If WPT adults, juveniles or eggs are found, the approved biologist will determine the closest appropriate relocation site. The approved biologist will be allowed sufficient time to move them from the work site before work activities begin. Only CDFW-approved biologists will participate in activities associated with the capture, handling, and moving of WPT.</td>
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<td>WPT-3. Before any activities begin on a project, a CDFW-approved biologist will conduct a training session for all construction personnel. At a minimum, the training will include a description of the WPT and its habitat, the importance of the WPT and its habitat, general measures that are being implemented to conserve the WPT as they relate to the project, and the boundaries within which the project may be accomplished. Brochures, books and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.</td>
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<td>WPT-4. A CDFW-approved biologist will be present at the work site until such time as all removal of WPT,</td>
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<td>instruction of workers, and disturbance of habitat have been completed. WPT-5. The number of access routes, number and size of staging areas, and the total area of the activity will be limited to the project plans. Routes and boundaries will be clearly demarcated. Where impacts occur in these staging areas and access routes, restoration will occur as identified in the general BMP Update components above. (Applicable Components: B, C, D, and E)</td>
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<td>BIO-2I (FISH): The following measures are required to reduce impacts to special status fisheries, including steelhead and resident rainbow trout, to a less-than-significant level: FISH-1. A NOAA Fisheries-approved, qualified fisheries biologist would be onsite to provide preconstruction training on steelhead life-history to construction crews and to provide daily monitoring during construction activities. FISH-2. If the preliminary construction concept proposes the use of temporary coffer dams for isolating the work areas at the upstream and downstream extent of the project, installation and removal of the temporary coffer dams would be monitored by the qualified fisheries biologist. FISH-3. Following initial construction of the coffer dam bypass system, isolated standing water would be pumped from the work area to adjacent vegetated terraces, settling tanks or back into the river, if turbidity is not elevated more than 10% of background turbidity levels. FISH-4. If a work site is to be temporarily de-watered by pumping, intakes will be completely screened with wire mesh not larger than 0.2 inch to prevent steelhead or other native fish from entering the pump system. Water will be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow will be removed in a manner that would allow flow to resume with the least disturbance to the substrate. FISH-5. The installation and removal of the coffer dam structures would be controlled to minimize turbidity in the water. FISH-6. The use of best management practices would be implemented to reduce the probability of sediment and/or contaminated material from entering the creek. (Applicable Components: D, and E)</td>
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<td>BIO-2m: No water shall be diverted from College Lake from the time the lake begins filling in late fall/early winter through the end of the smolt outmigration period (approximately May 31 or June 15) unless sufficient bypass flows are provided at the dam for unimpeded adult upstream migration through March 31, and sufficient bypass flows are provided at the dam for unimpeded smolt outmigration through May 31. The precise bypass flow levels required to achieve unimpeded migrations are not known at this time.</td>
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<td>31 or June 15, the entire storage of College Lake could potentially be diverted. College Lake would likely be too warm to allow summer rearing by steelhead, especially in the presence of warm water predatory fishes. <strong>(Applicable Component: D)</strong></td>
<td>BIO-2n: Protection of Steelhead Migratory Habitat - Impacts to steelhead migration passage shall be minimized by carrying out construction in College Lake/Casserly Creek/Salsipuedes Creek after June 1 and prior to November 1, during which time adults and smolts do not migrate through the area. <strong>(Applicable Component: D)</strong></td>
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<td>BIO-2o: Protection of Steelhead Migratory Habitat - The proposed College Lake with Inland Pipeline to Coastal Distribution System component shall be operated such that it complies with all minimum required bypass flow requirements during the steelhead migration period, including those developed through a new bypass flow study to be conducted by a qualified fisheries biologist in consultation with the relevant regulatory agencies. <strong>(Applicable Component: D)</strong></td>
<td>BIO-2p: The PVWMA shall install and operate surface-water streamflow gaging stations on Casserly Creek upstream and on Salsipuedes Creek downstream of the proposed College Lake diversion structure to monitor available diversion inflows and to provide and document future Biological Opinion-required fish bypass flows. <strong>(Applicable Component: D)</strong></td>
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<td>BIO-2q: Protection of Steelhead Migratory Habitat - Impacts to steelhead migration passage shall be minimized by carrying out construction in the Pajaro River after June 1 and prior to November 1, during which time adults and smolts do not migrate through the area. <strong>(Applicable Component: E)</strong></td>
<td>BIO-2r: Protection of Steelhead Migratory Habitat - The proposed Murphy Crossing with Recharge Basins component shall be operated such that it complies with all minimum required bypass flow requirements during the steelhead migration period. <strong>(Applicable Component: E)</strong></td>
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| BIO-2s: The PVWMA shall install and operate surface-water streamflow gaging stations on the Pajaro River both upstream and downstream of the proposed Murphy Crossing infiltration gallery to monitor available diversion inflows and to provide and document future Biological Opinion-required fish bypass flows. **(Applicable Component: E)** | BIO-3a: Occurrences of special status plant species shall be avoided by project construction activities to the extent feasible. All facilities and construction activities will be maintained outside habitats supporting special status plant species where feasible. Prior to construction, a qualified biologist will conduct a survey of the project area to ascertain the presence or absence of special status plant species. If no species are encountered, no mitigation is required. If a special status species is found within a BMP Update component project area, a setback of 50 feet will be
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<td>candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service, if species are found to be present within the component-specific construction areas. This represents a potential significant impact that can be reduced to a less-than-significant level with mitigation identified in this EIR. No operational impacts to special status plant species are anticipated from the project. <em>(Applicable Components: A, B, C, D, and E)</em></td>
<td>established between the occurrence and the BMP Update construction activities. Prior to construction, PVWMA will install temporary construction fencing at the 50-foot setback line to prevent inadvertent equipment access or construction staging within the special status plant habitat. This fencing will be signed in the field as “SENSITIVE HABITAT AREA — NO CONSTRUCTION ACCESS”. A qualified biologist will inspect the temporary construction barrier fence and monitor the contractor’s compliance with this avoidance measure. If complete avoidance of special status plant species is infeasible, impacts would be minimized through implementation of Mitigation Measure BIO-3b <em>(Applicable Components: A, B, C, D, and E)</em></td>
<td>BIO-3b: Prior to clearing and grubbing in areas where impacts to special status plant species cannot be avoided, PVWMA will consult with applicable resource agencies (i.e., CDFW and/or USFWS) prior to implementing salvage and revegetation actions. A qualified biologist will collect any available above-ground seed pods/seed heads for their use in future revegetation efforts. During construction, the upper 6 inches of topsoil from areas supporting the plant species will be stripped from the construction area and stored for later use. The topsoil will be used in future revegetation efforts which may be on-site (if feasible) or at an off-site location approved by permitting agencies (i.e., USFWS, CDFW). At the designated revegetation area, all stockpiled topsoil will be placed on site and finish graded to blend with surrounding topography. Under direction of a qualified biologist, the areas will be revegetated with locally native herbaceous plant species compatible with natural regeneration of the special status plant species. The qualified biologist will hand broadcast any seeds collected from the special status plant species into the appropriate habitat areas. The revegetation will achieve a minimum of 2:1 plant replacement (i.e., re-establish two plants for every plant impacted). The qualified biologist will monitor the revegetation areas for two years after construction to ascertain if the special status plant species re-established within the revegetation area. Annual reports will be submitted to permitting agencies by December 31 of each monitoring year, describing the results of the revegetation measures, for a period of 5 years. <em>(Applicable Components: A, B, C, D, and E)</em></td>
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**Impact BIO-4:** Construction and operation of BMP Update components may interfere substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site. Specifically, the College Lake with Inland Pipeline to Coastal

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*Denise Duffy & Associates, Inc.*

*FINAL EIR S-12*

*Pajaro Valley Water Management Agency*

*BMP Update Final EIR*
### Final EIR Revised Table S-2 Summary of Significant Impacts and Mitigation Measures

KEY TO APPLICABLE COMPONENTS: (A) Increased Recycled Water Storage at Treatment Plant, (B) Harkins Slough Recharge Facilities Upgrades, (C) Watsonville Slough with Recharge Basins, (D) College Lake with Inland Pipeline to Coastal Distribution System (CDS), (E) Murphy Crossing with Recharge Basins

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<td>Distribution System and the Murphy Crossing with Recharge Basin components may reduce streamflows for steelhead passage, particularly for down-migrating smolts in spring months. This is a significant impact that can be reduced to a less than significant level with implementation of the following mitigation. (Applicable Components: D and E)</td>
<td>CR-1a: Final pipeline and facility plans shall locate facilities and pipeline alignments away from identified and recorded archaeological sites in each component area based on a site reconnaissance and archaeological investigation conducted by a qualified archaeologist at the time site-specific construction plans are developed. The archaeologist shall identify the areal extent of potential recorded sites, assess potential significance to identified resources, recommend adjustment to siting of improvements, facilities and/or pipeline alignments, if necessary, and provide other recommendations to avoid impacts to identified significant resources. If a significant or potentially significant archaeological or historic resource is identified pursuant to the definitions in the State CEQA Guidelines as identified above, the consulting archaeologist shall develop an appropriate mitigation plan for the cultural resource. Possible mitigation measures for important cultural resources may include monitoring by a qualified archaeologist during construction at identified sensitive sites, documentation and recordation of the resource, recovery and relocation, or stabilization of the resource. (Applicable Components: B, C, D, and E)</td>
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### 3.5 Cultural Resources

**Impact CR-1:** Construction activities associated with implementation of BMP Update components may result in the alteration or destruction of recorded archaeological sites or encounter unknown, buried resources during ground disturbing activities, which is a potentially significant impact. With mitigation identified in this EIR, the impacts would be reduced to less-than-significant levels. *(Applicable Components: B, C, D, and E)*

| CR-1a: Final pipeline and facility plans shall locate facilities and pipeline alignments away from identified and recorded archaeological sites in each component area based on a site reconnaissance and archaeological investigation conducted by a qualified archaeologist at the time site-specific construction plans are developed. The archaeologist shall identify the areal extent of potential recorded sites, assess potential significance to identified resources, recommend adjustment to siting of improvements, facilities and/or pipeline alignments, if necessary, and provide other recommendations to avoid impacts to identified significant resources. If a significant or potentially significant archaeological or historic resource is identified pursuant to the definitions in the State CEQA Guidelines as identified above, the consulting archaeologist shall develop an appropriate mitigation plan for the cultural resource. Possible mitigation measures for important cultural resources may include monitoring by a qualified archaeologist during construction at identified sensitive sites, documentation and recordation of the resource, recovery and relocation, or stabilization of the resource. (Applicable Components: B, C, D, and E) |

**CR-1b:** The cultural resource boundaries of potentially significant sites shall be marked as exclusion zones both on ground and on construction maps prior to the commencement of construction activities on component sites. Construction supervisory personnel shall be notified of the existence of cultural resources in each component area and will be required to keep personnel and equipment away from these cultural resources sites. During construction and operational phases, personnel and equipment will be restricted to each surveyed corridor for each component. *(Applicable Components: B, C, D, and E)*

**CR-1c:** Should any as yet undiscovered cultural resources be uncovered at any component site, such as structural features, or unusual amounts of bone or shell, artifacts, human remains, or architectural remains be encountered during any development activities, work will be suspended and PVWMA staff will be contacted. A qualified professional archaeologist shall be retained and will perform any necessary investigations to determine the significance of the find. PVWMA will then implement any mitigation deemed necessary for the
### Final EIR Revised Table S-2 Summary of Significant Impacts and Mitigation Measures

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<td>recordation and/or protection of the cultural resources. In addition, pursuant to Sections 5097.97 and 5097.98 of the State Public Resources Code and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, all work must be halted and the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains. (Applicable Components: B, C, D, and E)</td>
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### 3.6 Energy Utilities & Services

**Impact ES-1: Construction of the BMP Update components could result in temporary, planned or accidental disruption to utility services provided by underground lines. This potentially significant impact can be reduced to a less-than-significant level with the incorporation of mitigation measures identified in this EIR. (Applicable Components: A, B, C, D, and E)**

**ES-1:** A study to identify utilities along proposed alignments will be conducted by PVWMA during pre-design states of projects. The following mitigation measures are required for segments identified in final design as having potential conflicts with significant utilities:

a. Utility excavation and encroachment permits would be required from the appropriate agencies, including the Public Works Departments of Santa Cruz County, City of Watsonville, Caltrans, and Union Pacific Railroad. These permits include measures to minimize utility disruption. PVWMA and its contractors shall comply with permit conditions. Permit requirements shall be included in construction contract specifications.

b. Utility locations would be verified through field survey (potholing) and use of an underground locating service.

c. A detailed engineering and construction plan shall be prepared as part of the design plans and specifications. This plan shall include procedures for the excavation, support, and fill of areas around utility cables and pipes. All affected utility services would be notified of PVWMA’s construction plans and schedule. Arrangements would be made with these entities regarding protection, relocation, or temporary disconnection of services.

d. In areas where the pipeline would parallel wastewater mains, engineering and construction plans shall include trench wall support measures to guard against trench wall failure, and possible resulting loss of structural support for the wastewater main.

e. Residents and businesses in the project area shall be notified in writing by the contractor of planned utility service disruption two to four days in advance, in conformance with state and County standards. (Applicable Components: B, C, D, and E)

**Impact ES-2: Construction of the BMP Update components could potentially impact solid waste landfill capacity, since the County’s**

**ES-2:** PVWMA shall include in its construction specifications a requirement for the contractor to provide plans for recovering, reusing, and recycling construction, demolition, and excavation wastes and providing for composting of plant material, where feasible. (Applicable Components: B, C, D, and E)
## Final EIR Revised Table S-2 Summary of Significant Impacts and Mitigation Measures

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<td>Buena Vista Landfill is approaching capacity. Although the BMP Update improvements are expected to generate a relatively small amount of construction waste to be disposed of at the landfill, this is considered a significant impact due to limited landfill capacity. Mitigation is identified below to reduce the impact to a less-than-significant level. ([Applicable Components: A, B, C, D, and E])</td>
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<td><strong>3.7 Geology &amp; Soils</strong></td>
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<td><strong>Impact GS-1:</strong> Seismic groundshaking and its secondary effects, including localized liquefaction and related ground failure from a major earthquake in Santa Cruz County or Monterey Bay region could cause structural damage to associated facilities of each of the BMP Update components. With mitigation identified in this EIR, the impacts would be limited to less-than-significant levels. ([Applicable Components: A, B, C, D, and E])</td>
<td>GS-1: Future construction of proposed BMP Update facilities shall be designed in accordance with design recommendations of geotechnical reports and in compliance with applicable policies and appropriate engineering investigation practices necessary to reduce the potential detrimental effects of groundshaking and liquefaction. Construction shall be in accordance with applicable City and County ordinances and policies regarding mitigation of seismic and geologic hazards, and appropriate geotechnical studies shall be conducted. ([Applicable Components: B, C, D, and E])</td>
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<td>GS-2: Construction of BMP Update components would result in erosion and discharge of sediment in water bodies. With mitigation identified in this EIR, the impact would be reduced to a less-than-significant level. ([Applicable Components: A, B, C, D, and E])</td>
<td>GS-2: Construction of future BMP Update facilities shall include preparation and implementation of erosion control plans to minimize erosion and inadvertent transport of sediments into water bodies during installation of facilities. Measures shall include, but not be limited to: limiting the area of ground disturbance and vegetation removal at any one time during construction; conducting work prior to the rainy season if possible and protecting disturbed areas during the rainy season; installing bales or other appropriate barriers adjacent to water bodies to prevent transport of sediments into sloughs and water courses; immediately revegetating disturbed areas; and other Best Management Practices during construction to protect water quality. All grading and construction shall conform to requirements of the Santa Cruz County Grading Ordinance. To the extent possible, grading activities in non-cropped areas shall be limited to the period between April 15 and October 31. ([Applicable Components: B, C, D, and E])</td>
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<td>GS-3: Proposed pipeline, diversion facilities and water filtration systems</td>
<td>GS-3: All diversion and pipeline facilities shall be designed and engineered in accordance with recommendations of a geotechnical report and appropriate engineering designs to reduce the potential...</td>
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<td>associated with BMP Update components could incur damage as a result of underlying soils properties (subsidence, high shrink-swell potential, and corrosivity). With mitigation identified in this EIR, the impacts would be limited to less-than-significant levels. <em>(Applicable Components: A, B, C, D, and E)</em></td>
<td>detrimental effects of expansive soils, corrosivity, and/or other identified soils constraints. A licensed geotechnical engineer shall prepare recommendations applicable to foundation design, earthwork, and site preparation prior to or during the project design phase. Recommendations will address mitigation of site-specific, adverse soil and bedrock conditions that could hinder development. Project engineers shall implement the recommendations. Geotechnical design and design criteria will comply with applicable codes and requirements of the California Building Code with California additions (CCR Title 24), applicable City and County construction and grading ordinances. <em>(Applicable Components: B, C, D, and E)</em></td>
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#### 3.8 Hazards and Hazardous Material

**Impact HM-1:** Construction of the BMP Update components could potentially release hazardous materials from the disturbance/removal of soils used for agricultural purposes that may contain pesticide residuals. In addition, Construction of the BMP Update components (i.e., excavation for pipelines) could potentially release hazardous materials in areas of potential soil contamination such as those identified by DTSC. This is a potentially significant impact that would be reduced to a less-than-significant level with mitigation identified below. *(Applicable Components: A, B, C, D, and E)*

HM-1: Prior to initiation of earthwork activities, PVWMA shall perform soil testing on agricultural sites proposed for development and analytically test for pesticide residuals and pesticide-related metals arsenic, lead, and mercury. If contamination is identified in the soil samples above applicable levels, PVWMA shall prepare a Site Management Plan (SMP) to establish protocols/guidelines for the contractor including: identification of appropriate health and safety measures while working in contaminated areas; soil reuse; handling, and disposal of any contaminated soils; and agency notification requirements. The SMP shall be subject to the review and approval of the appropriate regulatory agency. *(Applicable Components: B, C, D, and E)*

HM-2: During the design phase of the proposed pipeline alignment from College Lake to Coastal Distribution System (CDS), PVWMA shall perform a Phase I Environmental Site Assessment for the alignment to determine the potential for encountering hazardous materials contamination in soils to be excavated and identify appropriate recommendations. Appropriate health and safety measures shall be identified as needed for worker safety, soil handling, and disposal of contaminated soils. *(Applicable Component: D)*

#### 3.9 Surface Water, Groundwater, and Water Quality

**Impact HWQ-1:** Construction of proposed BMP Update components could result in increased erosion and sedimentation with adverse impacts to water quality. Temporary dewatering of shallow groundwater during construction could also result in increased erosion and sedimentation with adverse impacts to water quality. Additionally, PWQ-1: PVWMA shall require contractors to apply for all applicable NPDES permits, including dewatering permits, develop a SWPPP for construction of proposed facilities, and comply with conditions of the permit(s), as required by the CCRWQCB. The objectives of the SWPPP are to identify pollutant sources that may affect the quality of stormwater discharge and to implement BMPs to reduce pollutants in stormwater discharges. The SWPPP for this proposed action would include the implementation, at a minimum, of the following elements:

- Source identification
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| accidental release of fuels or other hazardous materials associated with construction activities could degrade water quality. This potentially significant impact can be reduced to a less-than-significant level with mitigation measures identified in this EIR. **(Applicable Components: A, B, C, D, and E)** | • Preparation of a site map  
• Description of construction materials, practices, and equipment storage and maintenance  
• List of pollutants likely to contact stormwater  
• Estimate of the construction site area and percent impervious area  
• Erosion and sedimentation control practices, including soils stabilization, revegetation, and runoff control to limit increases in sediment in stormwater runoff, such as detention basins, straw bales, silt fences, check dams, geofabrics, drainage swales, and sandbag dikes  
• Proposed construction dewatering plans  
• Provisions to eliminate or reduce discharge of materials to stormwater  
• Description of waste management practices  
• Maintenance and training practices **(Applicable Components: A, B, C, D, and E)** | |

**Impact HWQ-2**: Operation of proposed BMP Update components could result in increased erosion and subsequent sedimentation, with adverse impacts to surface water quality. Diversions from Watsonville and Harkins Sloughs resulting in chronic imposed water-level fluctuations may result in increased erosion and sedimentation, including potential bank collapse. College Lake and Murphy Crossing diversions may result in erosion and downstream sedimentation depending upon operations and pump design. This potentially significant impact can be reduced to a less-than-significant level the following mitigation measures. **(Applicable Components: B, C, D, and E)**

HWQ-2: Rapid, imposed water-level fluctuations shall be avoided within the sloughs, Salsipuedes Creek, and the Pajaro River to minimize erosion and failure of exposed (or unvegetated), susceptible banks. This can be accomplished by operating the pumps at an appropriate flow rate, in conjunction with commencing operation of the pumps only when suitable water levels or flow rates are measured in the water body. Criteria for minimizing fluctuations and/or protecting banks from related erosion will need to be developed, as some banks presently are stable and others are not. Control is important, as the mobilized sediment also impairs inslough habitat values, and potentially exacerbates bacterial levels in the slough system. It may be that water-level fluctuations may be controlled as well to minimize other impacts, such as desiccation of amphibian eggs or waterlogging of agricultural soils adjacent to the sloughs. **(Applicable Components: B, D, and E)**

**Impact HWQ-3**: Overall, the BMP Update will raise groundwater levels locally in the project areas; basin however, basin-wide groundwater elevations will not increase. Higher groundwater levels will result in reduced

HWQ-3. If pumping rates in existing wells fall below levels that can support existing or planned land uses, and the reduction in pumping can be attributed to one or many of the project components, then one of several measures may be undertaken to mitigate the loss of pumping. These mitigation measures may include:

1. Improving irrigation efficiency
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<td>pumping costs and marginally greater pumping rates from existing pumps in wells. Therefore, the BMP Update has an overall beneficial impact on from reduced pumping costs and marginally greater pumping rates from existing pumps in wells, and a beneficial impact by raising groundwater levels in localized project areas but not basin wide. The College Lake component of the BMP Update, however, may seasonally reduce groundwater levels from their baseline elevations at localized areas downstream of the lake. In these areas, project operation could decrease the annual production rate of existing nearby irrigation wells due to localized drawdown. Under extreme conditions, existing or planned land use(s) may not be fully supported. If pumping rates are reduced to the extent that land uses cannot be fully supported, this would represent a potentially significant impact that can be reduced to a less-than-significant level with mitigation. This impact, however, is unlikely; and would only occur locally only in some years and seasons. (Applicable Component: D)</td>
<td>2. Modifying irrigation and agricultural operations 3. Lowering the pump in the irrigation well 4. Lowering and changing the pump in the irrigation well 5. Adding storage capacity for irrigation supply 6. Replacing the irrigation well 7. Replacing the irrigation water source</td>
<td>To determine if well production loss can be attributed to one of the project components, the PVWMA will allow well owners to enroll in a monitoring and mitigation program (MMP). PVWMA will collect baseline data necessary for establishing significant impacts only from wells that are enrolled in the MMP. If a well is not enrolled in the MMP, to claim a significant impact the well owner will need to provide adequate and reliable baseline data. To claim a significant impact for each well enrolled in the MMP, PVWMA will first establish baseline irrigation well extraction rates, drawdowns, and water quality near planned components. Pumping rate reductions and changes in water quality from these baseline values will be analyzed to assess whether or not they are caused by the project. A pumping rate reduction or adverse change in water quality is assumed to be caused by the Project if: 1) it occurs at the same time as the onset of operations of BMP Update component(s); 2) it occurs in an area reasonably predicted to be affected by the BMP Update component(s); 3) static groundwater levels have dropped; 4) pumping groundwater levels have not dropped more than static groundwater levels; and 5) no other obvious reason exists for the drop in production capacity. For PVWMA or others to identify another reason for loss of production it must be based on the written professional opinion of a qualified hydrogeologist that will be submitted to the PVWMA staff or their designee, for review and concurrence. (Applicable Component: D)</td>
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**Impact HWQ-4:** Development of BMP Update components may expose people and structures to flood hazards or impede or redirect flood flows because many of the BMP Update facilities are located within the FEMA 100-year flood hazard zones. This potentially significant impact can be reduced to a less- | HWQ-4: Facilities shall be designated to comply with FEMA and County of Santa Cruz requirements to floodproof the facilities and shall not exacerbate upstream or downstream flood hazards on other properties. The FEMA process will require identification of the FEMA floodway zone and may require no increase water elevations for a one percent chance annual flood. The FEMA process will require identification of the FEMA zone type and may require no increase water elevations for a one percent chance annual flood. To meet the specific FEMA requirements for the component, substantial modifications to the facility design and additional mitigation may be required. (Applicable Components: A, B, C, D, and E) |
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<td>than-significant level with mitigation measures identified in this EIR. In addition, these impacts may be exacerbated by climate change in the cumulative. <em>(Applicable Components: A, B, C, D, and E)</em></td>
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### 3.10 Noise and Vibration

There are no impacts to noise and vibration that require mitigation (see Section 3.10 for additional detail).

### 3.11 Transportation/Traffic

**Impact TR-1: Construction of BMP Update components would increase wear and tear on area roadways used by construction vehicles. With mitigation identified in this EIR, the impact would be reduced to a less-than-significant level. *(Applicable Components: A, B, C, D, and E)***

TR-1: Conduct a preconstruction survey of road conditions on key access routes to the project sites (e.g., San Andreas Road). The pavement conditions of local streets judged to be in good condition for use by heavy truck traffic shall be monitored. Roads damaged by construction shall be repaired to a structural condition equal to, or better than, that which existed prior to construction activity. *(Applicable Components: A, B, C, D, and E)*