REPORT TO THE BOARD OF DIRECTORS
BOARD MEETING OF FEBRUARY 8, 2022
AGENDA ITEM 9.B.2

AGENDA SECTION: **NEW BUSINESS**

SUBJECT: **APPOINTMENT OF PUBLIC MEMBERS TO THE FINANCE COMMITTEE**

PREPARED BY: Gloria Omania, Interim Board Clerk

APPROVED BY: Adam Coyan, General Manager

BACKGROUND

The Finance Committee was established by the Board of Directors to advise them on matters related to the District's finances.

Director Thornbrough and Director MacDonald serve as the Board's liaison to the committee.

DISCUSSION

The District announced the openings for public members to the Finance Committee. An application was received from Robert Stroffregen (a redacted copy is attached). Additional openings remain on the committee and the open application process will continue.

FISCAL IMPACT

None.

CEQA ASSESSMENT

This is not a CEQA project.

RECOMMENDED ACTION

It is Staff's recommendation that the Board of Directors adopt Resolution 2022-XX appointing Mr. Stroffregen to the Finance Committee.

ATTACHMENTS

1. Robert Stroffregen Resume
2. Draft Resolution 2022-XX Appointment of Public Member to the Finance Committee

REPORT TO THE BOARD OF DIRECTORS
BOARD MEETING OF FEBRUARY 8, 2022
AGENDA ITEM 9.B.

AGENDA SECTION: **NEW BUSINESS**

SUBJECT: **APPOINTMENT OF PUBLIC MEMBERS TO THE IRRIGATION COMMITTEE**

PREPARED BY: Gloria Omania, Interim Board Clerk

APPROVED BY: Adam Coyan, General Manager

BACKGROUND

The Irrigation Committee was established by the Board of Directors to advise them on matters related to irrigation service. The newly formed committee will work on a District policy on the role and responsibilities of the committee for the Board's approval. A draft policy (Attachmen1) will serve as a guide for the formative meetings of the committee.

Director Seaman and Director Gerry Stewart were appointed to serve as the Board's liaison to the committee.

DISCUSSION

The District announced the openings for public members to the Irrigation Committee and the following applications have been received.

Applicant	Years as Irrigation Customer	Location
John Duarte	23 years	Greenwood
Kristy McKay	6 years	Georgetown
Eric Mead	40 years	Cool
Bill Threkel	40 years	Cool

FISCAL IMPACT

None.

CEQA ASSESSMENT

This is not a CEQA project.

RECOMMENDED ACTION

It is Staff's recommendation that the Board of Directors consider adopting Resolution 2021-19 and appoint the public members to the Irrigation Committee.

ATTACHMENTS

1. Draft Policy on Role and Responsibilities of the Irrigation Committee
2. Draft Resolution 2022-XX Appointment of Public Members to the Irrigation Committee

POLICY TITLE: Irrigation Committee Role and Responsibilities

POLICY NUMBER: XXX:

1. **Purpose.** The Irrigation Committee was established in January 2020 to provide recommendations to the Board of Directors on matters related to the District's Irrigation services and allow Irrigation customers an opportunity to provide feedback to this committee. The Committee is advisory nature and the Committee, and its members have no authority to set policy, expend funds, or make obligations on behalf of the Board and/or the District.

2. **Brown Act**: The Irrigation committee is a committee formed formally under the Board of Directors Policy 5000.3 and must comply with the Brown Act. The Brown Act. The Legislature adopted the Brown Act, commonly referred to as California's "Open Meetings Laws" in 1964. The Brown Act is contained in Government Code section 54950 et seq. The Brown Act is broadly construed, and compliance is constitutionally mandated. Committee members must be knowledgeable of the Brown Act and there will be annual/bi-annual training.

3. **Membership; Quorum.** The Committee shall be comprised of no more than five (5) public members. A quorum shall consist of three (3) public members currently appointed to the Committee.

4. **Board Liaison(s).** One Director up to a maximum total of two (2) Directors, shall be appointed to the Committee as Board Liaison members.

    a) The duties of the Board Liaison include presenting relevant data to the Board and arranging for any presentation of important progress on projects to the Board by the Committee chairperson.
    b) The Board Liaison's role will be advisory to the Committee-
    c) The Board Liaison will not have a vote on the Committee.
    d) Only Two (2) Board of Directors can be present at any of the Committee meetings
    e) If a regular Liaison cannot attend a meeting, that member will contact the Board President and the Board President will arrange for another member to attend the meeting. If there are three members present the Board Liaison is authorized to request the non-liaison Board member to leave.

5. **Selection of Committee Members.**

    (a) A Notice of Vacancy on the Irrigation Committee shall be posted on the District's website and social media sites, and must be published in a newspaper of general circulation in the District with instructions for applying, including a deadline for submittal.

    (b) All applicants who reside within the District boundaries and are current irrigation water customers will be eligible for consideration by the Board.

    (c) Applications must be submitted by the stated deadline and must include a Statement of Interest, the number of years as an irrigation water customer, and the area in the District the

applicant resides. Applications can be mailed or hand-delivered to the General Manager at the District Office, located at 6425 Main Street, Georgetown, CA 95634, or transmitted by email to gm@gd-pud.org or the Board President.

(d) The General Manager will distribute all applications to the Board of Directors.

(e) All applicants shall be available for personal comments at the Board of Directors during the selection board meeting.

(f) The Board of Directors will ask questions of the applicants during the Board meeting and will publicly vote on each applicant to be appointed. In the case where there are more applicants than Committee seats, the Board of Directors will submit their ranking of the applicants to the President after the questioning period and the applicant(s) with the highest number of first place, then second place if needed, etc.. will be selected and announced as the appointee(s).

(g) Those Irrigation Committee members who resign or who do not renew their two-year commitment shall provide a letter of resignation to the Irrigation Committee Chair, the President of the Board of Directors, and the General Manager.

(h) The Board of Directors will confirm appointments or resignations by Resolution of the Board.

6. **Role of the Committee.** The primary role of the Committee is to provide recommendations to the Board of Directors ("Board") from their direction, or in response to Board approved proposals on matters related to the District's Irrigation water services. Additional mission to be provided by the committee.

(a) Present all Committee findings and proposals to the Board for approval.

(b) Accept all projects requested by the Board.

7. **Meetings**. The committee shall meet at least quarterly, and more often if needed or requested by the Board or the Committee. Meetings shall be held at the District's offices unless otherwise stipulated by an emergency or Executive Order

(a) At any meeting of the Irrigation Committee, the majority of the members currently appointed show constitute a quorum for purposes of conducting business or meetings. Unless otherwise posted, a majority vote of those present and voting shall be sufficient to adopt any motion. A quorum cannot be under three (3) public appointed members.

(b) All meetings of the Committee shall be open and public, and all persons shall be permitted to attend any meeting of the committee as provided by Government Code Section 54950 et seq

(c) All meetings of the Committee shall be held in the GDPUD offices at 6425 Main Street, Georgetown, CA 95634, unless there is a special need to hold a meeting at a different location.

(d) The proceedings of all meetings of the Committee shall be conducted in accordance with GDPUD Board Policy Numbers 5000, 5030 and 5040.

(e) The Committee shall follow the order of business for the conduct of its meetings by the agenda. The order can be changed during the Adoption of the Agenda by majority vote.

(f) Any meeting may be adjourned to a time and place stated in the Order of Adjournment. Less than a quorum may also adjourn from time to time. If all members are absent, the Secretary may declare the meeting adjourned to a stated time and place and shall cause each notice to be given in the same manner as for special meetings.

(g) Special meetings may be called at any time at the direction of the Chairperson or by a majority of the Committee. However, scheduling must be coordinated with the General Manager and Board President to ensure there are no conflicts with other scheduled Committee, Board, County, Regional, or Legislative meetings. A minimum of Forty-Eight hours advance written notice of special meetings shall be provided by the Chairperson to

the Board President and General Manager stating the time and business to be transacted. The public shall be notified through the district regular communications and procedures, in accordance with Government Code Section 54950 et seq – At least Twenty-four (24) hours prior to the meeting.

(h) The Committee Secretary shall maintain meeting minutes, including a complete record of all transactions, findings, and determinations, and present a full statement to the General Manager for the Board prior to the next Board meeting. A signed copy of meeting minutes shall be filed with the Staff Liaison.

8. **Terms.** The terms of office shall be two (2) years. Committee members may be reappointed to subsequent terms by providing their letter of intent to the Board and the General Manager, and then the Board voting on the Committee members to be reappointed during a Board meeting.

9. **Removal**. All committee members serve at the will of the Board, and any member may be removed by an affirmative vote of three (3) members of the Board. The Committee member removal will follow procedure as described in Board Policy XXX.X

10. **Officers.** The committee shall designate from among its members a Chair, Vice-Chair, and Secretary. The Chair shall preside over the meetings, and in the Chair's absence, the Vice-Chair shall preside. If both the Chair and the Vice-Chair are absent, the remaining members, if a quorum exists, shall select from among themselves a person to preside over the meeting. The Board Clerk, or Staff designee, shall prepare agendas and minutes of every meeting and shall be responsible for transmitting the agenda and the final copy of all minutes to the General Manager or designee. Items needing Board action shall be transmitted as soon as possible to the General Manager or designee for inclusion on the next available Board agenda.

11. **Agenda.**

(a) The General Manager, in cooperation with the Board President and the Chair of the Irrigation Committee, shall prepare an agenda for each regular and special meetings of the Irrigation Committee Meeting in accordance with the Ralph M. Brown Act (California Government Code Section 54950).

(b) During the last item of the Irrigation Committee agenda before adjournment, a Committee member may bring up items they would like the Committee to review and for what purpose. Requests affirmed by a majority vote of the Committee shall be reported to the Board of Directors by the Committee Chair at the next meeting of the Board of Directors.

(c) Requests for additional information by Committee members should be directed to the Irrigation Committee Chair. The Chair will provide the Board Liaison with these requests. The requests will then be given and discussed with the General Manager with a copy to the Board President. Only the General Manager can direct staff for reports. Only the Board can direct the General Manager.

12. **Board Reports.** The Committee shall report on its activities to the Board at the following meeting after the Committee meets. The Board Report shall be either oral or written and shall include a description of the activities of the Committee for the proceeding, and any on-going or outstanding activities or tasks. The Board Report will be given at the next Regular Board Meeting by the Irrigation Committee Chair or Vice-Chair. Committee member minutes can be used to satisfy this requirement if the Chair or Vice-Chair is not present at the Board of Directors meeting.

POLICY TITLE: Irrigation Committee Role and Responsibilities

POLICY NUMBER: XXX:

1. **Purpose.** The Irrigation Committee was established in January 2020 to provide recommendations to the Board of Directors on matters related to the District's Irrigation services and allow Irrigation customers an opportunity to provide feedback to this committee. The Committee is advisory nature and the Committee, and its members have no authority to set policy, expend funds, or make obligations on behalf of the Board and/or the District.

2. **Brown Act**: The Irrigation committee is a committee formed formally under the Board of Directors Policy 5000.3 and must comply with the Brown Act. The Brown Act. The Legislature adopted the Brown Act, commonly referred to as California's "Open Meetings Laws" in 1964. The Brown Act is contained in Government Code section 54950 et seq. The Brown Act is broadly construed, and compliance is constitutionally mandated. Committee members must be knowledgeable of the Brown Act and there will be annual/bi-annual training.

3. **Membership; Quorum.** The Committee shall be comprised of no more than five (5) public members. A quorum shall consist of three (3) public members currently appointed to the Committee.

4. **Board Liaison(s).** One Director up to a maximum total of two (2) Directors, shall be appointed to the Committee as Board Liaison members.

    a) The duties of the Board Liaison include presenting relevant data to the Board and arranging for any presentation of important progress on projects to the Board by the Committee chairperson.
    b) The Board Liaison's role will be advisory to the Committee-
    c) The Board Liaison will not have a vote on the Committee.
    d) Only Two (2) Board of Directors can be present at any of the Committee meetings
    e) If a regular Liaison cannot attend a meeting, that member will contact the Board President and the Board President will arrange for another member to attend the meeting. If there are three members present the Board Liaison is authorized to request the non-liaison Board member to leave.

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    (b) All applicants who reside within the District boundaries and are current irrigation water customers will be eligible for consideration by the Board.

    (c) Applications must be submitted by the stated deadline and must include a Statement of

Interest, the number of years as an irrigation water customer, and the area in the District the applicant resides. Applications can be mailed or hand-delivered to the General Manager at the District Office, located at 6425 Main Street, Georgetown, CA 95634, or transmitted by email to gm@gd-pud.org or the Board President.

(d) The General Manager will distribute all applications to the Board of Directors.

(e) All applicants shall be available for personal comments at the Board of Directors during the selection board meeting.

(f) The Board of Directors will ask questions of the applicants during the Board meeting and will publicly vote on each applicant to be appointed. In the case where there are more applicants than Committee seats, the Board of Directors will submit their ranking of the applicants to the President after the questioning period and the applicant(s) with the highest number of first place, then second place if needed, etc.. will be selected and announced as the appointee(s).

(g) Those Irrigation Committee members who resign or who do not renew their two-year commitment shall provide a letter of resignation to the Irrigation Committee Chair, the President of the Board of Directors, and the General Manager.

(h) The Board of Directors will confirm appointments or resignations by Resolution of the Board.

6. **Role of the Committee.** The primary role of the Committee is to provide recommendations to the Board of Directors ("Board") from their direction, or in response to Board approved proposals on matters related to the District's Irrigation water services. Additional mission to be provided by the committee.

(a) Present all Committee findings and proposals to the Board for approval.

(b) Accept all projects requested by the Board.

7. **Meetings**. The committee shall meet at least quarterly, and more often if needed or requested by the Board or the Committee. Meetings shall be held at the District's offices unless otherwise stipulated by an emergency or Executive Order

(a) At any meeting of the Irrigation Committee, the majority of the members currently appointed show constitute a quorum for purposes of conducting business or meetings. Unless otherwise posted, a majority vote of those present and voting shall be sufficient to adopt any motion. A quorum cannot be under three (3) public appointed members.

(b) All meetings of the Committee shall be open and public, and all persons shall be permitted to attend any meeting of the committee as provided by Government Code Section 54950 et seq

(c) All meetings of the Committee shall be held in the GDPUD offices at 6425 Main Street, Georgetown, CA 95634, unless there is a special need to hold a meeting at a different location.

(d) The proceedings of all meetings of the Committee shall be conducted in accordance with GDPUD Board Policy Numbers 5000, 5030 and 5040.

(e) The Committee shall follow the order of business for the conduct of its meetings by the agenda. The order can be changed during the Adoption of the Agenda by majority vote.

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(g) Special meetings may be called at any time at the direction of the Chairperson or by a majority of the Committee. However, scheduling must be coordinated with the General Manager and Board President to ensure there are no conflicts with other scheduled

Committee, Board, County, Regional, or Legislative meetings. A minimum of Forty-Eight hours advance written notice of special meetings shall be provided by the Chairperson to the Board President and General Manager stating the time and business to be transacted. The public shall be notified through the district regular communications and procedures, in accordance with Government Code Section 54950 et seq – At least Twenty-four (24) hours prior to the meeting.

(h) The Committee Secretary shall maintain meeting minutes, including a complete record of all transactions, findings, and determinations, and present a full statement to the General Manager for the Board prior to the next Board meeting. A signed copy of meeting minutes shall be filed with the Staff Liaison.

8. **Terms.** The terms of office shall be two (2) years. Committee members may be reappointed to subsequent terms by providing their letter of intent to the Board and the General Manager, and then the Board voting on the Committee members to be reappointed during a Board meeting.

9. **Removal**. All committee members serve at the will of the Board, and any member may be removed by an affirmative vote of three (3) members of the Board. The Committee member removal will follow procedure as described in Board Policy XXX.X

10. **Officers.** The committee shall designate from among its members a Chair, Vice-Chair, and Secretary. The Chair shall preside over the meetings, and in the Chair's absence, the Vice-Chair shall preside. If both the Chair and the Vice-Chair are absent, the remaining members, if a quorum exists, shall select from among themselves a person to preside over the meeting. The Board Clerk, or Staff designee, shall prepare agendas and minutes of every meeting and shall be responsible for transmitting the agenda and the final copy of all minutes to the General Manager or designee. Items needing Board action shall be transmitted as soon as possible to the General Manager or designee for inclusion on the next available Board agenda.

11. **Agenda.**

(a) The General Manager, in cooperation with the Board President and the Chair of the Irrigation Committee, shall prepare an agenda for each regular and special meetings of the Irrigation Committee Meeting in accordance with the Ralph M. Brown Act (California Government Code Section 54950).

(b) During the last item of the Irrigation Committee agenda before adjournment, a Committee member may bring up items they would like the Committee to review and for what purpose. Requests affirmed by a majority vote of the Committee shall be reported to the Board of Directors by the Committee Chair at the next meeting of the Board of Directors.

(c) Requests for additional information by Committee members should be directed to the Irrigation Committee Chair. The Chair will provide the Board Liaison with these requests. The requests will then be given and discussed with the General Manager with a copy to the Board President. Only the General Manager can direct staff for reports. Only the Board can direct the General Manager.

12. **Board Reports.** The Committee shall report on its activities to the Board at the following meeting after the Committee meets. The Board Report shall be either oral or written and shall include a description of the activities of the Committee for the proceeding, and any on-going or outstanding activities or tasks. The Board Report will be given at the next Regular Board Meeting by the Irrigation Committee Chair or Vice-Chair. Committee member minutes can be used to satisfy this requirement if the Chair or Vice-Chair is not present at the Board of Directors meeting.

RESOLUTION NO. 2022-XX
OF THE GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT
FOR THE APPOINTMENT OF PUBLIC MEMBERS
TO THE IRRIGATION COMMITTEE

WHEREAS, the Irrigation Committee was established to advise the Board on matters related to irrigation service; and

WHEREAS, the District announced the openings for public members to the Irrigation Committee and applications were received; and

WHEREAS, the Irrigation Committee is comprised of two Directors serving as Board liaison, and five (5) public members; and

WHEREAS, Director Donna Seaman (Chair) and Director Gerry Stewart have been appointed as Board liaison; and

WHEREAS, newly formed committee will work on a District policy on the Role and Responsibilities of the Irrigation Committee for approval by the Board of Directors.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS THAT THE INDIVIDUALS NAMED BELOW IS APPOINTED TO THE IRRIGATION COMMITTEE FOR A TERM OF TWO (2) YEARS:

Appointee	Years as Irrigation Customer	Location
John Duarte	23 years	Greenwood
Kristy McKay	6 years	Georgetown
Eric Mead	40 years	Cool
Bill Threkel	40 years	Cool

PASSED AND ADOPTED by the Board of Directors of the Georgetown Divide Public Utilities District at a meeting of said Board held on the 8th day of February 2022, by the following vote:

AYES:

NOES:

ABSENT/ABSTAIN:

Michael Saunders, President
Board of Directors
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

ATTEST:

_____
Adam Coyan, Clerk and ex officio
Secretary, Board of Directors
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

CERTIFICATION

I hereby certify that the foregoing is a full, true, and correct copy of Resolution 2022-XX duly and regularly adopted by the Board of Directors of the Georgetown Divide Public Utility District, County of El Dorado, State of California, on the 8th day of February 8, 2022.

_____
Adam Coyan, Clerk and ex officio
Secretary, Board of Directors
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

RESOLUTION NO. 2022-XX
OF THE GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT
FOR THE APPOINTMENT OF PUBLIC MEMBERS
TO THE IRRIGATION COMMITTEE

WHEREAS, the Irrigation Committee was established to advise the Board on matters related to irrigation service; and

WHEREAS, the District announced the openings for public members to the Irrigation Committee and applications were received; and

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WHEREAS, Director Donna Seaman (Chair) and Director Gerry Stewart have been appointed as Board liaison; and

WHEREAS, newly formed committee will work on a District policy on the Role and Responsibilities of the Irrigation Committee for approval by the Board of Directors.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS THAT THE INDIVIDUALS NAMED BELOW IS APPOINTED TO THE IRRIGATION COMMITTEE FOR A TERM OF TWO (2) YEARS:

Appointee	Years as Irrigation Customer	Location
John Duarte	23 years	Greenwood
Kristy McKay	6 years	Georgetown
Eric Mead	40 years	Cool
Bill Threkel	40 years	Cool

PASSED AND ADOPTED by the Board of Directors of the Georgetown Divide Public Utilities District at a meeting of said Board held on the 8th day of February 2022, by the following vote:

AYES:

NOES:

ABSENT/ABSTAIN:

Michael Saunders, President
Board of Directors
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

ATTEST:

_____
Adam Coyan, Clerk and ex officio
Secretary, Board of Directors
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

CERTIFICATION

I hereby certify that the foregoing is a full, true, and correct copy of Resolution 2022-XX duly and regularly adopted by the Board of Directors of the Georgetown Divide Public Utility District, County of El Dorado, State of California, on the 8th day of February 8, 2022.

_____
Adam Coyan, Clerk and ex officio
Secretary, Board of Directors
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

REPORT TO THE BOARD OF DIRECTORS
BOARD MEETING OF FEBRUARY 8, 2022
AGENDA ITEM 9.B.2

AGENDA SECTION: **NEW BUSINESS**

SUBJECT: **APPOINTMENT OF PUBLIC MEMBERS TO THE FINANCE COMMITTEE**

PREPARED BY: Gloria Omania, Interim Board Clerk

APPROVED BY: Adam Coyan, General Manager

BACKGROUND

The Finance Committee was established by the Board of Directors as an advisory body to the Board on matters related to the District's finances, budgeting, auditing, financial policies, and reports.

The committee is comprised of no fewer than three (3) and no more than five (5) public members who reside within the District boundaries. The Board Treasurer and another Director serve as Board liaison. Director Thornbrough and Director MacDonald currently serve as the Board's liaison.

DISCUSSION

The District announced the openings for public members to the Finance Committee. An application was received from Robert Stoffregen (resume attached). Additional openings remain on the committee and the open application process should continue.

FISCAL IMPACT

None.

CEQA ASSESSMENT

This is not a CEQA project.

POSSIBLE ACTIONS

- Interview Mr. Stoffregen for a vacant Finance Committee position.
- Adopt Resolution 2022-XX appointing Mr. Stoeffregen to the Finance Committee
- Continue the application process to fill the remaining public member seats.

ATTACHMENTS

1. Robert Stoffregen Resume
2. Draft Resolution 2022-XX Appointment of Public Member to the Finance Committee

ROBERT STOFFREGEN

[redacted]

Summary

I am a CPA - lawyer with 40+ years of accounting, business, and financial experience across many different types of entities and in various roles. I am now retired.

Recent Directly Relevant Experience

I am presently on the finance committee of the Auburn Lake Trails Association and have previously served on the finance committee and Board of Directors of the Oakland Museum of California, and as President of the Board of Directors of the Bollinger Canyon Improvement Association HOA.

Professional Experience

Chief Financial Officer
Powerhouse Diesel Services, Benicia, CA
11/11 – 11/13

Chief Financial Officer, Secretary, Director
Applied Intellectual Capital Limited, Alameda, CA
11/06 – 6/09

Partner, Consulting CFO, and Advisor
CFOs2GO, Lafayette, CA
3/04 - 11/17
[Executive finance staffing services]

Vice President, Chief Financial Officer
Reactrix Systems, Inc., San Carlos, CA
6/03 - 2/04
[Start-up, interactive media]

Vice President, Chief Financial Officer
Good Guys, Inc., Alameda, CA
10/00 - 3/02
[Public company, former client, turnaround, consumer goods retail]

Vice President, Chief Financial Officer
PurpleTie.com, Pleasanton, CA
1/00 - 10/00
[Start-up, Internet based consumer services]

Vice President, Chief Financial Officer
ZapMe! Corporation, San Ramon, CA
11/98 - 1/00
[Start-up, education oriented, broadband network]

Vice President, Chief Financial Officer
Radical Entertainment, San Francisco, CA
1/98 - 10/98
[Start-up, consumer goods development]

Executive Vice President
Chief Financial Officer
Director of Corporate Development
California Culinary Academy, San Francisco, CA
6/96 - 1/98
[Public company, former client, education]

Partner
Jones, Henle & Schunck, CPA's, Danville, CA
1/96 - 11/96
(McOuat, Regalia & Stoffregen consulting practice merged into JH&S)

Partner
McOuat, Regalia & Stoffregen, **CPA's**, San Ramon, CA
5/95 - 12/95

Executive Vice President, Chief Financial Officer
YES! Entertainment Corporation, Pleasanton, CA
9/94 - 3/95
[Start-up, consumer goods development]

Senior Vice President, Chief Financial Officer
The Sharper Image, San Francisco, CA
1991 - 9/94

Partner
Deloitte & Touche (Touche, Ross)
San Francisco, CA 1985 - 1991
St. Paul, MN 1980 – 1984, 1976 - 1978

Attorney, Business Organization Group
Fryberger Buchanan, Smith & Frederick, Duluth, MN
1978 - 1980

Education

University of Minnesota – Duluth; BA-Accounting, *Magna Cum Laude*
William Mitchell College of Law; JD, *Cum Laude*

RESOLUTION NO. 2022-XX
OF THE GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT
FOR THE APPOINTMENT OF A PUBLIC MEMBER
TO THE FINANCE COMMITTEE

WHEREAS, the Board of Directors of the Georgetown Divide Public Utility District established the Finance Committee as an advisory body to the Board on matters related to the District's finances, budgeting, auditing, financial policies, and reports; and

WHEREAS, the Finance Committee is comprised of the two Directors serving as Board liaison, and at least three (3) public members with no more than five (5), serving a term of two (2) years; and

WHEREAS, the District desires to fill the openings for public members and announced the open application process by a press release and articles in issues of the GDPUD newsletter; and

WHEREAS, an application was received from Robert Stoffregen, a resident of the District who has a finance and budgeting background.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS THAT ROBERT STOFFREGEN IS APPOINTED TO THE FINANCE COMMITTEE:

PASSED AND ADOPTED by the Board of Directors of the Georgetown Divide Public Utilities District at a meeting of said Board held on the 8th day of February 2022, by the following vote:

AYES:

NOES:

ABSENT/ABSTAIN:

_____
Michael Saunders, President
Board of Directors
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

ATTEST:

_____
Adam Coyan, Clerk and ex officio
Secretary, Board of Directors
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

CERTIFICATION

I hereby certify that the foregoing is a full, true, and correct copy of Resolution 2021-19 duly and regularly adopted by the Board of Directors of the Georgetown Divide Public Utility District, County of El Dorado, State of California, on the 8th day of February 8, 2022.

_____

Adam Coyan, Clerk and ex officio
Secretary, Board of Directors
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

REPORT TO THE BOARD OF DIRECTORS
BOARD MEETING OF FEBRUARY 8th, 2022
AGENDA ITEM NO. 9C

AGENDA SECTION: **NEW BUSINESS**

SUBJECT: **STORMWATER MANAGEMENT PLAN**

PREPARED BY: Adam Coyan, General Manager

APPROVED BY: Adam Coyan, General Manager

BACKGROUND

Currently there are waste gates on Georgetown Divide Public Utilities transmission ditch for untreated water. The waste gates are in place for emergency conditions, such as a large storm event and the water in the ditch starts to overflow the banks. The waste gates usually are located at seasonal stream beds.

DISCUSSION

In some locations the waste gates are spread too far apart, and the amount of storm water collected in the transmission ditch is enough to overwhelm the seasonal stream beds. I would like to propose for the fiscal year 2022 / 2023 to add additional waste gates where our crews can easily access them, where they are near drainages and would reduce the volume of the water in each drainage.

FISCAL IMPACT

If directed this item would be added to the CIP budget for 2022 / 2023

CEQA ASSESSMENT

A CEQA assessment would need to be done as part of this project.

RECOMMENDED ACTION

Direct Staff to add this item to the 2022 / 2023 CIP budget

ALTERNATIVES

No Action

ATTACHMENTS

1. West Slope Stormwater Resource Plan
2. State Water Resource Control Board General Permit for Drinking Water System Discharges to Waters of the United States
3. State Water Resource Control Board Order WQ 2014- XXXX - DWQ

West Slope Stormwater Resource Plan

Public Draft

Stantec

Prepared for:
El Dorado County Water Agency,
County of El Dorado, and
City of Placerville

January 2018

Table of Contents

LIST OF TABLES

LIST OF FIGURES

APPENDICES

Abbreviations

AB	Assembly Bill
AC	Alpine County
Act	1959 El Dorado County Water Agency Act
AF	Acre-Feet
AF/yr	Acre-Feet per Year
Agency	El Dorado County Water Agency
BMP	Best Management Practice
CABY	Cosumnes American Bear Yuba
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CDS	Community Development Services
CGP	Construction General Permit
CNPS	California Native Plant Society
County	County of El Dorado
CVP	Central Valley Project
CWA	Federal Clean Water Act
DWQ	Division of Water Quality
DWR	California Department of Water Resources
E.coli	Escherichia coli
EID	El Dorado Irrigation District
FEMA	Federal Emergency Management Agency
GAMA	Groundwater Ambient Monitoring and Assessment
GDPUD	Georgetown Divide Public Utility District
GFCSD	Grizzly Flats Community Service District

HUC	Hydrologic unit code
IGP	Industrial General Permit
IRWM	Integrated Regional Water Management
IRWMP	Integrated Regional Water Management Plan
ISWEBE Plan	Inland Surface Waters, Enclosed Bays, and Estuaries
LID	Low impact development
MS4	Municipal Separate Storm Sewer
NGO	Non-Governmental Organization
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
Placerville	City of Placerville
Proposition 1	Water Quality, Supply, and Infrastructure Improvement Act of 2014
RACI	Responsible, Accountable, Consulted, Informed
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SB 790	Stormwater Resource Planning Act of 2009
SGMA	Sustainable Groundwater Management Act of 2014
State	State of California
State Water Board	California State Water Resources Control Board
SWMP	Stormwater Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRP	Stormwater Resource Plan
West Slope SWRP	West Slope Stormwater Resource Plan
SWRP Guidelines	State Water Board's Stormwater Resource Plan Guidelines (December 2015)

SWRP Partners	El Dorado County Water Agency, County of El Dorado, and the City of Placerville
TMDL	Total Maximum Daily Load
UO	University of Oregon
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Department of Agriculture, Forest Service
USGS	U.S. Geological Survey
Water Code	California Water Code
Watershed Plan	El Dorado Irrigation District's South Fork American River Watershed Plan
WDR	Waste Discharge Requirement
WWTF	Waste Water treatment facility
WWTP	Waste Water Treatment Plant

1.0 INTRODUCTION

This comprehensive West Slope Stormwater Resource Plan (West Slope SWRP) outlines the approach for watershed resource planning and stormwater runoff management. The El Dorado County Water Agency (Agency) led the development of the West Slope SWRP with close collaboration from the County of El Dorado (County) and the City of Placerville (Placerville) (collectively, SWRP Partners).

The West Slope SWRP is tailored to address the unique conditions of the western portion of El Dorado County, a mostly rural agricultural area in the foothills where management of stormwater resources continues to be very different from that in an urban setting on flat land. Figure 1-1 shows the West Slope in relation to El Dorado County. The West Slope consists of dispersed urban, rural, and agricultural areas, and about half of the area lies within the Eldorado National Forest (refer to Section 2 for more details).

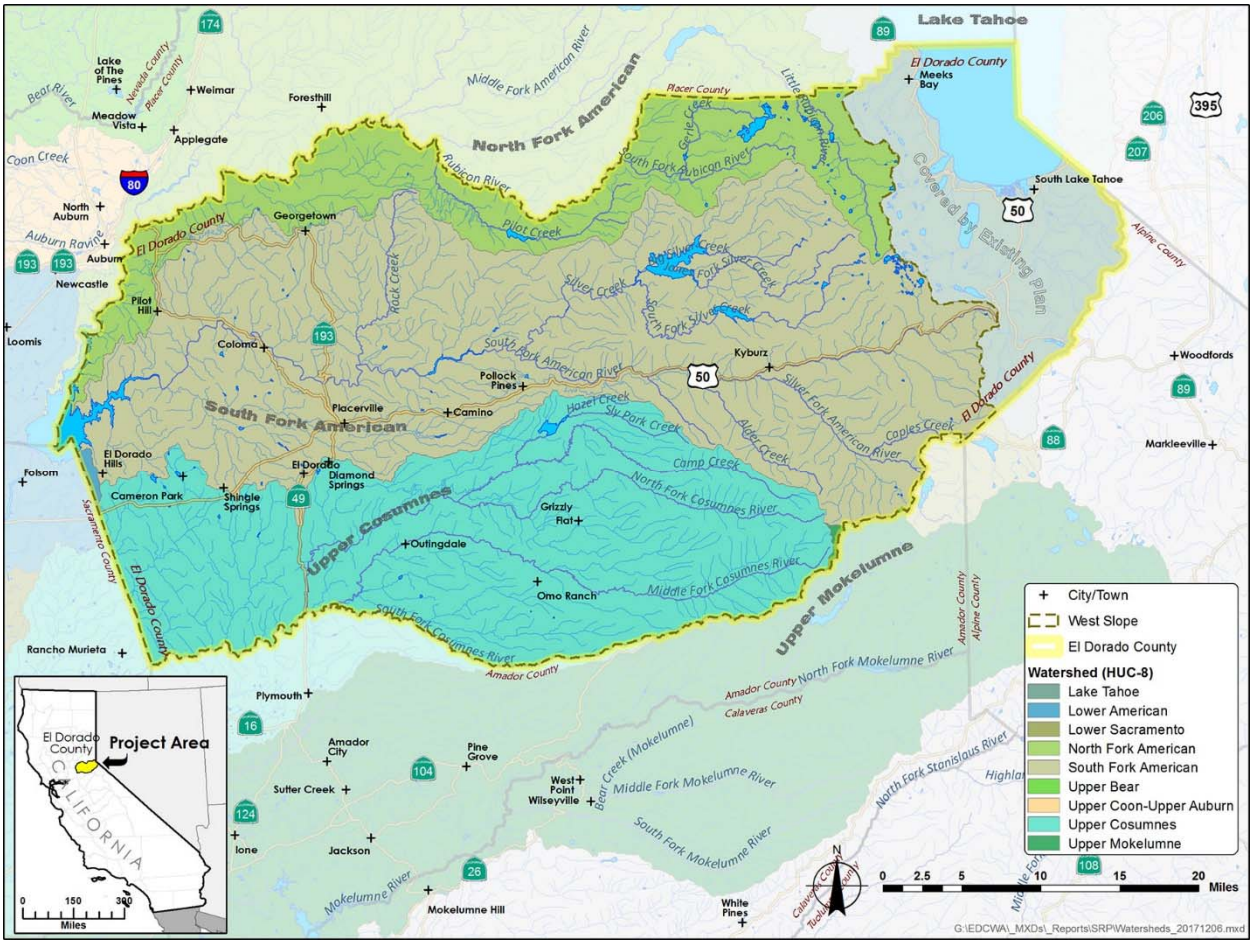

Figure 1-1. West Slope Stormwater Resource Plan Area

To adequately address stormwater resource planning in this diverse and large foothill setting, the West Slope SWRP covers three main components:

1. Surface Water Storage
2. Watershed Management
3. Stormwater Management

The West Slope SWRP is intended to serve as a foundation for efforts outlined in existing local Stormwater Management Plans (SWMP) and is not intended to replace existing plans or plans that are under development. The West Slope SWRP meets the standards and requirements of the California Water Code (Water Code) section 10560 et. seq., and will be updated as new goals, projects, and needs arise on the West Slope.

1.1 BACKGROUND

The 1959 El Dorado County Water Agency Act (Act) gives the Agency the authority to provide water for all beneficial uses in El Dorado County including power development and flood control. In particular, Section 13 of the Act states the following:

> *Sec. 13. The agency shall have the power to control the flood and stormwaters of the agency and the flood and stormwaters of streams that have their sources outside of the agency, which streams and floodwaters flow into the agency, and to conserve such waters for beneficial and useful purposes of said agency by spreading, storing, retaining and causing to percolate into the soil within or without said agency, or to save or conserve in any manner all or any of such waters and protect from damage from such flood or stormwaters the watercourses, watersheds, public highways, life and property in said agency, and the watercourses outside of the agency of streams flowing into the agency.*

The County, the Agency's collaborating partner, also is responsible for stormwater and floodwater management. The County must comply with regulatory and non-regulatory requirements that include but are not limited to Phase I and Phase II Municipal Separate Storm Sewer (MS4) Permits, National Pollutant Discharge Elimination System (NPDES) Permits, Total Maximum Daily Loads (TMDL), Trash Policy, Biological Objectives, and the Toxicity Policy. The County also addresses climate resiliency and flood risk mitigation.

Placerville, another SWRP Partner, is responsible for stormwater and floodwater management. Similar to the County, it must comply with regulatory and non-regulatory requirements.

1.2 STORMWATER RESOURCE PLANNING

Several terms are important in the context of stormwater resource planning. ***Dry weather runoff*** means "…surface waterflow and waterflow in storm drains, flood control channels, or other means of runoff conveyance produced by nonstormwater resulting from irrigation, residential, commercial, and industrial activities" (Water Code Section 10561.5). ***Stormwater*** refers to "…temporary surface water runoff and

INTRODUCTION

drainage generated by immediately preceding storms. This definition shall be interpreted consistent with the definition of 'stormwater' in Section 122.26 of Title 40 of the Code of Federal Regulations" that is applicable to the State of California's (State) NPDES programs (Water Code Section 10561.5).

Stormwater management is currently changing in California due to the increased awareness of stormwater-related environmental challenges as well as the potential for stormwater to be part of the long-term solution to California's water conflict and scarcity. While early regulatory efforts focused on controlling pollutants and implementing best management practices (BMP), current regulatory decisions also emphasize holistic strategies that will result in multi-benefit projects and programs while concurrently managing pollution.

The *Stormwater Resource Planning Act of 2009* (or Senate Bill (SB) 790) required a watershed approach to actively incorporate stormwater management as a resource. With the focus on stormwater as a resource, newer low impact development (LID) and green infrastructure techniques are now capitalizing on opportunities to capture stormwater runoff for local landscaping needs, agricultural uses, and groundwater recharge. Stormwater management is also being incorporated to existing efforts such as Integrated Regional Water Management Plans (IRWMP).

In 2014, SB 985 amended the Stormwater Resource Planning Act, thereby also amending Water Code sections 10561, 10562, 10563, 10573, and adding sections 10561.5 and 10565. SB 985 incentivized and promoted stormwater resource planning efforts that include both wet and dry weather flow management and outlined the requirements for a SWRP.

In particular, Water Code Section 10562(b) outlines the basic requirements for a SWRP.

> *A stormwater resource plan shall:*
>
> *(1) Be developed on a watershed basis.*
>
> *(2) Identify and prioritize stormwater and dry weather runoff capture projects for implementation in a quantitative manner, using a metrics-based and integrated evaluation and analysis of multiple benefits to maximize water supply, water quality, flood management, environmental, and other community benefits within the watershed.*
>
> *(3) Provide for multiple benefit project design to maximize water supply, water quality, and environmental and other community benefits.*
>
> *(4) Provide for community participation in plan development and implementation.*
>
> *(5) Be consistent with, and assist in, compliance with total maximum daily load (TMDL) implementation plans and applicable NPDES permits.*
>
> *(6) Be consistent with all applicable waste discharge permits.*
>
> *(7) Upon development, be submitted to any applicable integrated regional water management group. Upon receipt, the integrated regional water management group shall incorporate the stormwater resource plan into its integrated regional water management plan.*

(8) Prioritize the use of lands or easements in public ownership for stormwater and dry weather runoff projects.

In accordance with Water Code Section 10565, the California State Water Resources Control Board (State Water Board) was required to establish guidance for the development of SWRPs. The State Water Board's Stormwater Resource Plan Guidelines (December 2015) (termed SWRP Guidelines) were developed to provide guidance on contents and procedures to public agencies seeking to develop a SWRP that complies with Water Code sections 10560 et seq. (as amended by SB 985, Stats. 2014, ch. 555, § 5) described above.

SB 985 also stipulated that a SWRP (or its equivalent) is required to be eligible for stormwater implementation grants funded from voter-approved bonds after January 1, 2014 (Water Code Section 10563, subdivision (c)(1)). The SWRP also needs to be incorporated into the appropriate IRWMP. For example, a SWRP is required by agencies to obtain funding from the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1. Assembly Bill (AB) 1471), which authorized $200 million in grants for multi-benefit stormwater management projects.

Integrating stormwater management with basic aspects of aquatic resource protection and overall water management (e.g., flood control, water supply, habitat conservation) can be accomplished through a watershed approach. Therefore, in order for individual stormwater and dry weather runoff capture projects to be eligible for funding, a SWRP (or equivalent) needs to be watershed-based and must comply with the relevant Water Code provisions enacted by SB 985. Alternatively, existing planning documents and local ordinances may be used in lieu of a SWRP as long as they, in combination, satisfy the legislative requirements. These may include: watershed management plans, integrated resource plans, urban water management plans, green infrastructure plans, water quality improvement plans, salt and nutrient management plans, TMDL implementation plans, or similar plans that incorporate stormwater and dry weather runoff capture and use as a component of the watershed goals and objectives. Additional supplemental information may also include local or regional plans and ordinances (see the Stormwater Resource Plan Checklist and Self-Certification in Appendix A).

1.3 GUIDING PRINCIPLES FOR PLAN DEVELOPMENT

The SWRP Partners implemented a collaborative approach to develop the West Slope SWRP consistent with legislative requirements and regional needs. In a workshop on July 11, 2017, the SWRP Partners collectively established the following guiding principles to support efficient and effective development and implementation of the West Slope SWRP:

1. Align the planning and implementation of countywide integrated management and stewardship for water, land, and related resources. This includes consistency and coordination with existing planning efforts and future project implementation.

2. Develop multi-objective projects and administrative actions that provide direct benefits to El Dorado County and its residents. In addition to facilitating opportunities for regional and statewide benefits and conforming to the principles of integrated water resources management. Investments and

outcomes should consider: 1) Social Equity, 2) Economic Efficiency, and 3) Ecological Sustainability.

3. Incorporate proactive public outreach and stakeholder engagement during the development of the West Slope SWRP, especially during project prioritization. Existing venues for public outreach should be leveraged to maximize efficiency.

4. Use the available talents and expertise of different government entities in a collaborative and cooperative manner to maximize efficiency.

5. Maximize the use of available data, plans, information, and references.

6. Aim to develop a complete and acceptable document expeditiously, with some areas of detail to be supplemented during subsequent (as needed and/or with periodic) updates.

7. Establish component-specific or topic-specific groups or subgroups for discussion and content development, as needed.

1.4 RELEVANT EFFORTS

This West Slope SWRP incorporates previous and ongoing regional and watershed planning efforts led by various entities throughout El Dorado County. Existing plans known by the SWRP Partners and related to stormwater management on the West Slope are listed below in order of published date:

- *American River Basin Integrated Regional Water Management Plan (Anticipated 2018)*
- *American River Basin Stormwater Resource Plan (Anticipated summer 2018)*
- *El Dorado County Multi-Jurisdictional Hazard Mitigation Plan (Anticipated 2018)*
- *El Dorado County Sustainable Agritourism Mobility Study (2016)*
- *Western Slope Roadway Capital Improvement Program and Traffic Impact Mitigation Fee Program for the County of El Dorado (2016)*
- *Cosumnes American Bear Yuba Integrated Regional Water Management Plan (Updated 2014)*
- *South Fork American River Watershed Plan (2009)*
- *Placerville Stormwater Management Plan (2005)*
- *Western El Dorado County Stormwater Management Plan (2004)*
- *County of El Dorado Drainage Manual (1995)*

The following subsections summarize these existing plans.

1.4.1 American River Basin Integrated Regional Water Management Plan

The *American River Basin IRWMP* was developed in 2006 and updated in 2013. Another update to the *American River Basin IRWMP* is anticipated in July 2018. The plan is a comprehensive document that encourages regional strategies for integrated water resources management. Integrated water resources management has been accomplished through partnerships that promote the development of priorities used to implement projects and programs. A small portion on the West Slope is in the *American River Basin IRWMP* area, and projects in the West Slope SWRP are likely to benefit downstream users, namely in the American River Basin. More information on the *American River Basin IRWMP* is available at

http://rwah2o.org/programs/integrated-regional-water-management/american-river-basin-irwmp-2013-update/.

1.4.2 American River Basin Stormwater Resource Plan

The SWRP for the American River Basin is under development with a draft anticipated in the summer of 2018. The boundaries for this plan include the watersheds in the existing American River Basin IRWMP region. Both the *American River Basin SWRP* and this West Slope SWRP contain a portion of the South Fork American Watershed and Upper Cosumnes Watershed (discussed in more detail in Section 2), meaning that the plans overlap in the El Dorado Hills area. *The American River Basin SWRP* is currently not available online as it is under development.

1.4.3 El Dorado County Multi-Jurisdictional Hazard Mitigation Plan

The 2017 *El Dorado County Multi-Jurisdictional Hazard Mitigation Plan* is under development as an update to the 2004 plan. This plan is intended to protect the citizens of El Dorado County and their property from hazards. The plan serves the jurisdictions of El Dorado County, City of Placerville, City of South Lake Tahoe, El Dorado Irrigation District (EID), and Sacramento Municipal Utility District. The primary hazard identified in this plan related to stormwater is flooding. Urban development generally increases the amount of impervious surfaces and leads to increases in the flow rate and volume of water in the drainage channels during and after a storm event. When flows exceed the capacity of drainage channels constructed to convey water, flooding can occur. Hazards associated with localized flooding include the overtopping of roadways, inundation of areas near the drainage channels, and structural damage. It is anticipated that some of the occasional flood events may be reduced through the implementation of the West Slope SWRP projects. A 2017 plan is under development and is anticipated to be approved by the Federal Emergency Management Agency (FEMA) in 2018. A copy of the *2004 Hazard Mitigation Plan* is available at *https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794 /17565/CA_017_ElDora do_2004.pdf?sequence=1&isAllowed=y*.

1.4.4 El Dorado County Sustainable Agritourism Mobility Study

The *El Dorado County Sustainable Agritourism Mobility Study* is an existing study that identifies mobility challenges and the causes of traffic congestion found in El Dorado County that relate to agritourism. The study identifies solutions that are low-cost and high-impact to existing infrastructure that will continue to support agritourism in El Dorado County. Given the solutions present in the study, stormwater and dry weather runoff capture projects will be incorporated into the proposed solutions discussed in the *El Dorado County Sustainable Agritourism Mobility Study* as an effort driven by the West Slope SWRP. More information on this study is available at *http://www.edctc.org/3/AgritourismStudy.html.*

1.4.5 Western Slope Roadway Capital Improvement Program and Traffic Impact Mitigation Fee Program for El Dorado County

The *Western Slope Roadway Capital Improvement Program* and *Traffic Impact Mitigation Fee Program* for El Dorado County is a Program Environmental Impact Report for the updated *Western Slope Roadway Capital Improvement Program* and the *Traffic Impact Mitigation Fee Program* for El Dorado County. The

Capital Improvement Program is a planning tool that is updated periodically, that outlines the plans for implementing a list of capital improvement projects in El Dorado County. The funding sources of each project are identified in the *Capital Improvement Program*. The *Traffic Impact Mitigation Fee Program* is designed to help fund projects related to widening roadways, new roadway construction, and roadway intersection improvements, including adjacent pedestrian and bicycle facilities. As projects covered in the *Capital Improvement Program* will be in the West Slope area, there is an opportunity to incorporate stormwater and dry weather runoff capture components into each project that is not yet completed in order to support stormwater management efforts. More information is available at *https://www.edcgov.us/government/longrangeplanning/DOT/tim/documents/CIP-TIM-Final-EIR-Sept-2016.pdf*.

1.4.6 Cosumnes American Bear Yuba Integrated Regional Water Management Plan

The *Cosumnes American Bear Yuba (CABY) Integrated Regional Water Management (IRWM)* region was developed in 2009, following the completion of the 2007 *CABY IRWMP*. The 2007 plan was updated in 2014 and is compliant with Proposition 84 Guidelines. The 2014 *CABY IRWMP* defines current water resources and environmental conditions, documents key issues and challenges, identifies management goals and objectives, evaluates alternative water management strategies, identifies opportunities for cooperative actions, provides an implementation plan for priority projects, and establishes an ongoing planning framework. The projects identified in the West Slope SWRP will be incorporated into the *CABY IRWMP* (See Section 5.2). More information on the 2014 *CABY IRWM* effort, the 2014 *CABY IRWMP*, and the plan to update for consistency with 2016 IRWM Planning Standards is available at *http://cabyregion.org/caby-plan/*.

1.4.7 South Fork American River Watershed Plan

Finalized in February 2009, the EID *South Fork American River Watershed Plan (Watershed Plan)* links localized, single-issue mandatory plans that guide water resources management in select parts of the watershed and fill in the gaps of management throughout the rest of the watershed. The *Watershed Plan* describes the current watershed resources, including geology and soils, hydrology and water resources, biological resources, and social and cultural characteristics. It also describes the single-issue mandatory plans that have been developed in the watershed, the goals of each plan for watershed management, and how each goal relates to the *Watershed Plan*. Water resources issues discussed in the *Watershed Plan* include water quality, water supply, environment and habitat, social and cultural, flooding, catastrophic wildfire, and air quality. The *Watershed Plan* identifies 11 goals and 31 objectives for the South Fork American River Watershed and provides an assessment regarding the existing mandatory plans ability to meet them. The *Watershed Plan* also includes a list of proposed projects that include education outreach, monitoring, and best practices for land use and construction. The West Slope SWRP includes the South Fork American River Watershed, which covers a large portion in the West Slope area. This plan is considered in the development of the West Slope SWRP to account for the ongoing watershed management efforts that are likely to contribute to the integrated watershed management and stormwater management efforts outlined in the West Slope SWRP. More information on the *South Fork American River Watershed Plan* is available at *http://cabyregion.org /?mdocs-file=962.*

1.4.8 Placerville Stormwater Management Plan

Placerville is located in the Sierra Nevada foothills east of Sacramento and has its own SWMP. Urban runoff from areas located within the city limits is primarily discharged to Hangtown Creek. Hangtown Creek is a tributary to Weber Creek and the South Fork American River. The 2005 *Placerville SWMP* contains a list of BMPs that primarily involve the establishment of adequate legal authority, education of the public and city employees, drainage system mapping, and the evaluation and revision of the existing city procedures and design standards. Ultimately, implementation of the *Placerville SWMP* will result in additional city and private capital and operating costs for the management of urban runoff to protect the quality of water in Hangtown Creek. Stormwater and dry weather runoff capture projects proposed in the West Slope SWRP to occur in Placerville will need to comply with the *Placerville SWMP*. More information is available at *https://www.cityofplacerville.org/storm-drains*.

1.4.9 Western El Dorado County Stormwater Management Plan

The 2004 *Western El Dorado County SWMP* outlines a program to reduce the discharge of pollutants associated with the stormwater drainage systems serving on the West Slope. The *SWMP* identifies how the County complies with the provisions of the NPDES permit under Water Quality Order No. 2003-0005-DWQ proposed by the State Water Board, now replaced by Water Quality Order No. 2013-0001-DWQ. The *SWMP* discusses the County's methods for project planning, design, and construction and outlines operation and maintenance procedures for County-owned facilities. The *Western El Dorado County SWMP* only addresses the water quality component of the integrated management of stormwater resources approach envisioned for a *SWMP*. The *SWMP's* proposed stormwater management program includes public education and outreach, public involvement and participation, illicit discharge detection and elimination, construction site runoff control, post construction runoff control, and pollution prevention/good housekeeping. The *SWMP* also describes the County's monitoring, program evaluation, and reporting program, which includes collecting information on problem pollutants, monitoring the performance of stormwater controls in addressing these pollutants, and annually reporting progress and updates to the Regional Water Quality Control Board (RWQCB). Stormwater and dry weather runoff capture projects proposed to occur on the West Slope will need to abide by the *Western El Dorado County SWMP*. More information on the *2004 Western El Dorado County SWMP* is available at *https://www.edcgov.us/Government/longrangeplanning/StormWaterManagement/documents /swmp%20(1).pdf.*

1.4.10 County of El Dorado Drainage Manual

In 1995, the County Department of Transportation developed a manual that outlines the procedures necessary to provide uniform methodology for conducting the analysis and design of drainage facilities. The Drainage Manual provides general drainage guidelines regarding hydrology, surface drainage design, hydraulic design of closed conduits, stormwater storage design, hydraulic design of open channels, and hydraulic design of culverts. All drainage improvement projects proposed on the West Slope SWRP will need to comply with the *County of El Dorado Drainage Manual*. More information is available at *https://www.edcgov.us/government/dot/manuals/documents/DrainageManual.pdf.*

1.5 CONSISTENCY WITH APPLICABLE LAW, REGULATIONS, AND PERMIT CONDITIONS

In addition to complying with the SWRP Guidelines, the West Slope SWRP will also support efforts to comply with other applicable laws, regulations, and permit conditions. The West Slope SWRP is compliant with the following, but not limited by, regulatory requirements and permit conditions:

- The State Water Board Trash Policy, which includes Amendments to the Water Quality Control Plan for Ocean Waters of California adopted by the State Water Board to control trash and Part 1 of the Trash Provision of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries (ISWEBE Plan) (State Water Board 2017a).
- California Health and Safety Code for pests and mosquito abatement to help reduce public health threats and diseases that may be caused by vectors.

Additional permits and approvals may be needed from the following, but not limited to, agencies before implementing stormwater projects included in in the West Slope SWRP:

- El Dorado County Community Development Services
- El Dorado County Air Quality Management District
- Applicable Community Service Districts
- El Dorado County and Georgetown Divide Resources Conservation Districts
- Central Valley RWQCB
- State Water Board
- California Department of Fish and Wildlife
- U.S. Army Corps of Engineers (USACE)

1.6 DOCUMENT ORGANIZATION

To adequately address the unique setting of the West Slope, the West Slope SWRP includes three main components to properly cover the nature of stormwater in El Dorado County: Surface Water Storage, Watershed Management, and the more conventional component of Stormwater Management. These three components and the associated project identification, benefit evaluation, and project prioritization are the focus of this document.

The West Slope SWRP is organized as follows, consistent with the SWRP Guidelines:

- **Section 1: Introduction –** Provides background information, guiding principles, relevant efforts, and consistency with applicable laws.

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- **Section 2: Description of Watershed –** Provides a description of the watersheds and planning areas addressed in the West Slope SWRP.
- **Section 3: Organization, Coordination, Collaboration –** Identifies the local agencies, non-governmental organizations (NGO), and State and Federal agencies that play important roles in developing and implementing the West Slope SWRP.
- **Section 4: Quantitative Methods for Identification and Prioritization of Stormwater and Dry-Weather Runoff Capture Projects** – Describes the methodology for identifying and prioritizing the multi-benefit stormwater projects, and the subsequent results.
- **Section 5: Plan Implementation Strategy and Scheduling of Projects** – Describes how the West Slope SWRP will be implemented and adapted.
- **Section 6: Education, Outreach, and Public Participation –** Describes the public outreach performed through the development of the West Slope SWRP and outlines the future public outreach plan for long-term participation in plan implementation.
- **Section 7: References –** Lists references used to prepare the West Slope SWRP.
- **Appendix A: Stormwater Resource Plan Checklist and Self-Certification:** Contains the checklist and self-certification of compliance for the West Slope SWRP. Demonstrates that the West Slope SWRP is compliant with the Water Code requirements and State Water Board guidance for Stormwater Resource Plans.
- **Appendix B: Project Description Forms:** Contains the project description forms for each of the multi-beneficial use projects submitted for the West Slope SWRP.
- **Appendix C: Project Evaluation and Prioritization Method:** Contains an overview of the project evaluation metrics and scoring, in addition to background on how project benefits were weighted for the evaluation of projects.
- **Appendix D: Quantitative Analysis and Project Evaluation Summary Sheets:** Contains a description of the quantitative analysis completed for the submitted projects for the West Slope SWRP. Additionally, it also includes the evaluation results for each project.
- **Appendix E: Project Evaluation Summary Table:** Contains a summary table of the evaluation outcomes obtained for each submitted project for the West Slope SWRP.

2.0 DESCRIPTION OF WATERSHED

This section provides an overview of the geographic scope, background on the watersheds, the various water resources, and the water quality compliance found in the area.

El Dorado County is located in Northern California, north east of Sacramento County and covers 1,708 square miles with an estimated population of 185,625 (U.S. Census Bureau 2010). The western portion of El Dorado County, referred to as the West Slope, is the focus of the West Slope SWRP and covers the portion of El Dorado County west of the Sierra Nevada Continental Divide and excludes the Lake Tahoe watershed (see Figure 2-1). The only incorporated city in the West Slope area is Placerville, with the remainder of the population living mostly in towns and community service districts (see Figure 2-2). The major political boundaries on the West Slope are the multiple water service providers and the Eldorado National Forest, which covers about half of the West Slope in the areas of high elevation (Figure 2-3).

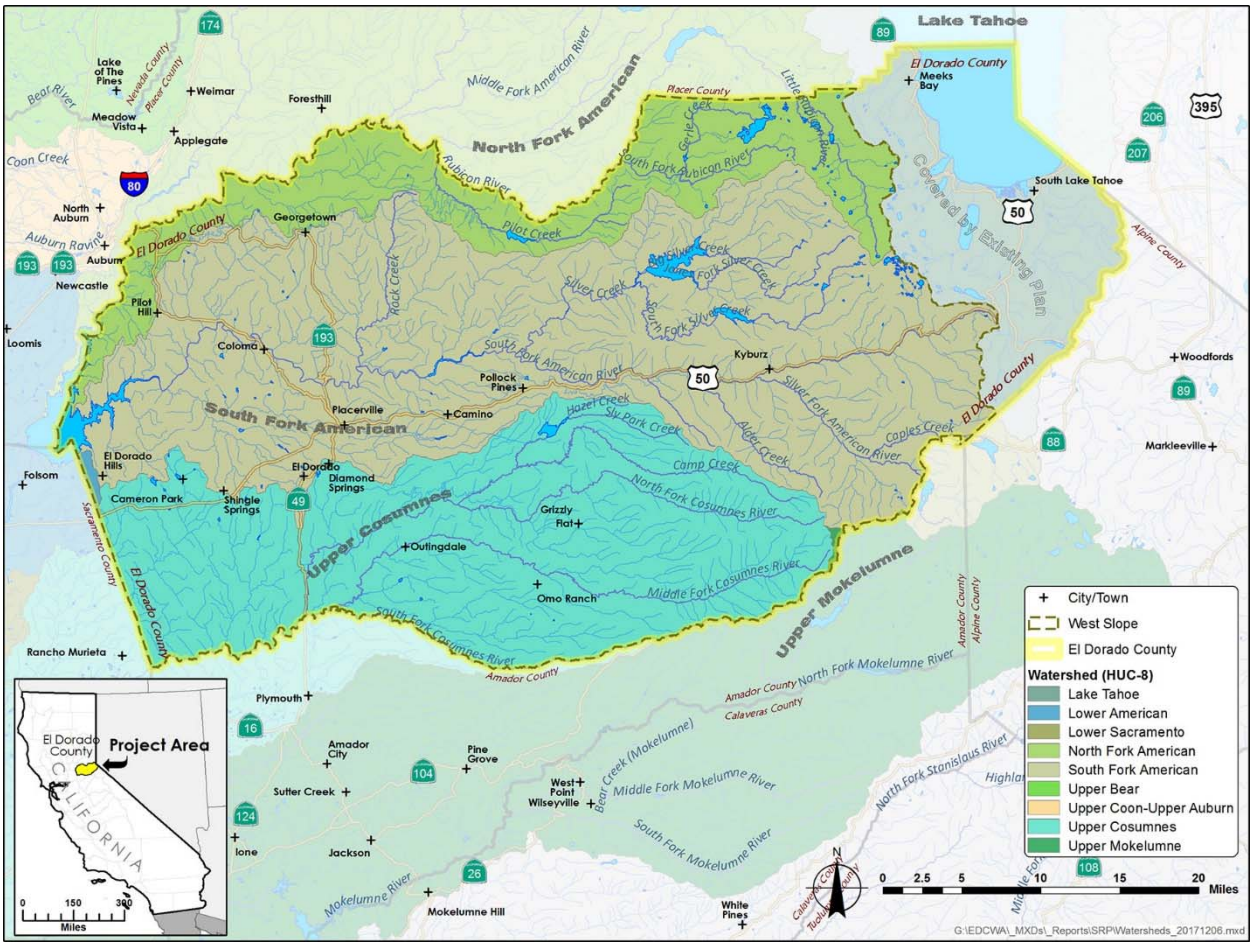
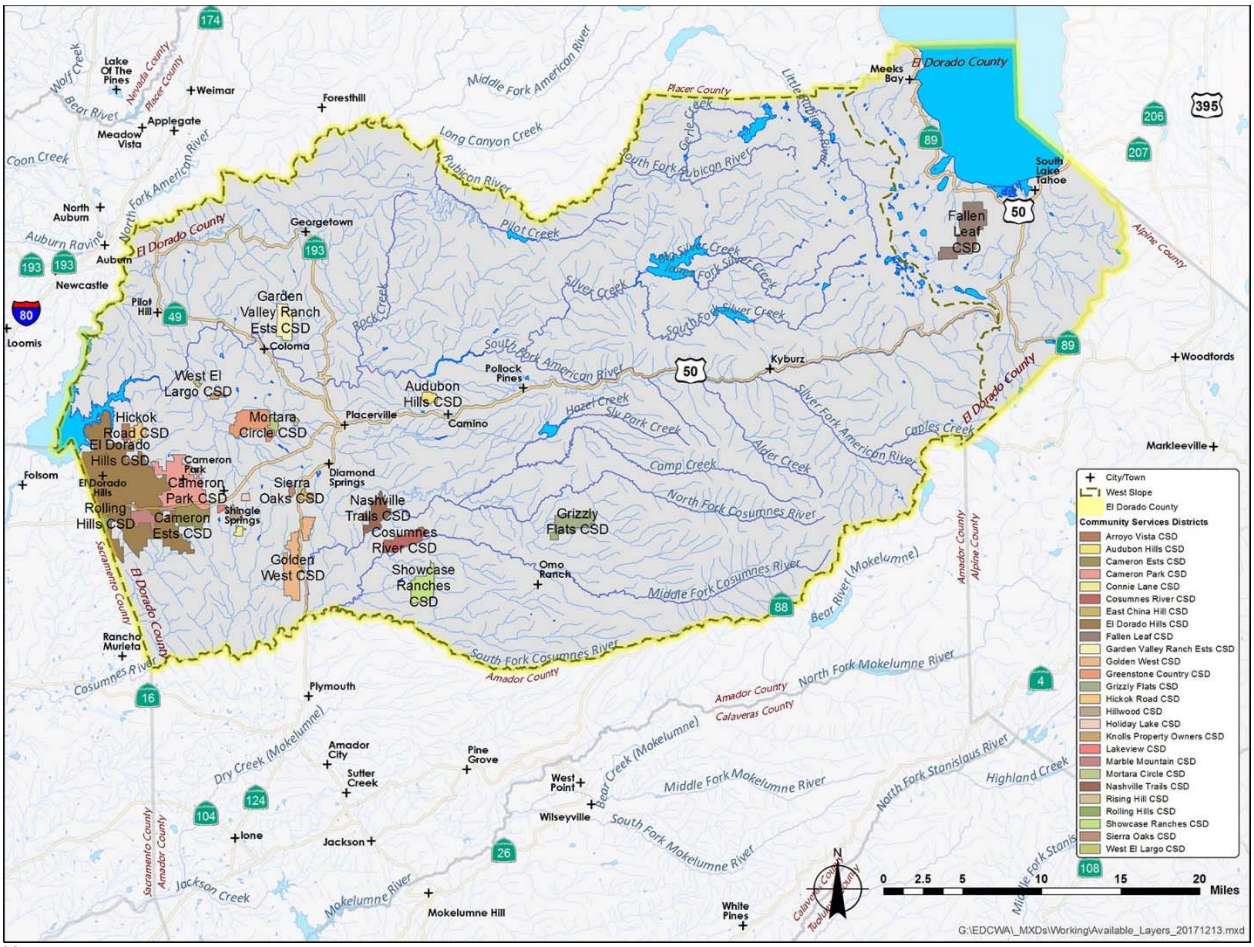


Figure 2-1. West Slope Stormwater Resource Plan Area

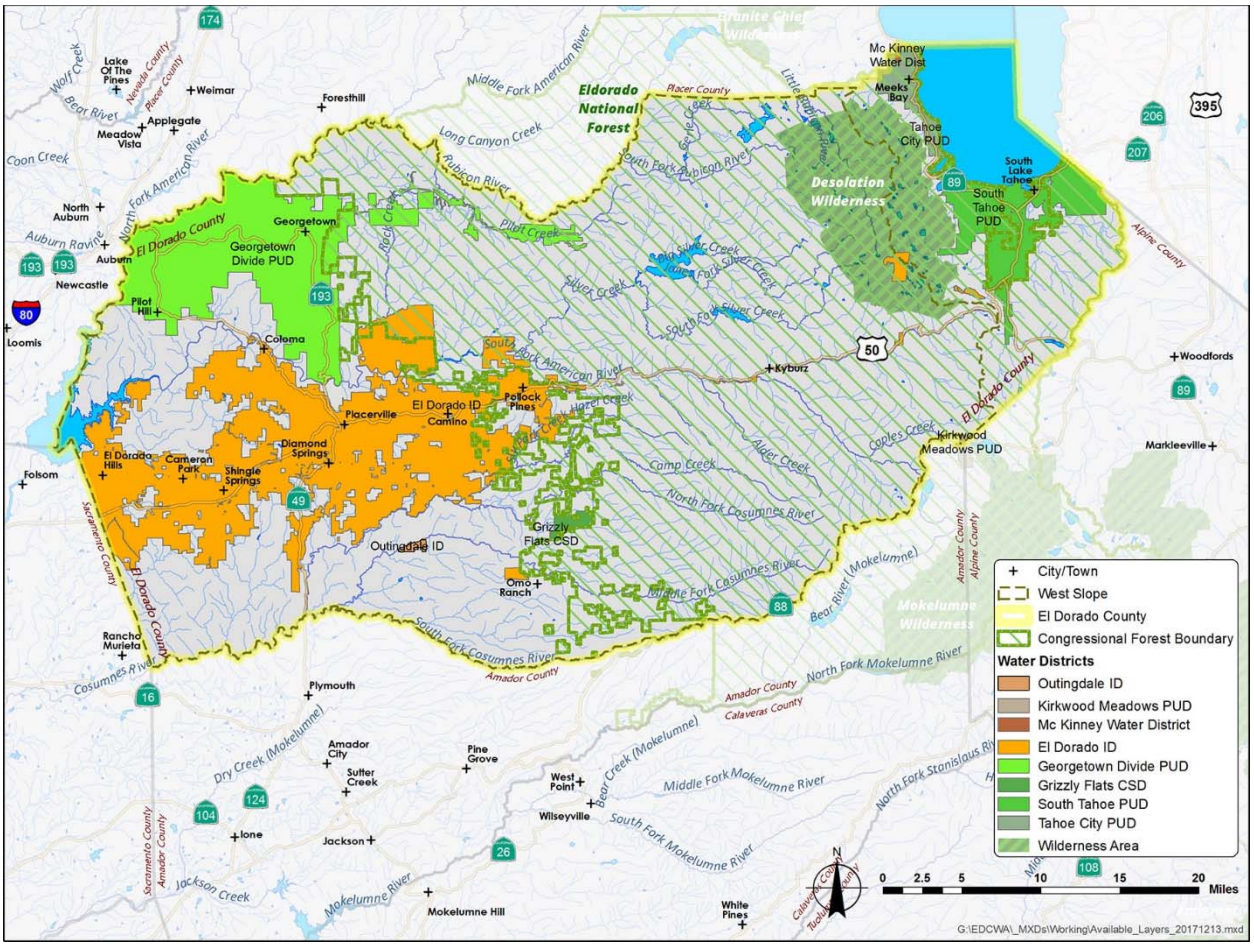
DESCRIPTION OF WATERSHED



Key:
CSD = Community Service District

Figure 2-2. Cities, Towns, and Community Service Districts in El Dorado County

DESCRIPTION OF WATERSHED



Key:
ID = Irrigation District
PUD = Public Utility District
CSD = Community Service District

Figure 2-3. Political Boundaries in El Dorado County

2.1 GUIDANCE FROM STATE WATER BOARD ON GEOGRAPHIC SCOPE

The SWRP Guidelines defines a watershed as the region draining into a river, river system, or other body of water above a particular point. The SWRP Guidelines also references the U.S. Geological Survey's (USGS) and CalWater 2.2's definitions and classifications of watersheds. According to the USGS, watersheds are classified into 6 different levels based off the average area in square miles: Region, Subregion, Basin, Subbasin, Watershed, and Subwatershed (State Water Board 2015). According to CalWater 2.2, a dataset, it provides a standard nested watershed delineation scheme using the State Water Resources Control Board numbering scheme. In the CalWater 2.2 dataset, the hierarchy of watershed designations consists of six levels of increasing specificity: Hydrologic Region, Hydrologic Unit, Hydrologic Area, Hydrologic Sub-Area, Super Planning Watershed, and Planning Watershed. The primary purpose of the CalWater 2.2 dataset is to provide a unified reference for watershed delineation with the assignment of a single, unique code to a specific watershed polygon. Additionally, under CalWater 2.2's definition of a "Planning Watershed," the smallest size a watershed may be is 5 square miles. In general, the boundary of each watershed area identified in a SWRP should not be based on political boundaries, county lines, or any other non-watershed boundary. However, as necessary, political boundaries may be used to describe smaller watersheds, flat areas that encompass multiple small watershed, or watersheds without distinct boundaries.

The SWRP Guidelines allows agencies to define the extent of study boundaries to vary in size as long as they are inclusive of an entire watershed. In addition, the SWRP Guidelines provides the following conditions for the local agency's consideration:

- The scale of the watershed selected should allow for quantitative analysis of stormwater and dry weather runoff patterns.
- The watershed should be the largest practicable to allow for comprehensive and integrated stormwater management, and if practical, across multiple jurisdictional boundaries.
- Plans should include multiple projects within the watershed to achieve watershed-based stormwater management objectives, and should not be developed on a scale for the sole purpose of funding a single project.
- In general, watersheds smaller than the CalWater 2.2 "Planning Watershed" size should not be used (smaller than 5 square miles in size) unless to address watershed-specific conditions or regulatory requirements.
- Plans based on the IRWM group watershed boundary are preferred.

2.2 WATERSHEDS IN THE WEST SLOPE

The United States is divided and sub-divided into successively smaller hydrologic units which are arranged within each other, from the largest geographic area (regions) to the smallest geographic area (cataloging units). Hydrologic unit code (HUC) 8 maps the subbasin level, analogous to medium-sized river basins

DESCRIPTION OF WATERSHED

(about 2,200 nationwide). There are five portions of USGS HUC-8 watersheds in the West Slope area (see Figure 2-1 above):

- Lower American Watershed
- North Fork American Watershed
- South Fork American Watershed
- Upper Cosumnes Watershed
- Upper Mokelumne Watershed

Of these five watersheds, only the South Fork American River Watershed and the Upper Cosumnes River Watershed are included in the West Slope SWRP for reasons described below. Both the Lower American and Upper Mokelumne watersheds have less than 5 square miles on the West Slope. According to CalWater 2.2's definition of a Planning Watershed, these two watersheds are smaller than the allowable size and therefore were not included in the West Slope SWRP. The American River Basin SWRP that is under development will include the Lower American Watershed. The Upper Mokelumne Watershed is covered by the Mokelumne/Amador/Calaveras IRWMP (RMC 2013).

The North Fork American River Watershed (HUC 18020128) is largely located in Placer County, with only a small portion running along the northern edge of El Dorado County. Major water bodies in this watershed that are located the North Fork American River Watershed are Stumpy Meadows Reservoir and the Oxbow Reservoir which borders the northern end of El Dorado County. This watershed drains into Folsom Lake. There are no cities, towns, or community service districts in this portion of the watershed in El Dorado County. Because this watershed is mostly in Placer County, any stormwater resources planning associated with this watershed would need to occur in collaboration with an entity in Placer County either for the whole watershed, a sub-watershed that is located within El Dorado County (such as the Rubicon River Watershed), or other watershed considered by the Agency. Stormwater resources planning for this watershed is therefore not included in the West Slope SWRP.

The South Fork American River Watershed (HUC 18020129) is located almost entirely in El Dorado County and covers about half of the West Slope area. The South Fork American River Watershed includes major water bodies such as the South Fork American River, Folsom Lake which is located at the confluence of the South Fork American Watershed and the North Fork American Watershed, Union Valley Reservoir, and Ice House Reservoir. The watershed covers a portion of the Eldorado National Forest and includes Placerville and the major corridor, Highway 50, which runs through this watershed.

The upper half of the Upper Cosumnes River Watershed (HUC 18040013) is located in El Dorado County. Major water bodies in El Dorado County include the Cosumnes River (including the North Fork, Middle Fork, and South Fork) and Jenkinson Creek. In El Dorado County, this watershed mostly covers agricultural and forest lands, but also contains portions of the unincorporated areas of El Dorado Hills and Cameron Park.

2.3 PLANNING AREAS FOR STORMWATER MANAGEMENT COMPONENT

As discussed above, to adequately address stormwater resource planning in this diverse and large foothill setting, the West Slope SWRP covers three main components: Surface Water Storage, Watershed Management, and Stormwater Management. For the Surface Water Storage and Watershed Management components, the entire portion of the South Fork American River and Upper Cosumnes River watersheds located within the West Slope was considered. No sub-watersheds were delineated for these components as managing these two components typically spans large areas; requires multiple local, State, and/or Federal partners; and affects the entire watershed and downstream watersheds.

For the stormwater management component, these projects tend to be smaller, led by an individual local agency, and apply BMPs. To efficiently integrate into existing stormwater management practices and address varying land uses in the West Slope area, eight planning areas were developed (Figure 2-4). The planning areas for the stormwater management component are all located in the South Fork American and Upper Cosumnes watersheds. The planning areas were developed to capture the urban and agricultural settings found in the West Slope area in order to differentiate between the extensive geographic areas consisting of non-uniform land use, diverse hydrologic and soil conditions, a variety of water quality concerns, and flooding concerns that exist. The forested area of the eastern section of the West Slope area was not incorporated into the planning areas as the projects in forested areas fall into the other two components (Surface Water Storage or Watershed Management). Table 2-1 presents an overview the planning areas for the stormwater management component.

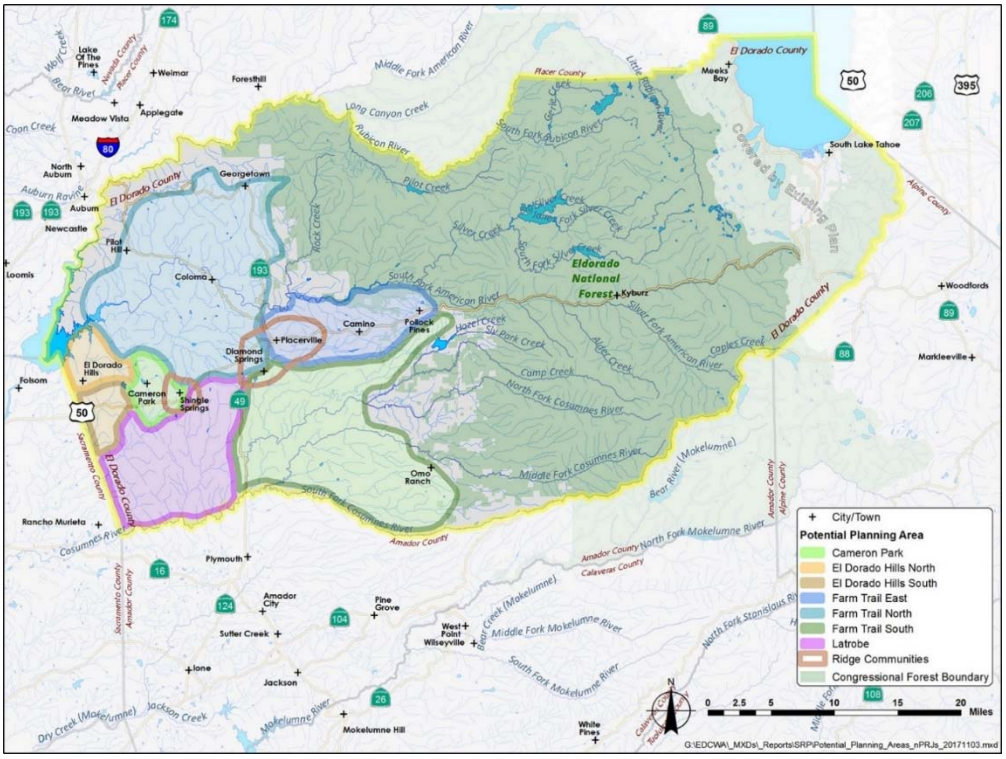


Figure 2-4. Planning Areas for Stormwater Management Component

DESCRIPTION OF WATERSHED

Table 2-1. Summary of Planning Areas for Stormwater Management Component

Planning Areas	El Dorado Hills		Cameron Park	Ridge Communities (Placerville, Diamond Springs, Shingle Springs)	Farm Trail			Latrobe
	North	South			East (Apple Hills)	North (Coloma)	South (Pleasant Valley)	
South Fork American Watershed	x	-	-	x	x	x	-	-
Upper Consumes Watershed	-	x	x	x	-	-	x	x
Primary Land Use	Urban	Urban	Urban/Rural	Urban/Rural	Agricultural/ Rural	Agricultural/ Rural	Agricultural/ Rural	Rural/ Agricultural
Incorporated Area with a Separate SWMP	-	-	-	Yes, Placerville	-	-	-	
Discharging into Impacted Water Body	Yes	Yes	Yes	-	Yes	Yes	-	Yes
Containing Wastewater Treatment Plant and the Associated Discharge Locations	-	Yes, El Dorado Hills	Yes, Cameron Park	Yes, Hangtown Creek	-	-	-	Yes, Deer Creek
Local Flooding Risks and/or Known Hotspots	Yes	-	Yes	Yes	Yes	Yes	Yes	Yes
Soil Erosion Concerns with Steep Slopes	-	-	Yes, but less	Yes	Yes	Yes	Yes	Yes but less
Containing Moderate and High Draining Soil for water Percolation	-	-	Yes	Yes, Diamond Springs	Yes	Yes, mostly Highway 49 to Diamond Springs Corridor	Yes	-
Containing Relative Large Areas with a Ground Surface Slope Less than 10 Percent	Yes	Yes	Yes	Yes, mostly Diamond Springs and Shingle Springs	Some	Some	Some	Yes

2.3.1 El Dorado Hills (North and South) Planning Areas

Both stormwater management planning areas are located on the Western Side of El Dorado County. El Dorado Hills is an unincorporated census-designated place located about 20 miles east of the City of Sacramento with a population of 42,108 (U.S. Census Bureau 2010). El Dorado Hills has one of the highest median household incomes in El Dorado County with an average of $120,000 between 2011 and 2015. Between 2000 and 2010, the land area has more than doubled to about 49 square miles. El Dorado Hills is bisected by Highway 50 and lies in two watersheds. The North section of El Dorado Hills is the portion north of Highway 50, is classified as mainly residential, and is at risk from occasional flood events. The South section of El Dorado Hills is the portion south of Highway 50. This area includes residential neighborhoods and the 885-acre El Dorado Hills Business Park and the El Dorado Hills Town Center area. Both north and south areas of El Dorado Hills discharge into local impacted water bodies.

2.3.2 Cameron Park Planning Area

Cameron Park is an unincorporated census-designated place located just east of El Dorado Hills with a population of 18,228 (U.S. Census Bureau 2010). Cameron Park is an urban and rural community covering an area of about 11 square miles, and it is at risk from occasional flood events. Stormwater management efforts are encouraged in this area to remediate problems with soil erosion, discharges to an impacted water body, and flood events. The Cameron Park planning area is centered on the community of Cameron Park.

2.3.3 Ridge Communities Planning Area

The Ridge Communities is found at two locations, where one location is near Shingle Springs and the other location is near Placerville. This planning area includes Placerville, Diamond Springs, and Shingle Springs, and it covers both urban and rural residential communities. This area experiences local flooding risks and soil erosion problems. This area has a topographic setting that drains to two separate watersheds. It is likely that the management actions identified for this area will be combined with other downstream areas.

2.3.4 Farm Trail East Planning Area

The Farm Trail East area is located around the community of Camino, where it extends from Placerville to Pollock Pines. More notably, it is an agritourism area containing Apple Hill, a tourist area characterized as having an urban and rural setting.

2.3.5 Farm Trail North Planning Area

The Farm Trail North area is located in the area of Coloma, northwest of Placerville. This area includes agricultural and rural areas that discharge into local impacted water bodies.

2.3.6 Farm Trail South Stormwater Management Planning Area

The Farm Trail South area is found in the portion of Pleasant Valley which is characterized as agricultural and rural. The area is bounded on the west by Highway 49, Highway 50 on the north, El Dorado County

boundary on the south, and portions of the Eldorado National Forest on the east. This area contains high value crops with over a dozen wineries.

2.3.7 Latrobe Stormwater Management Planning Area

Latrobe is a rural and agricultural area bounded on the west and south by El Dorado County boundary and Highway 49 on the east. This area is prone to flood events and experiences soil erosion that discharges into local impacted water bodies. While this area does have some stormwater problems, they are addressed but not prioritized when compared to the other agricultural planning areas that contain high value crops and support agritourism.

2.4 DISADVANTAGED COMMUNITIES AND ECONOMICALLY DISTRESSED AREAS

The California Department of Water Resources (DWR) has identified communities as underserved and/or disproportionate if they have been affected by land and water use planning efforts that have resulted in concerns about environmental justice. In El Dorado County, economically disadvantaged communities (DAC), California Native American Tribes, and Hispanic/Latino communities are found to experience poor access to clean drinking water, adverse impacts related to wastewater, cultural barriers, or economic challenges.

As described in the *2016 Integrated Regional Water Management Grant Program Guidelines, Appendix E*, a DAC is a community that has an annual median household income that is 80% less than the annual statewide value. In referencing data obtained from the American Community Survey, for the 2010-2014 time period, 80% of the statewide median household incomes is $49,191 (DWR 2016). Based on the 2010 census, only two West Slope communities fit the criteria for a DAC: Grizzly Flats and Kirkwood (note, only a small portion of Kirkwood is in El Dorado County). These communities were considered when developing multi-benefit stormwater projects for the West Slope SWRP.

DACs face specific challenges as a result of their economic status, but may face other challenges that will differ if they are located in an urban or rural location setting. As defined in the CABY IRWMP, a "Rural DAC" has the following characteristics: not incorporated, has its own water management structures, is not contiguous to other communities, has a population of under 500 people, and has a water system with no intertie with any other water system. In an urban setting, a DAC is incorporated, the water is managed by an internal department and staff, it may share a boundary and/or infrastructure interties with an adjacent jurisdiction, and it has less than 3,000 individual connections (CABY 2014).

2.5 SURFACE WATER RESOURCES IMPAIRMENTS AND BENEFICIAL USES

El Dorado County has vast surface water resources. Surface water on the West Slope is under the jurisdiction of the Central Valley RWQCB. The RWQCBs are responsible for regulating pollution and water quality objectives to assure that water bodies continue to provide beneficial uses. The Central Valley RWQCB oversees both the South Fork American and Upper Cosumnes watersheds. The West Slope SWRP outlines the beneficial uses and impairments to both watersheds. Figure 2-5 illustrates the 303 (d) listed impaired water bodies found in El Dorado County. The Clean Water Act is responsible for overseeing the amount of pollution that enters the nation's waterways. The state and regional water boards conduct biennial assessments to determine which bodies of water exceed water quality criteria and standards. This process is set out in California's Clean Water Act Section 303 (d) Listing Policy of how the state will comply with Section 303(d) of the Federal Clean Water Act.

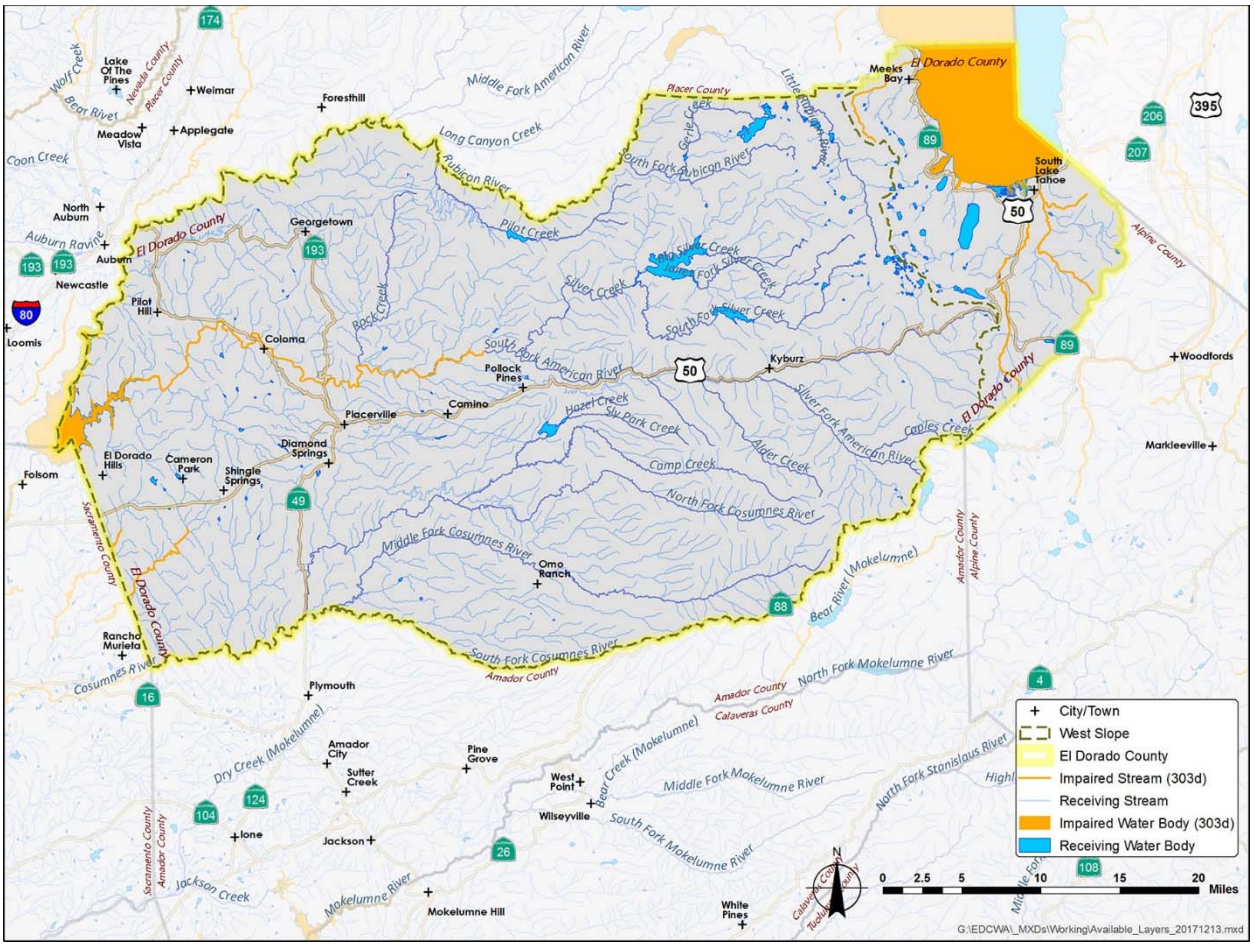


Figure 2-5. Clean Water Act Section 303 (d) Listed Impaired Water Bodies and Streams found El Dorado County

2.5.1 Surface Waters of the South Fork American Watershed

The South Fork American Watershed supports a series of beneficial uses such as municipal and domestic water supplies; irrigation; power; contact and noncontact recreation; canoeing and rafting; warm freshwater habitats; spawning of salmon and steelhead in cold water habitats; and wildlife habitat (Central Valley RWQCB 2016). Impairments of these beneficial uses exist in three water bodies in the South Fork American Watershed within El Dorado County, as listed in Table 2-2 (USEPA 2017a). Mercury is the water quality priority based on the TMDL and water body pollutant combinations on the Federal Clean Water Act (CWA) Section 303(d) list. Given that some water bodies have been identified as impaired, the state of California will need to develop TMDLs. However, there is often a lag between the listing and an approved TMDL for the affected water body.

Table 2-2. Clean Water Act Section 303(d) Listed Water Bodies and Pollutants in the South Fork American Watershed in El Dorado County

Water Bodies	303(d) Listing
American River, South Fork	Mercury
Folsom Lake	Mercury
Slab Creek Reservoir	Mercury

The El Dorado Hills North planning area drains into Folsom Lake which is classified as an impaired water body. The Farm Trail North planning area drains into the impaired South Fork American River. The Farm Trail East planning area drains into the impaired South Fork American River and Slab Creek Reservoir. A mercury TMDL for Folsom Lake is expected to be completed by 2019, whereas one for the South Fork American River and Slab Creek Reservoir is expected to be completed by 2021. However, there are no existing mercury TMDLs for the South Fork American Watershed.

2.5.2 Surface Waters of the Upper Cosumnes Watershed

Water bodies in the Upper Cosumnes Watershed support a series of beneficial uses that includes municipal and domestic water supplies; irrigation; stock watering; contact and noncontact recreation; canoeing and rafting; warm freshwater habitats for migration and spawning of striped bass, sturgeon, and shad; cold water habitats for migration and spawning of salmon and steelhead; and wildlife habitat (Central Valley RWQCB 2016). Impairments of these beneficial uses exist in six water bodies in the Upper Cosumnes Watershed for the pollutants listed in Table 2-3. Four of the listed water bodies are found within or bordering El Dorado County (USEPA 2017b). Water quality priorities for this watershed include aluminum, manganese, Escherichia coli (E. Coli), invasive exotic species, sediment toxicity, and iron, and are based on TMDLs and water body pollutant combinations on the CWA Section 303(d) list.

Table 2-3. Clean Water Act Section 303(d) Listed Water Bodies and Pollutants in the Upper Cosumnes Watershed in El Dorado County

Water Body	Clean Water Act 303(d) Listing
Carson Creek	Aluminum, Manganese
Cosumnes River, Lower	E. Coli, Invasive Exotic Species, Sediment Toxicity
Cosumnes River, Upper	Invasive Exotic Species
Deer Creek	Iron

The impaired water body of Carson Creek is located in the El Dorado Hills South planning area. The Latrobe planning area encompasses the Deer Creek impaired water body and is bordered on the southern end by the Upper and Lower Cosumnes River that are also impaired. The Farm Trail South planning area is bordered on the southern end by the impaired Upper Cosumnes River. However, no TMDLs currently exist for the pollutants listed in Table 2-3. A TMDL is expected to be available for aluminum, invasive exotic species, and iron by 2019. A TMDL for manganese, E. Coli, and sediment toxicity is expected to be available by 2021.

2.6 GROUNDWATER RESOURCES

As shown in Figure 2-6, there are no groundwater basins on the West Slope. However, *Bulletin 118* does identify the Tahoe South Subbasin of the Tahoe Valley Groundwater Basin in El Dorado County (DWR 2004). In response to the Sustainable Groundwater Management Act of 2014 (SGMA), DWR revised Bulletin 118 to provide updated information on the presence of groundwater aquifers, groundwater management and future recommendations (DWR 2017).

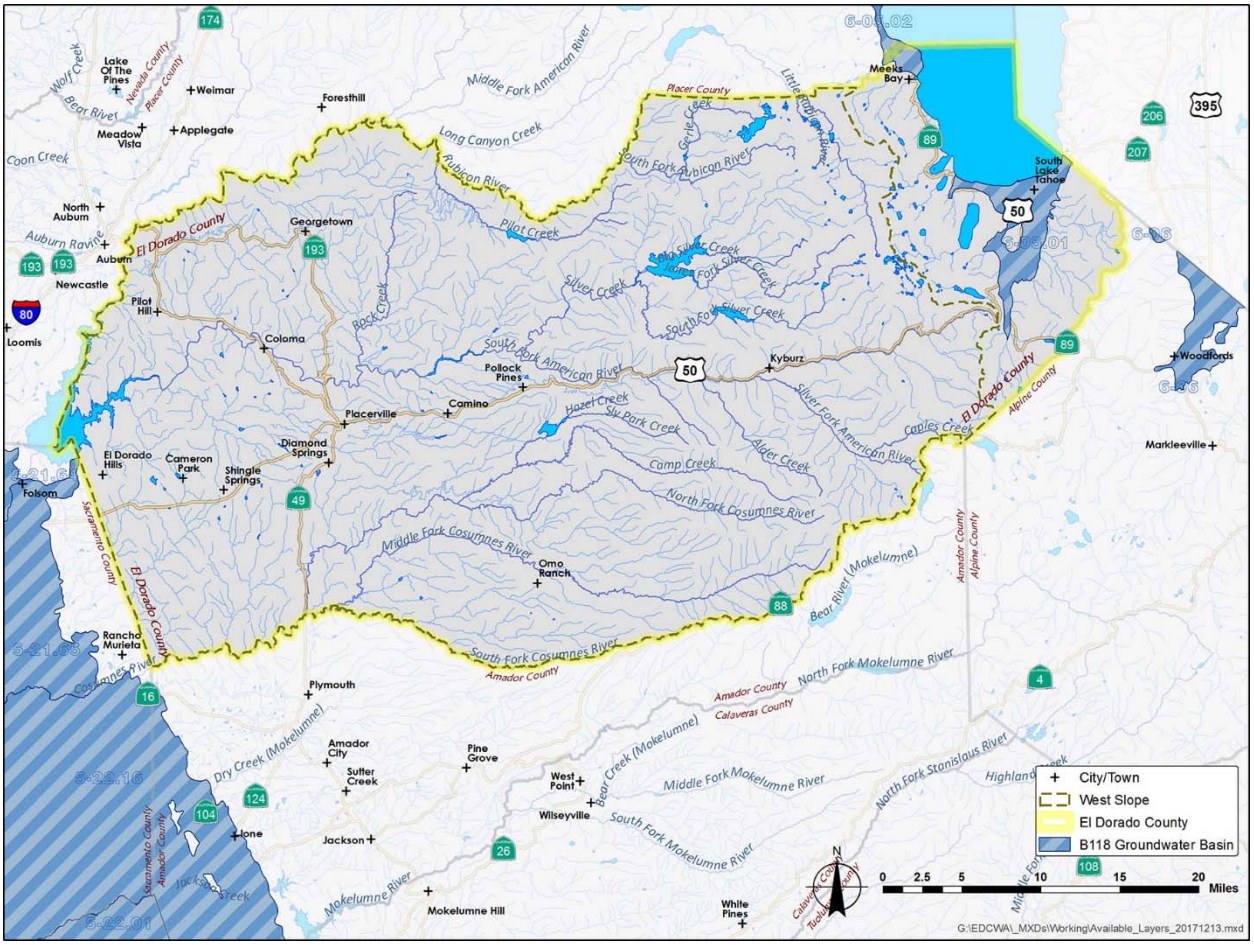
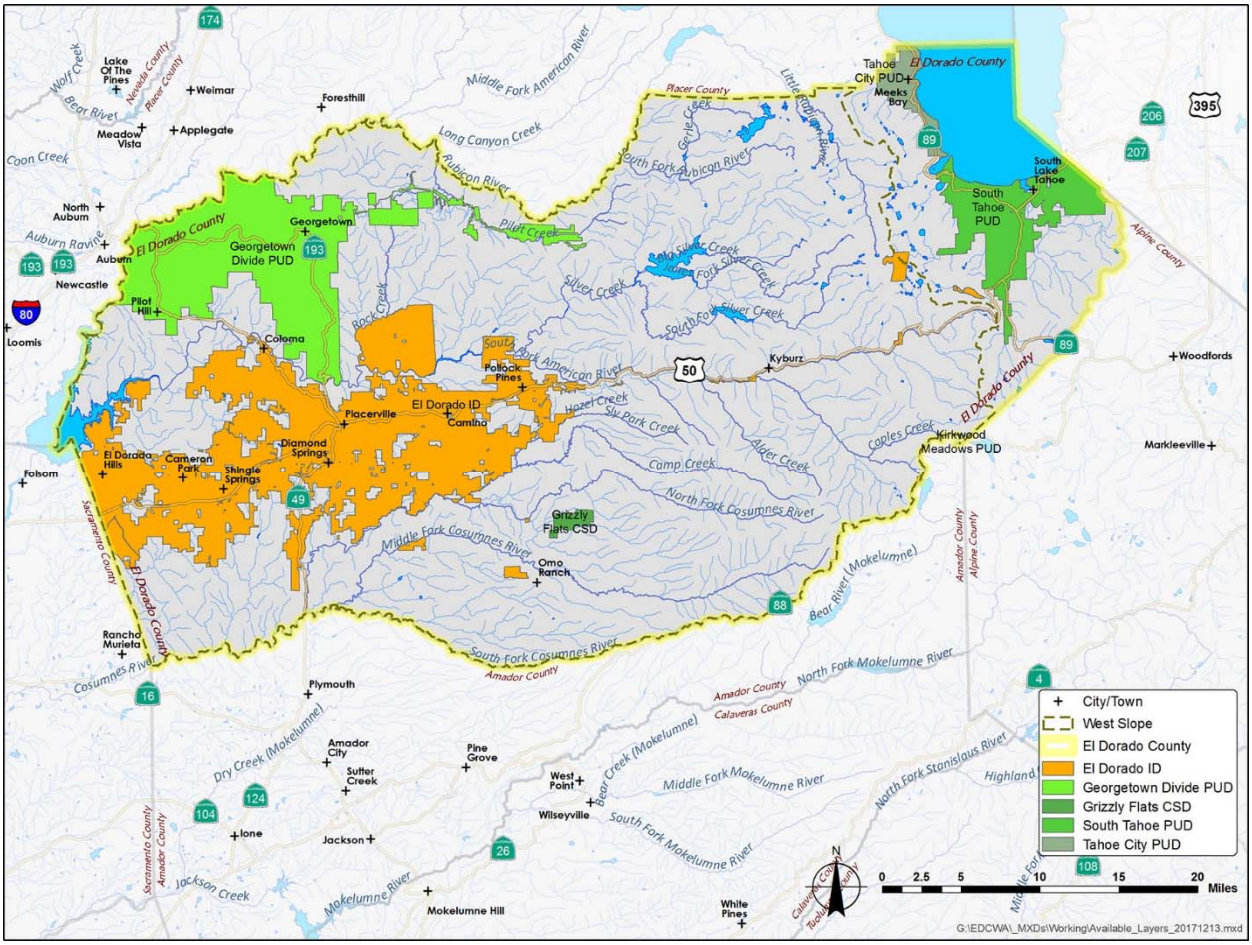


Figure 2-6. Groundwater Basins in El Dorado County, as identified in Bulletin 118

2.7 WATER SUPPLIES

There are three main entities that supply water on the West Slope area: EID, Georgetown Divide Public Utility District (GDPUD), and Grizzly Flats Community Service District (GFCSD) (Figure 2-7). From 2012 to 2017, California experienced a severe drought that strained local water supplies. El Dorado County's water supplies depend on the snowpack in Sierra Nevada. California's variable climate, hydrology, projected population increase, and the occurrence of drought is expected to increase the water demands in El Dorado County. Therefore, securing El Dorado County's water supplies is of great importance in both the planning areas and headwaters.



Key:
ID = Irrigation District
PUD = Public Utility District
CSD = Community Service District

Figure 2-7. Water Purveyors in El Dorado County

2.7.1 El Dorado Irrigation District

EID is the main water supplier on the West Slope area, serving nearly 110,000 residents most of whom are located along the Highway 50 corridor from El Dorado Hills to Pollock Pines/Sly Park. Figure 2-7 shows the EID service area boundary in El Dorado County. EID provides water supplies to meet municipal, industrial, and agricultural water demands, in addition to generating recycled water. EID has a Central Valley Project (CVP) water service contract; CVP is owned and operated by the U.S. Department of the Interior, Bureau of Reclamation. EID has appropriative water rights, including pre-1914 water rights to obtain water from the North and Middle Forks of the Cosumnes River, Clear Creek, Squaw Hollow Creek, Park Creek, Camp Creek, Slab Creek, Weber Creek, and the South Fork American River (EID 2013). In 1999, Pacific Gas & Electric Company transferred its power generation and consumptive use water rights to EID to divert water from the South Fork American River, its tributaries, and Echo Lake (EID 2013).

EID's service area is split between the South Fork American Watershed and the Upper Cosumnes Watershed, serving two different regions and separate drainage areas in El Dorado County. EID has shifted from providing water for agriculture to providing water for municipal, industrial and commercial uses in three service areas: El Dorado Hills Region, Western Region, and the Eastern Region (EID 2013). Potable water supplies are obtained through diversion points located at Sly Park Dam and Jenkinson Lake, El Dorado Hydroelectric Federal Energy Regulatory Commission Project 184 at Forebay Reservoir, and from Folsom Lake (EID 2013). Water obtained from Sly Park Dam and Jenkinson Lake is treated at Reservoir A Water Treatment Plant. Water from El Dorado Hydroelectric Federal Energy Regulatory Commission Project 184 at Forebay Reservoir is treated at Reservoir 1 Water Treatment Plant. El Dorado Hills Water Treatment Plant treats water diverted from Folsom Reservoir. EID's Strawberry and Outingdale satellite systems obtain water from the South Fork American River and from the Middle Fork Cosumnes River, respectively (EID 2013). Irrigation water provided by EID is diverted into the Crawford Ditch from the North Fork Cosumnes River (EID 2013). EID generates recycled water for the communities of El Dorado Hills and Cameron Park from two of the four wastewater treatment plants (WWTP) it operates: El Dorado Hills WWTP and the Deer Creek WWTP.

Combined, the water treatment systems have over 1,200 miles of pipeline, 27 miles of ditches, five treatment plants, 34 storage reservoirs with a combined capacity of over 100 million gallons, and 38 pump stations (EID 2016). Portions of the district with open ditch canals are affected by organic loading. However, EID's raw water quality and treatment processes could be impacted by stormwater, especially in Reservoir 1 (EID 2013).

2.7.2 Georgetown Divide Public Utility District

Formed in 1946, GDPUD provides water supplies in both the South Fork and North Fork American watersheds, in between the Middle and South Forks of the American River (GDPUD 2017). GDPUD has several pre-1914 water rights and four post-1914 appropriative water rights to obtain water from Pilot Creek, Mutton Canyon, Bacon Canyon, Deep Canyon, unnamed tributaries to Pilot Creek, Otter Creek, and Onion Creek (El Dorado LAFCO 2012). GDPUD's main water supply is from the Stumpy Meadows Reservoir which is a 20,000 acre-feet (AF) impoundment located on Pilot Creek (GDPUD 2017). Stumpy Meadows Reservoir is owned and operated by GDPUD. Water captured in the reservoir is transported through pipes

and open ditch canals to Walton Lake Water Treatment Plant and distributed to the communities of Georgetown, Garden Valley, Kelsey, and Greenwood. Additionally, water from the Stumpy Meadows Reservoir is also transferred to the Auburn Lake Trails Water Treatment Plant where it is then distributed to the communities of Auburn Lake Trails, Cool, and Pilot Hill (El Dorado LAFCO 2012). Overall, GDPUD serves rural residential communities, open space areas, and agricultural communities.

2.7.3 Grizzly Flats Community Service District

The GFCSD is located in the foothills of the Sierra Nevada, in the Upper Cosumnes Watershed. It was formed in 1987 by the County Board of Supervisors (GFCSD 2017). GFCSD has a pre-1914 water right to divert from North Canyon Creek and Big Canyon Creek in the North Fork Cosumnes River Basin (El Dorado LAFCO 2014). In addition, GFCSD holds Permits 20357 and 20358 from the State Water Board to divert water. Under Permit 20357, water can be diverted from an unnamed tributary to Steely Fork Cosumnes River (El Dorado LAFCO 2014). Under Permit 20358, water can be diverted from the North Canyon Creek and Big Canyon Creek (El Dorado LAFCO 2014); this is GFCSD's main water supply. Water obtained from these sources is transferred from the diversion points through Eagle Ditch to the raw water storage reservoir for eventual treatment at the District's water treatment facility. Once the water is treated, it is distributed through a gravity-driven system for domestic use. GFCSD also provides untreated water for fire protection. As the district relies on one raw water reservoir for its water supply, in dry years GFCSD can be vulnerable to deficiencies in its water supply (El Dorado LAFCO 2014).

2.7.4 Water Supplies and Demands

Table 2-4 shows water supplies from the three main water purveyors and the West Slope area demands they are used to meet. The West Slope area has a total firm annual yield supply of 81,484 AF. In 2012, a total of 58,489 AF of water was delivered; 43,391 AF for urban water use and 15,098 AF for agricultural water use. To meet expected urban and agricultural demands at projected 2030 and build-out conditions, additional water supplies would need to be acquired. Therefore, securing additional water supplies for the future is crucial.

Table 2-4. West Slope Area Water Supplies and Demands, considering State Mandated Urban Conservation and Firm Yield Supplies

		Urban (AF/yr)			Agricultural (AF/yr)			Total Demand (AF/yr)			Additional Water Supply Needed (AF/yr)	
	Firm Yield Supply	2012	2030	Build-Out	2012	2030	Build-Out	2012	2030	Build-Out	2030	Build-Out
EID	69,100	40,237	51,403	79,316	7,977	9,515	19,218	48,214	60,919	98,534	-	29,434
GDPUD	12,200	3,001	4,120	9,581	7,121	7,621	10,349	10,122	11,741	19,930	-	7,730
GFCSD Total	184	153	187	313	--	--	--	153	187	313	3	129
Other El Dorado County Areas	-	-	-	12,336	-	-	17,476	-	-	29,812	-	20,560
West Slope Total	**-**	**-**	**-**	***101,546***	**-**	**-**	***47,043***	**-**	**-**	***148,590***	***3***	***57,854***

Source: 2014. El Dorado County Water Agency. 2014 West Slope Update: Water Resources Development and Management Plan, pg xix
Notes:
- Water supplies and demands only include information for water purveyors located in the West Slope area of El Dorado County, and do not consider the residents that use own private wells to meet water demands.
- 25% of Other County of El Dorado Areas urban demands and 100% of agricultural demands are included in the "Additional Water Supply Need."
- 2012 agricultural demands do not include demand supplied from ground water or riparian sources.
Key:
AF/yr = acre-feet per year
EID = El Dorado Irrigation District
GDPUD = Georgetown Divide Public Utility District
GFCSD = Grizzly Flats Community Service District

2.7.5 Groundwater Supplies

Although there are no groundwater basins on the West Slope as discussed in Section 2.6, some communities depend on shallow groundwater for their water supplies. According to the to the census data taken in 1990, El Dorado County had more than 11,650 domestic wells that served approximately 32,000 people (State Water Board and GAMA 2005). In the time frame from 1998 to 2000 an additional 1,067 domestic wells were built in El Dorado County (State Water Board and GAMA 2005).

2.8 WASTEWATER AND STORMWATER

Two solid waste collection facilities, six WWTPs, and several wastewater septic tanks are located in El Dorado County, as shown in Figure 2-8. The solid waste collection facilities (orange circular markers) are located in Diamond Springs and the City of South Lake Tahoe. Five of the WWTPs are located in the West Slope area and one is in City of South Lake Tahoe (all green circular markers); these include: El Dorado Hills Wastewater Treatment Plant (WWTP); Rancho Ponderosa Wastewater Treatment Facility (WWTF); Deer Creek WWTP; Hangtown Creek WWTP; Camino Heights WWTP; El Dorado Disposal Material Recovery Facility; South Lake Tahoe WWTP; and South Lake Tahoe Refuse/Transfer Station Materials Recovery Facility. The small yellow squares represent septic facilities in El Dorado County. Currently, not all septic facilities shown may be in operation.

Figure 2-9 shows the receiving waters into which wastewater or treated effluent is discharged. Figure 2-10 shows the mapped storm drain outfalls found throughout the 2010 census boundary for El Dorado Hills, Cameron Park, Shingle Springs, and the areas surrounding Placerville (up to the Smith Flat area). These outfalls are located in most of the populated areas in the West Slope area, and the locations assist the County with illicit discharge detection and elimination which is needed to meet County ordinances and MS4 NPDES permit requirements.

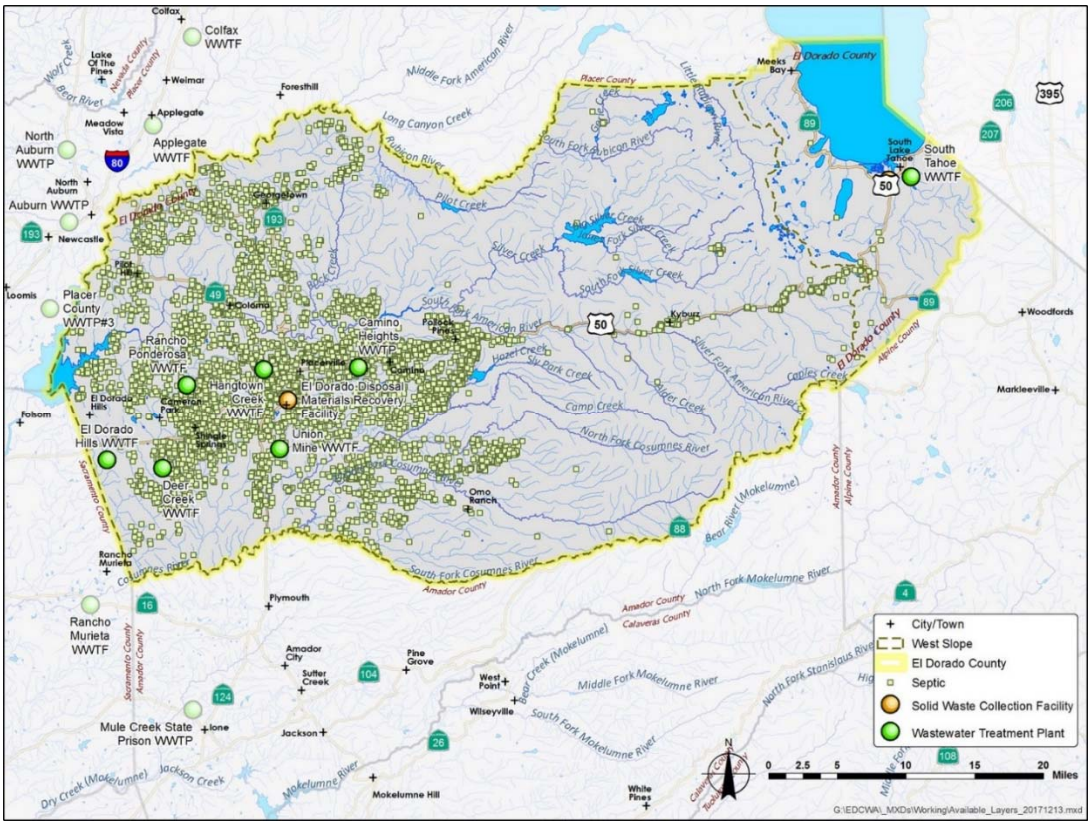


Figure 2-8. Solid Waste Collection Facilities, Wastewater Treatment Plants, and Wastewater Septic Tanks Located in El Dorado County

DESCRIPTION OF WATERSHED

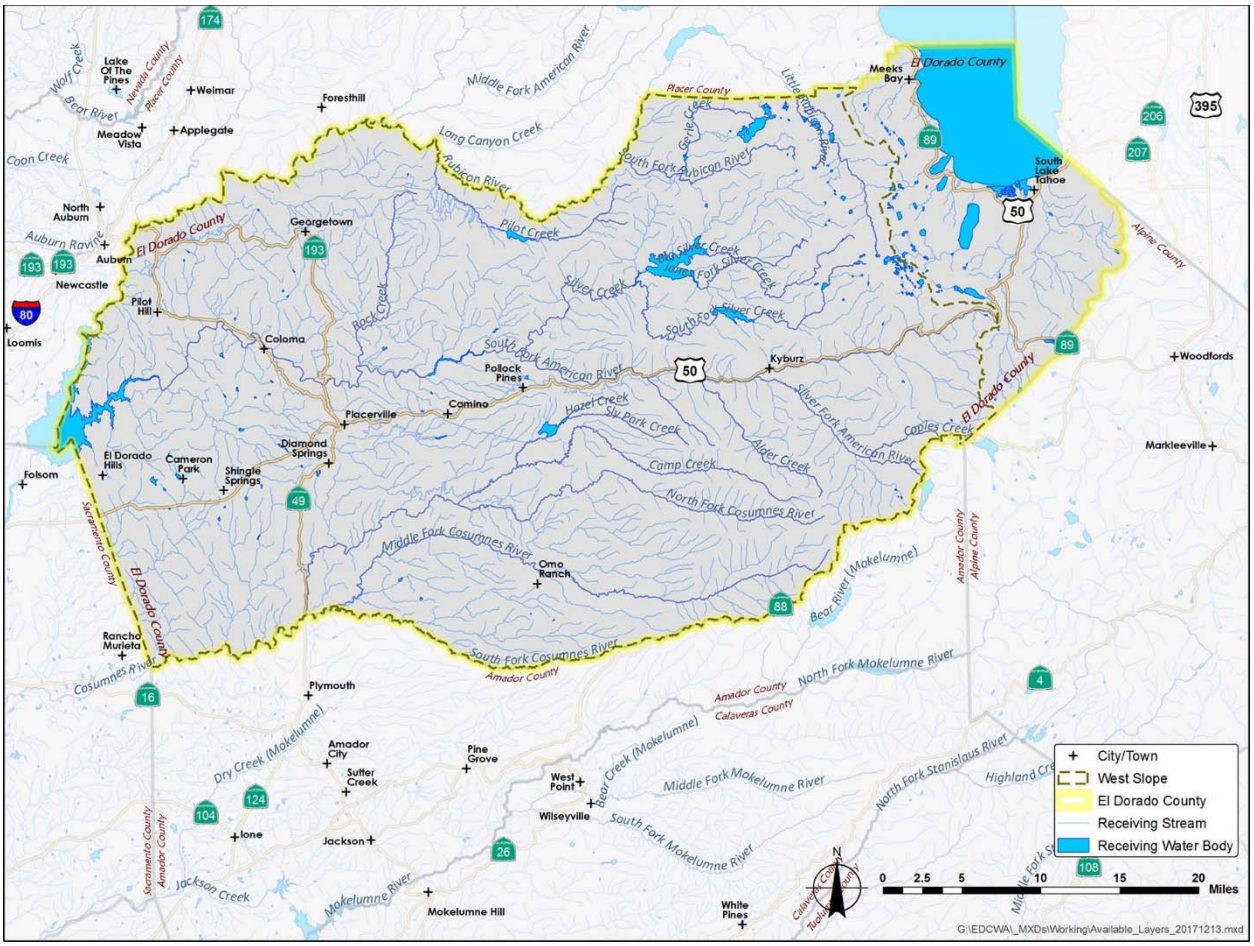


Figure 2-9. Receiving Waters in El Dorado County

DESCRIPTION OF WATERSHED

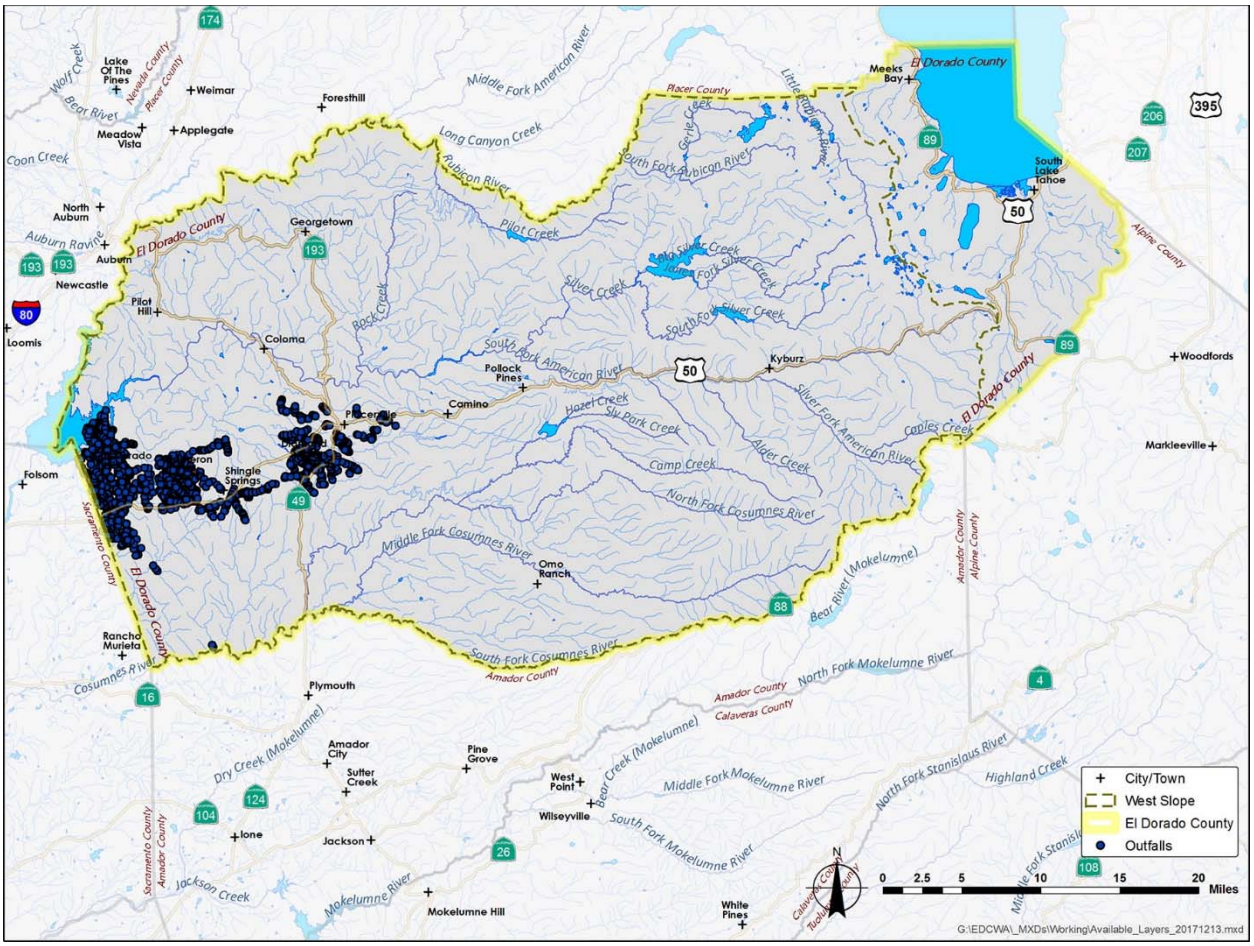


Figure 2-10. Storm Drain Outfalls Found Throughout 2010 Census Boundary for El Dorado Hills, Cameron Park, Shingle Springs, and Areas Surrounding City of Placerville (up to Smith Flat Area)

2.9 LAND USE

Figure 2-11 shows the various land uses in the West Slope area. The western side of the West Slope is covered by a combination of agricultural, public facilities, commercial, industrial, residential, tourist, and open space divisions. The eastern side of the West Slope area is mainly comprised of the Eldorado National Forest, a natural resource area.

The majority of the land use is natural resources use. Agricultural land in El Dorado County makes up approximately 58,000 acres for cultivation of apple orchards, vineyards, hay and pasture fields, nurseries, deciduous trees (fruits and nuts), Christmas Trees, pear orchards, and minor crops (County and AC 2016). The West Slope area also contains land under the Williamson Act. The Williamson Act is a law that provides property tax relief to owners of farmland and open-space land in exchange for a rolling term ten-year agreement that the land will not be developed or otherwise converted to another use. Contracts renew automatically every year unless the nonrenewal process is initiated. The Williamson Act states that a board or council by resolution shall adopt rules governing the administration of agricultural preserves. The rules of each agricultural preserve specify the uses allowed. Generally, any commercial agricultural use will be permitted within any agricultural preserve. In addition, local governments may identify compatible uses permitted with a use permit. As of 2016, there are about 34,000 acres of Williamson Act Lands in El Dorado County (Figure 2-12).

DESCRIPTION OF WATERSHED

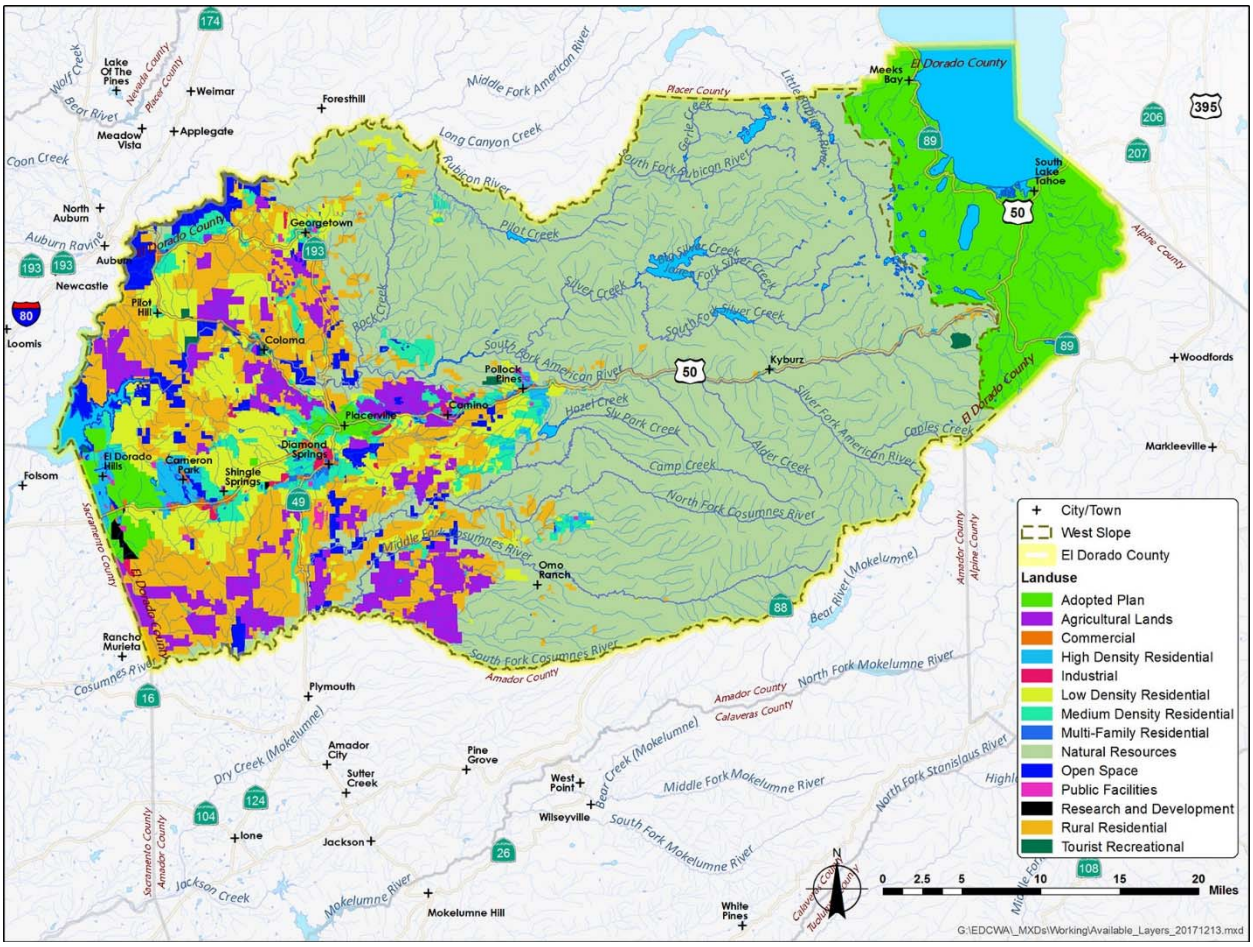


Figure 2-11. Land Use in the West Slope Area

DESCRIPTION OF WATERSHED

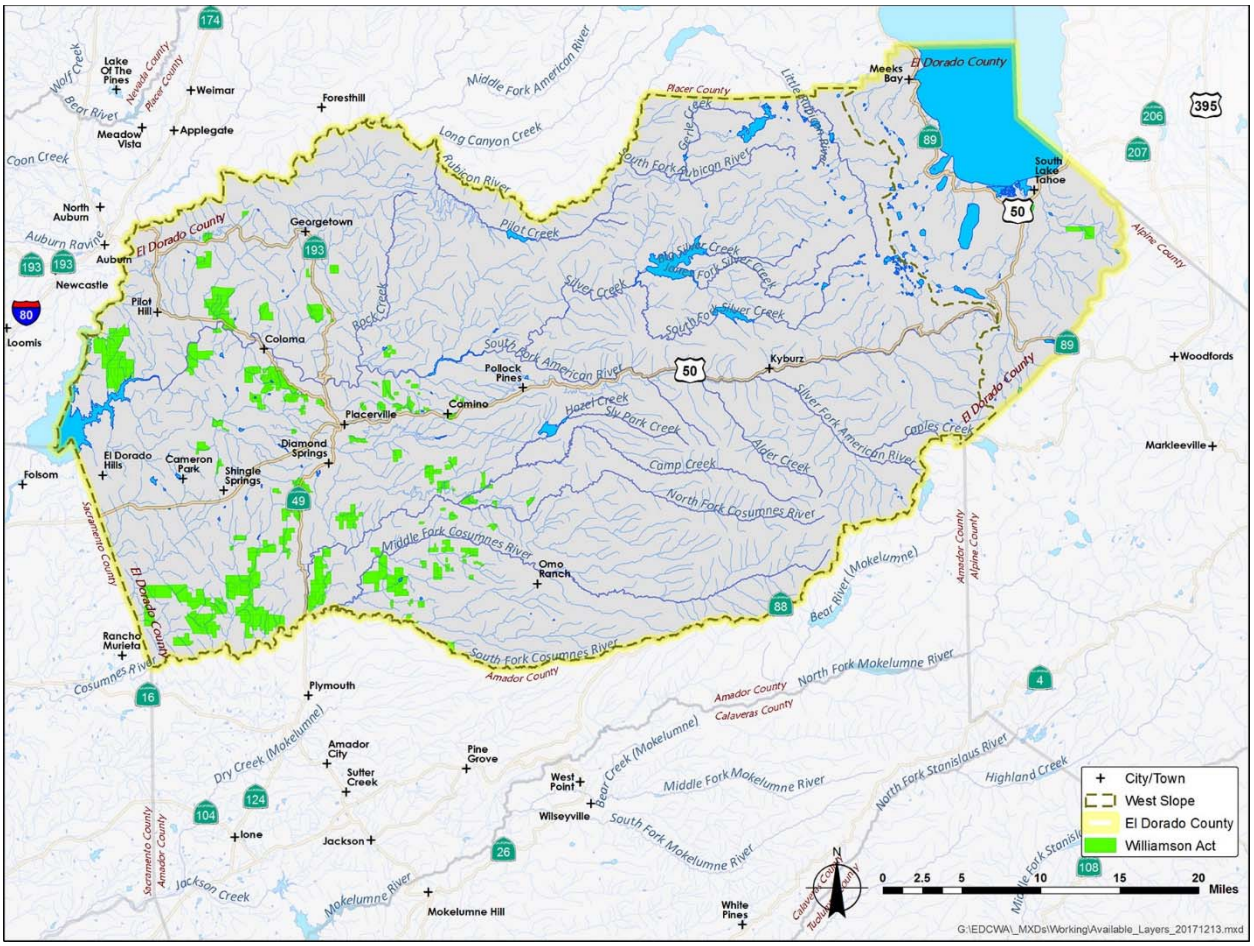


Figure 2-12. Williamson Act Lands in El Dorado County

2.10 NATIVE HABITATS

Diverse native habitats are found throughout El Dorado County. Grasslands in the region have vernal pools with the presence of spring-flowering annuals, whereas the lower foothills contain gabbro and serpentine soils that support endemic plants. Streams and rivers in El Dorado County are surrounded by riparian woodlands, shrubs, and herbs (CNPS 2017).The topography of the area results in high plant diversity, with plant assemblage adapted to its unique altitude and precipitation. The following summarizes unique habitats in each of the watersheds addressed by the West Slope SWRP.

2.10.1 Eldorado National Forest

Eldorado National Forest overlies the North Fork American Watershed, South Fork American Watershed, and Upper Cosumnes Watershed, covering about half of El Dorado County (Figure 2-3). This forest is located in the Sierra Nevada and hosts various vegetative types such as woodland, chaparral, mixed conifer, true fir, and subalpine (USDA 2017a). Commercial trees found in this forest further include: white fir, red fir, ponderosa pine, Jeffery pine, sugar pine, Douglas fir, and incense cedar (USDA 2017a).

2.10.2 Desolation Wilderness

The Desolation Wilderness is located on the North Fork American and South Fork American Watersheds, west of Lake Tahoe (Figure 2-3). This forest is 63,960 acres of valleys and lakes, sub-alpine and alpine forest, and granite peaks. This forest is managed jointly by Eldorado National Forest and the Lake Tahoe Basin Management Unit (USDA 2017b).

2.11 WATERSHED PROCESSES

El Dorado County has significant forest lands covering the headwater areas in high elevations where seasonal runoff from rainfall and snowmelt occur. Most of the precipitation in El Dorado County occurs from November to April. Precipitation, climate, and snowfall patterns differ throughout El Dorado County depending on elevation.

The amount of snowfall varies throughout El Dorado County. Placerville, located at a low elevation, occasionally receives 3 to 6 inches of snow during the winter. At a higher elevation, the community of Camino receives large quantities of snowfall. The areas closer to the Sierra Nevada experience the greatest amount of snowfall at higher frequency year round (El Dorado Weather 2017).

Areas at lower elevation experience much less rainfall than the areas found at higher elevation. On average per year, El Dorado Hills receives 25 inches of rain, Cameron Park 30 inches of rain, Shingle Springs 35 inches of rain, and Placerville approximately 39 inches of rain (El Dorado Weather 2017). The community of Camino, at a higher elevation, receives on average per year about 45 inches of rain (El Dorado Weather 2017). On the Western side of Sierra Nevada, 80 to 100 inches of rain occurs per year on average, whereas the Eastern side of the Sierra Nevada receives much less rainfall as a result of a rain shadow effect (El Dorado Weather 2017). When wind and moist air is uplifted towards the top of the mountainous terrain, it condenses and precipitates before it moves on to the other side of the mountain. Once the wind and air reach the other side, little moisture is left which creates an environment with little rainfall.

DESCRIPTION OF WATERSHED

The amount of precipitation that ponds on the land surface and infiltrates to contribute to groundwater, or runs off the land surface as overland flow to surface water, depends on the land-surface slope. When all other factors are the same, precipitation infiltrates into the subsurface in areas characterized by low slope; precipitation runs off the land surface in areas characterized by high slope. Figure 2-13 shows locations in El Dorado County where the slope is less than 10°.

The Natural Resources Conservation Service's (NRCS) Hydrologic Soil Groups A, B, C, and D are found throughout El Dorado County (Figure 2-14). These Hydrologic Soil Groups, along with land use, management practices, and hydrologic conditions, determine a soil's associated runoff curve number which is used to estimate direct runoff from rainfall. The following describes the four soil types.

- Group A—Soils in this group have low runoff potential when thoroughly wet. Water is transmitted freely through the soil. Group A soils typically have less than 10 percent clay and more than 90 percent sand or gravel and have gravel or sand textures. Some soils having loamy sand, sandy loam, loam, or silt loam textures may be placed in this group if they are well aggregated, of low bulk density, or contain greater than 35 percent rock fragments.

- Group B—Soils in this group have moderately low runoff potential when thoroughly wet. Water transmission through the soil is unimpeded. Group B soils typically have between 10 percent and 20 percent clay and 50 percent to 90 percent sand and have loamy sand or sandy loam textures. Some soils having loam, silt loam, silt, or sandy clay loam textures may be placed in this group if they are well aggregated, of low bulk density, or contain greater than 35 percent rock fragments.

- Group C—Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted. Group C soils typically have between 20 percent and 40 percent clay and less than 50 percent sand and have loam, silt loam, sandy clay loam, clay loam, and silty clay loam textures. Some soils having clay, silty clay, or sandy clay textures and may be placed in this group if they are well aggregated, or contain low bulk density, or contain greater than 35 percent rock fragments.

- Group D—Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted. Group D soils typically have greater than 40 percent clay, less than 50 percent sand, and have clay textures.

Given the hydrology, soils, and land-surface slopes found throughout El Dorado County, some West Slope areas are susceptible to flood events that impact not only the welfare of the communities but also the water quality of local water supplies. Historically, Cameron Park has had drainage problems in which occasional flooding occurs, due to the area being at low elevation and surrounded by areas at high elevation. This means that runoff is generated and discharged into the local creeks and tributaries. High flow in the local water bodies contributes to occasional flooding. Flooding is exacerbated if culverts are undersized or blocked with debris and sediment. As an example, the Town of El Dorado has also experiences occasional flooding near Slate Creek, when there is an excess amount of runoff. Similarly, the Sly Park Portal Subdivision found in the community of Pollock Pines has experienced occasional flooding events. Figure 2-15 depicts some of the flood prone or "hotspot" areas found in El Dorado County in addition to locations

that may have undersized culverts. These areas were identified by County Department of Transportation staff and were based on their best knowledge of the area.

Cameron Park and with other communities are also found in close proximity to bodies of water that can be affected by the 500-year floodplain defined by FEMA (shown in Figure 2-16). The 500-year floodplain is also known as the National Flood Insurance Program floodplain. A 500-year flood has a 0.2 percent annual chance of occurring and is designated as a Moderate Flood Hazard Area. These areas are not in any immediate danger from flooding caused by overflowing rivers or hard rains, but are still at risk of flooding. In El Dorado County, there is fragmented mapping of the 500-year floodplain, and what is mapped closely follows some of the local rivers and streams. The floodplain information presented in Figure 2-16 is from the Standard Digital Flood Insurance Rate Map Database, obtained in August of 2017.

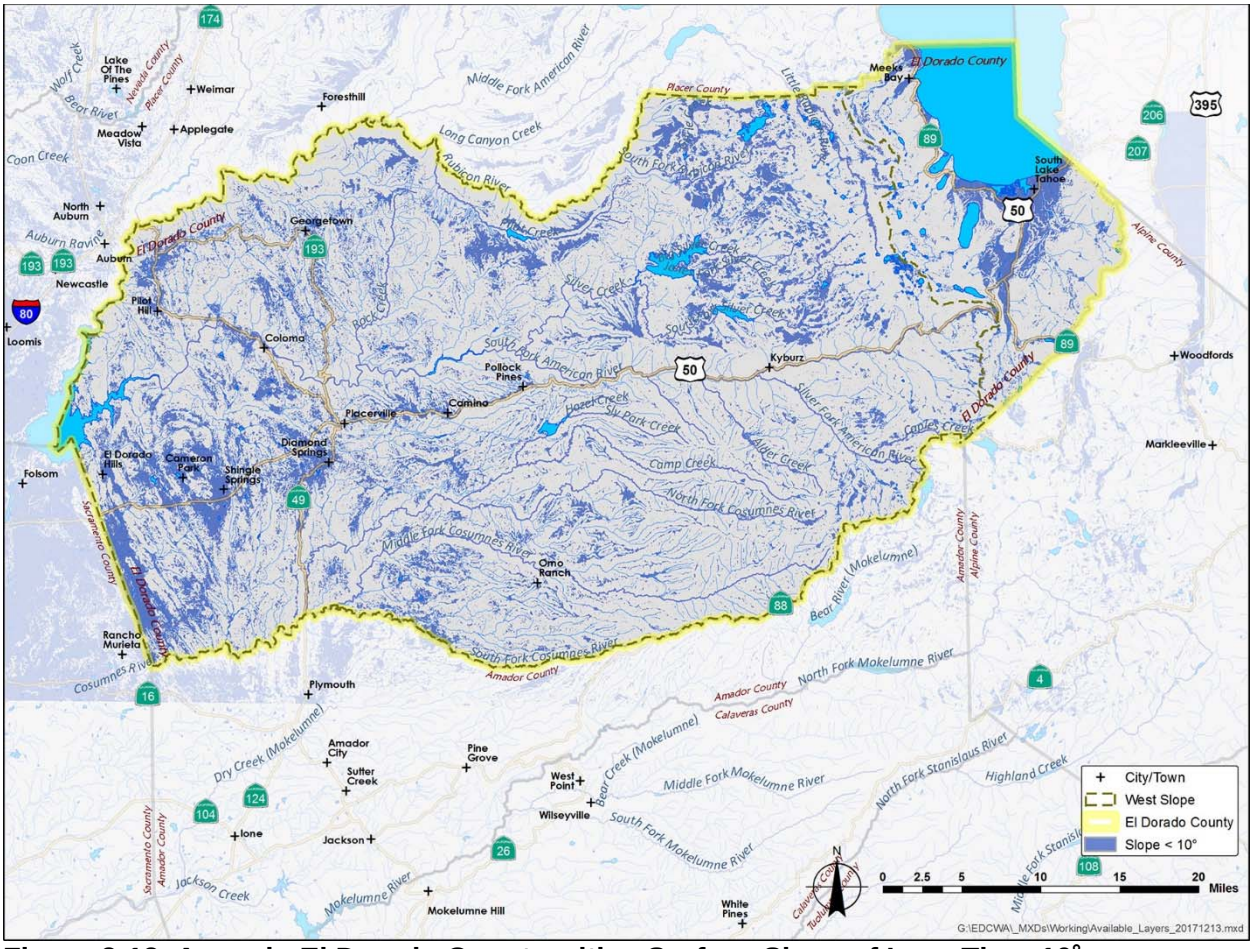


Figure 2-13. Areas in El Dorado County with a Surface Slope of Less Than 10˚

DESCRIPTION OF WATERSHED

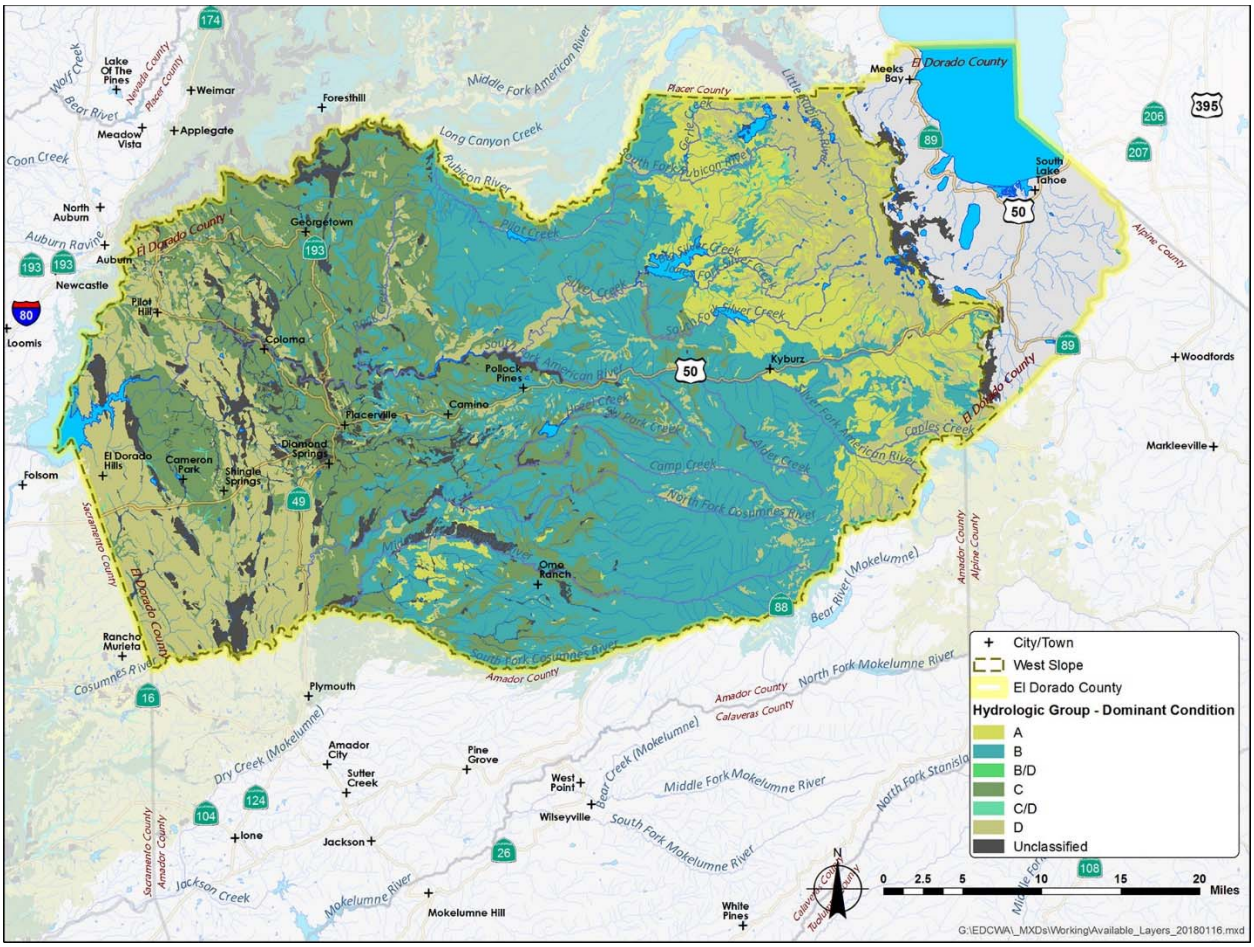


Figure 2-14. Natural Resource Conservation Service Hydrologic Soil Groups A, B, C, and D in El Dorado County

DESCRIPTION OF WATERSHED

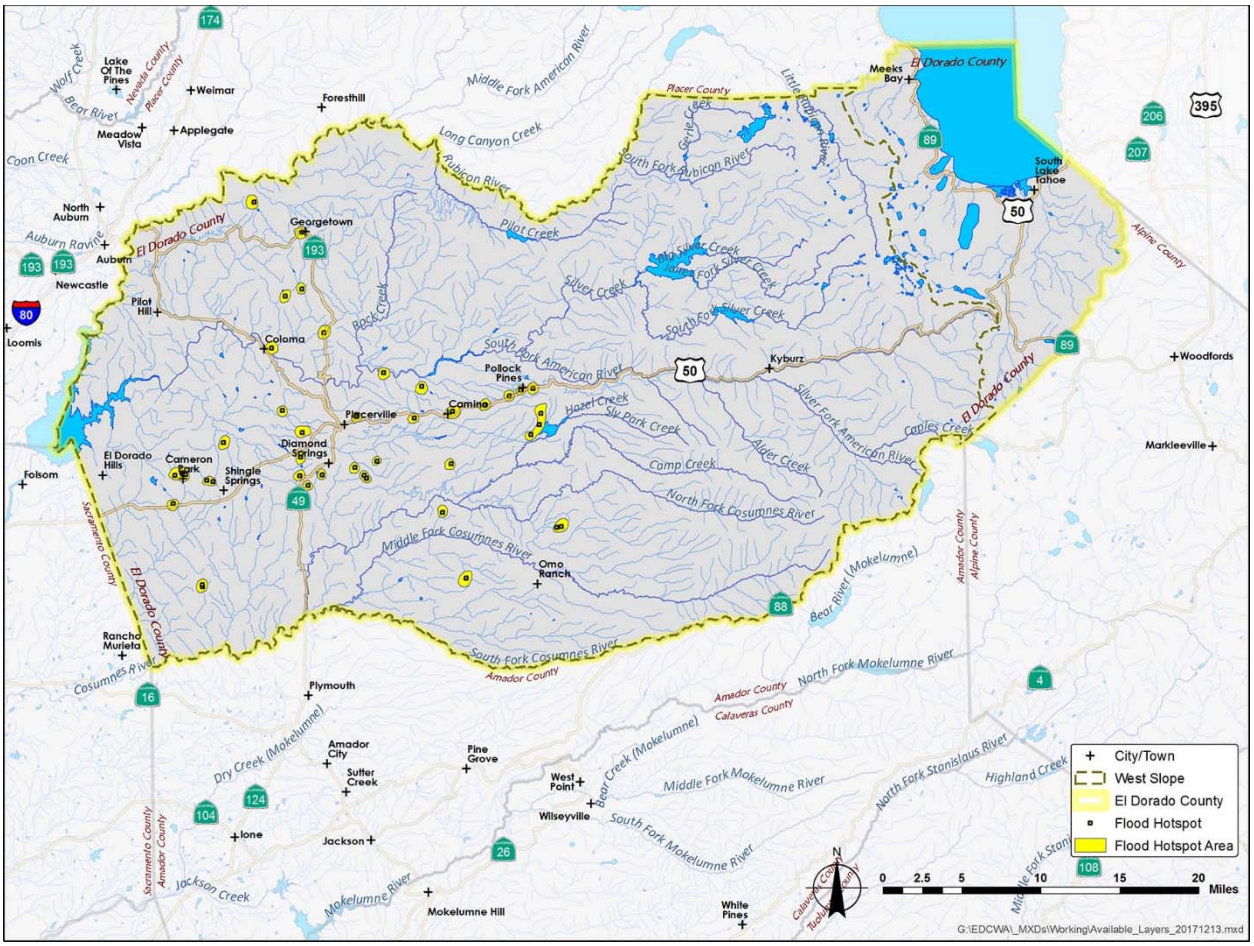
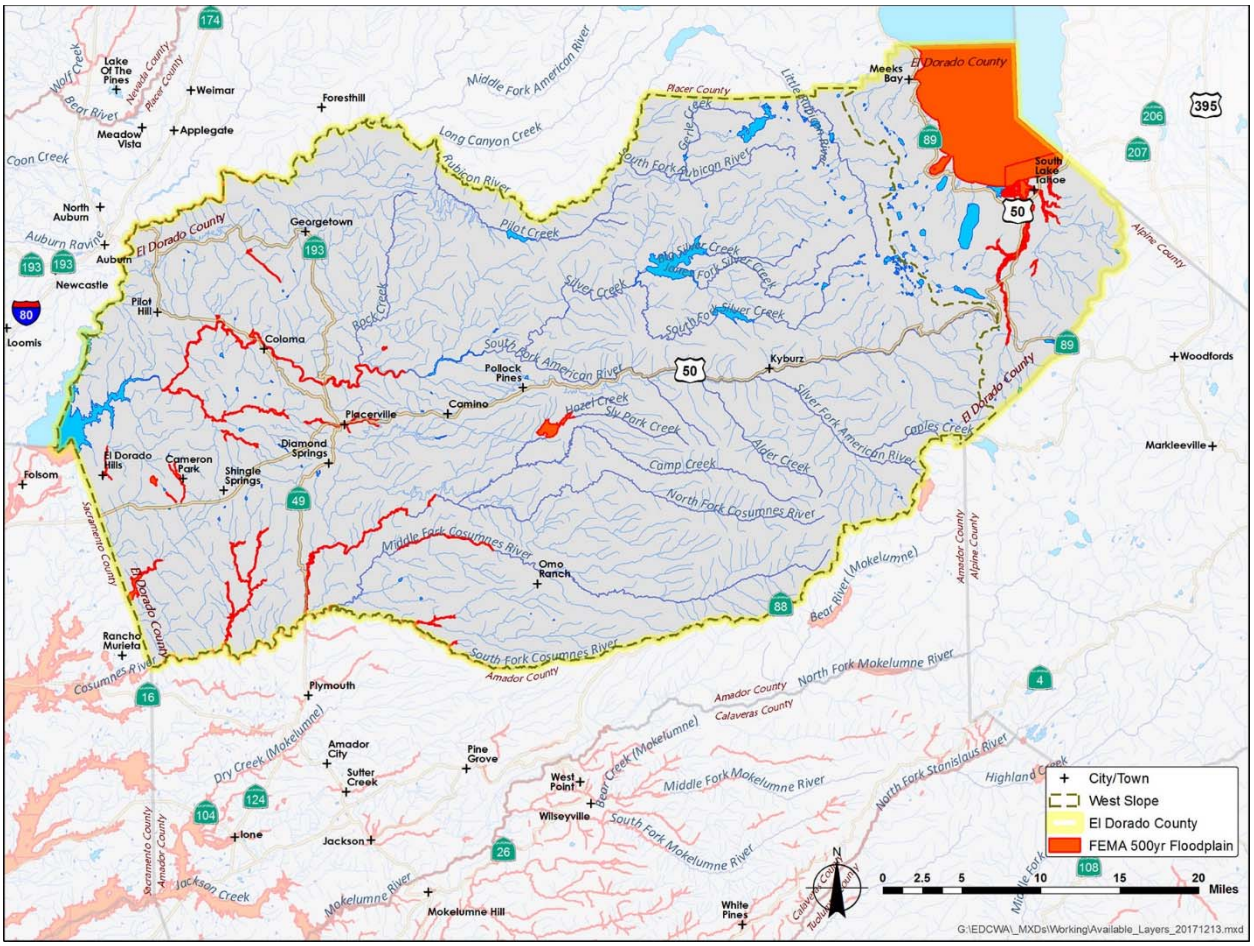


Figure 2-15. Observed Flood Prone Areas in El Dorado County

DESCRIPTION OF WATERSHED



FEMA data from August 29, 2017.

Key:

FEMA = Federal Emergency Management Agency

Figure 2-16. Federal Emergency Management Agency 500-year Floodplain

2.12 WATER QUALITY COMPLIANCE

Impairments to beneficial uses of surface waters found in the West Slope area were described in Section 2.5. The following sections discuss the sources that contribute to the pollution of stormwater and dry weather runoff that relate to those identified impairments. In addition, the TMDLs and NPDES compliance requirements in the West Slope area are discussed.

2.12.1 Contributors to Pollution Runoff

According to the Central Valley RWQCB, mercury is a constituent of concern since it impairs eight water bodies in the American River Watershed. This became evident after fish were observed to have high levels of methyl-mercury. The Central Valley RWQCB is developing TMDLs for the mercury found in the American River Watershed (described in Section 2.5). The TMDLs will ultimately specify the amount of mercury acceptable in the American River Watershed that are not anticipated to compromise the integrity of regional water supplies. The TMDLs will also specify the amount by which mercury contributing sources will have to be reduced. In order to implement these TMDLs, the State Water Board must amend the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins. In November 2010, the Central Valley RWQCB staff held meetings and worked with stakeholders to create a regulatory program that will reduce sources of inorganic mercury and methyl-mercury.

Inorganic mercury and methyl-mercury in the North Fork American Watershed have been attributed to tunnels and hydraulic mines from historical gold mining activities, discharges from municipalities, runoff from agriculture and the urban sector, and deposition from the air (Central Valley RWQCB 2010). Similarly, methyl-mercury from bacteria has been found in wetlands, lakes, streambeds, rivers, reservoir sediments, wastewater, urban runoff, and agricultural drainage. Historically, mercury was used in mines from the Coastal Range of California to aid in gold mining activities during the late 1800s. Since mercury was transported, some of it was lost and is now found in several of the rivers and streams in the West Slope area (Central Valley RWQCB 2010). Therefore, reducing the amounts of erosion and contaminated sediment that reach water bodies is extremely important to reducing the levels of mercury. In addition, limiting release of mercury from current sources into water bodies and the atmosphere will also decrease the levels of mercury present. Activities that control the creation of methyl-mercury may involve cleaning mines, reducing pollution from dredge tailings, preventing the discharge of contaminated sediment, stabilizing stream banks, aerating reservoirs to reduce methyl-mercury levels, managing contaminated sediment found in reservoirs, reducing discharges from urban areas, and reducing discharges from managed wetlands.

2.12.2 TMDL and NPDES Compliance

Under CWA Section 402, construction sites that are a minimum of one acre, as well as municipal, industrial, and commercial facilities that discharge stormwater and/or wastewater to waters of the United States must obtain a permit from the NPDES program. A permit for such sites is required to assure that the effluent being discharged to water bodies is not deteriorating water quality. The goal of the NPDES program is to control the discharge of pollutants into water bodies, which includes discharge from polluted stormwater runoff, point source pollution, and nonpoint source pollution.

The West Slope area is currently not subject to Areas of Special Biological Significance or TMDL monitoring and none of the pollutants listed in the CWA Section 303(d) List for the West Slope (see Section 2.5) identified urban runoff as the source, therefore, 303(d) monitoring for the Phase II MS4 Permit is not required. Instead, the County must develop a program to implement the Phase II MS4 permit requirements and demonstrate compliance through an annual report submittal. Although there is room for program expansion and enhancements to improve the County's stormwater program, the County is currently in compliance with its Phase II MS4 Permit on the West Slope.

The West Slope SWRP will support efforts to implement applicable NPDES permits, waste discharge requirements (WDR), Areas of Special Biological Significance Compliance Plans (State Water Board Resolution 2012-0012), and/or conditional waivers issued by the State Water Board and/or RWQCBs (Water Code Section 10562, subds. (b)(5) & (6)). A municipal NPDES permit currently exists to address the stormwater/urban water runoff discharges found in El Dorado County, Placer County, and the City of South Lake Tahoe within the Lake Tahoe Hydrologic Unit (Lahontan RWQCB 2017). The Monitoring and Reporting Program includes provisions for the implementation of TMDLs, if applicable, which prescribe requirements and schedules for permittees to manage discharges that may cause or contribute to violations of water quality standards. For the West Slope area, construction activities are subject to the Stormwater Program Guidelines outlined by the State Water Board under the 2009-0009 Division of Water Quality (DWQ) Construction General Permit (State Water Board 2017b), local ordinances, and the West Slope SWMP.

Additionally, the County is subject to the West Slope Phase II MS4 NPDES Permit which is overseen by the Central Valley RWQCB (EDCWA 2017a). The West Slope MS4 NPDES Permit went into effect on July 1, 2013 for a term of five years, aiming to improve the water quality of the surface water resources located in urban areas of high priority (EDCWA 2017a).

In the spring of 2015, the County Board of Supervisors adopted Chapter 8.79, Stormwater Quality Ordinance No. 5022, replacing Ordinance No. 4992. The new ordinance applies to the Lake Tahoe Basin and the unincorporated region of the West Slope area in which it is meant to provide legal authority to protect the safety, health, and welfare of the communities covered. The ordinance also seeks to protect the water quality of water bodies found in El Dorado County by reducing polluted stormwater runoff and by limiting non-storm drainage in storm drainage systems. Under the new ordinance, the use of BMPs is encouraged to reduce the impact of polluted stormwater runoff from, but not limited to, development of new and upgraded residential, commercial, industrial and public infrastructure.

2.13 PROJECT-SPECIFIC REGULATORY CHALLENGES AND INTEGRATED BENEFITS

Projects are to be implemented for a multitude of reasons. Occasionally, motivation for a project is regulatory in nature while at other times a project is built to benefit a population. It is necessary to understand the context of watershed processes before recommending projects for implementation. The necessity of project implementation for each of the three components is described below.

- **Surface Water Storage:** Water supply in California is becoming increasingly unreliable. Historic drought has been followed by historic rainfall. Surface water storage projects have the ability to dampen the effect of increasingly variable hydrology. Planning and construction challenges of implementing a surface water storage project include land acquisition, public opinion, water rights issues, and a large capital cost, however the additional water supply often warrants consideration of implementing a project.

- **Watershed Management:** The forest structure and species composition of the Eldorado National Forest within the El Dorado County has changed over the last century largely due to human activity. Historically low to moderate intensity fires were a frequent occurrence in forested areas. With the onset of more human activities, such as agricultural practices and fire suppression, forests began to develop higher tree density and more fuel loads making it more susceptible to severe fires. Additionally, large areas of forest have been dying due to prolonged drought conditions and bark beetle outbreaks which provides more fuel for future fire outbreaks. Severe wildfires have been shown to increase stormwater runoff and sediment generation, thus affecting stormwater resources, especially when downstream receiving waters are impaired (SCCWRP 2014).

- **Stormwater Management:** Stormwater has become heavily regulated in the last 20 years. Many of the new regulations are subject to revisions or further development, and it can be difficult to navigate the laws, permits, and policies that define the current regulatory environment. In addition, the State's climate has become increasingly unpredictable. Flood risk mitigation, climate change, and other safety programs as they relate protection of health and property, are discussed as drivers for project implementation.

The following sections discuss the various motivations surrounding why multi-benefit projects must be implemented through the West Slope SWRP. The sections that follow will discuss how the implementation of such multi-benefit projects will promote integrated water management benefits.

2.13.1 Integrated Water Management Planning

Stormwater management is currently going through a change in California due to the increased awareness of stormwater-related environmental challenges, and opportunities to be part of long-term solutions to water conflict and scarcity statewide. While early regulatory efforts focused on controlling pollutants and implementing BMPs, current regulatory decisions also emphasize holistic strategies that will result in multiple community benefits while concurrently managing pollution. With the focus on stormwater as a resource, newer low impact development and green infrastructure techniques are now capitalizing on opportunities to capture stormwater runoff and use it for local landscape and agricultural irrigation, and groundwater recharge. Allowing stormwater to infiltrate into the ground and contribute to river flows are additional ways to promote integrated water management. Figure 2-17 presents some of the key benefits to using this holistic integrated water management approach.

SB 985 amended then-existing legislative requirements for stormwater resource planning to incentivize and promote stormwater resource planning efforts that include both wet and dry weather flow management as well as outline the requirements for a stormwater resource plan. The SWRP Partners have elected to take

this definition one step further and incorporate surface water storage and watershed management into the West Slope SWRP. Potential benefits of this approach are discussed below.

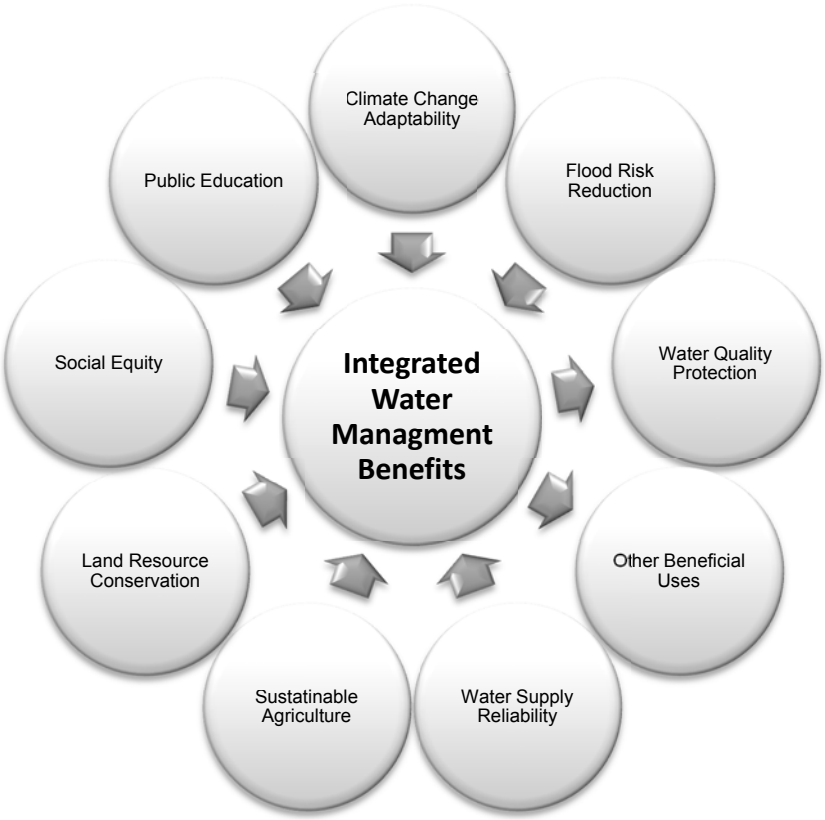


Figure 2-17. Relevant Benefits of Holistic Integrated Water Management Approach

2.13.1.1 Climate Change Adaptability

Over the past decade, the subject of climate change has continued to be a topic of much discussion in the water community statewide due to the potential implications of changes in hydrologic conditions, the considerable uncertainty about how to identify specific impacts to a given region, and the feasibility of strategies to mitigate any such effects. Despite the inherent uncertainty in projecting water supply conditions several decades into the future, it has become increasingly clear that water resource planning can no longer solely rely on calculated estimates of average or "normal" weather conditions from the past century.

Given the long range nature of this West Slope SWRP, it is prudent to consider projects that help assure the water resource management systems that serve the West Slope are more resilient to extreme weather conditions and can provide sufficient water to serve anticipated land uses. Development of the *2014 CABY IRWMP* has provided, and likely will continue to provide, many benefits to the West Slope area through the identification and implementation of strategies and multipurpose projects that can make the region more resilient to climate extremes. However, the CABY region shares many similar attributes, including geologic conditions that provide only limited opportunities for groundwater storage. As a result, the West Slope area

and the Mountain Counties (Alpine, Amador, Calaveras, El Dorado, Madera, Mariposa, Nevada, Placer, Plumas, Sierra, Tuolumne and Yuba Counties) have little opportunity to improve water supply reliability via conjunctive use programs directly in their regions, although several IRWM regions in the Sacramento River Valley have significant groundwater storage opportunities. To expand the benefits of IRWM planning, it may be necessary to seek inter-regional solutions that reach outside of the existing IRWM planning boundaries to enhance supply reliability. Further, although it is clear that the *2014 CABY IRWMP* provides many useful examples of multi-benefit approaches to water supply enhancements, the Agency has the continuing obligation to conduct long range water supply planning for El Dorado County as envisioned by its legislative Act.

As noted earlier, hydrologic conditions may change in the future which may create adverse impacts to water supply reliability on the West Slope over the long term. The combination of rising temperatures, a smaller snowpack, and more frequent and potentially longer droughts could reduce the availability of both surface water and groundwater supplies, as more water runs off or evaporates and less infiltrates into the ground. Reduced infiltration could reduce the reliability of groundwater wells drilled in fractured rock, which are common in the West Slope area. These possible changes in future hydrologic conditions may contribute to (1) an increase in water demands, (2) changes in runoff patterns, (3) reduced availability of both surface and groundwater supplies, and (4) an increased frequency of drought conditions on the West Slope of El Dorado County and throughout the state of California. Potential shifts in future hydrologic conditions will require major adjustments in the conservation and management of water supplies in what could become a more extreme mix of wetter and drier water years.

Current water delivery systems will likely be impacted by the loss of natural snowpack storage and the resultant changes in runoff timing. The need to preserve flood storage space in multipurpose reservoirs could limit the availability of storage for water supply purposes, as variable weather patterns may complicate reservoir management. In some years, such as in 2014 with challenges by the U.S Department of the Interior, Bureau of Reclamation (Reclamation) to provide full contract deliveries to EID, the result is and will continue to be insufficient storage to meet projected dry year demands. If groundwater wells become less reliable, the West Slope area would become even more dependent on surface storage.

The concept that future weather conditions could be more extreme must be tempered with the knowledge that even over the past century "normal" years were rare: variability in weather has always been the norm. Although planning for an average year will always be part of the task, more serious extremes must also be addressed to identify available options.

2.13.1.2 Flood Risk Reduction

DWR and USACE developed *California's Flood Future: Recommendations for Managing the State's Flood Risk* which contains the first comprehensive look at flooding throughout the State and presents recommendations to improve flood management in California (DWR and USACE 2013). Research used to develop this document included soliciting information from local, State, and Federal agencies. More than 140 public agencies responsible for flood management provided information used to describe problems facing flood management and develop recommended solutions.

Flooding varies according to the complexities and diversity of the physical features of the landscape, weather, climate, and human manipulations of the land (e.g., regional demographic differences, in part due to historical settlement patterns, land use regulations, and economic drivers). In addition, flood warning times vary across the State, with longer lead times for slow-rise flooding and often little to no lead time for flash flooding.

Flooding can affect California at different times of the year and in different forms from stormwater flooding in urban areas to alluvial fan flooding at the base of hillsides. Rivers and streams flood in different ways from fast-moving flash floods in Southern California to slow-rise deep flooding in the Central Valley.

2.13.1.3 Water Supply Reliability

The quantity, quality, and availability of water resources are vital to natural processes and human activities in a watershed or region. Wise and prudent planning combined with management of surface and available groundwater resources is fundamental to providing a substantial economic base for the residents of the region. Understanding the magnitude of future water demands, and any potential changes to existing water demands, allows managers to make informed recommendations and decisions that will meet and manage water demands into the future. How growth is accommodated and land use planning decisions are made by cities and counties have important implications on future water use (CABY 2014).

2.13.1.4 Water Quality Protection

Water is used in a variety of ways and as such, the quality of water is an important aspect for managing and developing local water resources. Water quality is directly linked to the ecological, social, and economic health of the community. Poor water quality impacts the health of local aquatic species, increases human health concerns from drinking and exposure, and high concentrations of pollutants result in increased plant stress and negative impacts on crop production. Understanding the causes of diminished water quality and developing approaches to identify and mitigate these activities allow current and future planned developments and projects to take a proactive approach to mitigate impacts to the health of local water bodies. In an effort to address causes and concerns of water quality, as discussed in Section 2.12, the implementation of the West Slope SWRP will work to identify and reduce sources of pollution and comply with applicable TMDLs and NPDES permits.

2.13.1.5 Sustainable Agriculture

Food and agriculture are the largest consumers of water in the West Slope. Roughly half of water used for agricultural irrigation is consumed as a result of evaporation, incorporation into crops and transpiration from crops. The other half recharges groundwater or surface flows or is lost in unproductive evaporation. Sustainable agricultural practices include rotating crops, planting cover crops, applying pest management practices, integrating livestock with crops and practices agroforestry practices. Sustainable agriculture means producing food without compromising future generations' ability to do the same. Protecting the environment, public, and animal welfare is an important aspect to achieving sustainable agriculture.

2.13.1.6 Land Resource Conservation

As natural land is being converted to developed land on the West Slope, there is a growing concern over the amount and quality of the natural land that remains. Some people are concerned that all of the natural land is being destroyed, and in recent years, there has been an increasing push to protect natural land.

Land conservation is the process of protecting natural land and returning developed land to its natural state. Some land has only had minor disturbances while other land has been completely destroyed, so a variety of techniques are needed to carry out land conservation. Some of the most common techniques include preservation, restoration, remediation, and mitigation.

2.13.1.7 Social Equity

Water plays a vital role in many aspects of everyday life both directly (e.g., human consumption of water) and indirectly (e.g., improving natural systems). As such, there are a multitude of ways that water can impact the welfare of people and advance social equity. Projects to be implemented through the development of the West Slope SWRP will aim to promote equal social welfare.

2.13.1.8 Public Education

An important purpose of environmental education is to teach people about pollution in order to protect the environment. Those involved in environmental education often teach individuals and groups pertinent information about subjects, such as biology, geology, meteorology, and hydrology, in order to better analyze the various sides of an issue through critical thinking. Educators use a wide variety of materials and methods to investigate the environment in the context of economics, politics, popular culture, and social equity as well as natural systems and processes to better educate the public. The West Slope SWRP will support this existing effort in the West Slope area by supporting public demonstrations projects and programs that the public may learn from. Such programs and demonstration projects will cover topics on pollution control as well as the mitigation and prevention of environmental issues found in communities.

Environmental education can help:

- Protect human health
- Promote sustainable development (environmental protection and pollution prevention in conjunction with economic development)
- Create interest in a wide variety of jobs in various environmental fields
- Enhance learning in all areas of education Reinforce the desire to protect natural resources for future generations

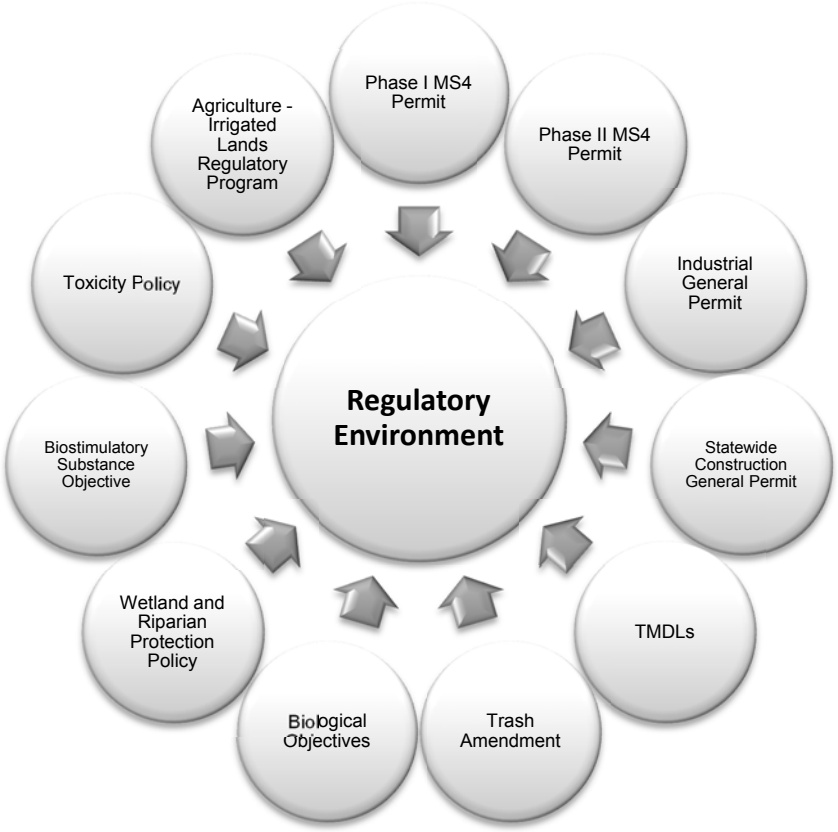
2.13.1.9 Other Beneficial Uses

Integrated water management also provides opportunities to progress other beneficial uses. For example, situated in the Sierra Nevada, the West Slope area offers a wide range of water-based tourism, sport,

leisure, and recreational opportunities. These recreational opportunities and public spaces provide educational and stewardship opportunities which allow communities and visitors to connect with their local water resources.

2.13.2 Regulatory Environment and Drivers

The SWRP Partners have the authority and obligation to comply with regulatory conditions. Some of these requirements are outlined in Figure 2-18 and described below.



Key:
MS4 = Municipal Separate Storm Sewer
TMDL = Total Maximum Daily Load

Figure 2-18. Typical Regulations and Drivers

2.13.2.1 Phases I and II MS4 Permits

While early regulatory efforts historically focused on controlling pollutants and implementing BMPs, current regulatory decisions also emphasize holistic strategies that will result in multiple benefits while concurrently managing pollution. With the focus on stormwater as a resource, newer LID and green infrastructure techniques are now capitalizing on opportunities to capture stormwater runoff for local landscape needs, agricultural uses, and groundwater recharge.

MS4 Permits are the vehicle by which actions are taken to address the issues described above. These permits have evolved to:

- Create a new, watershed-focused process for compliance involving SWMPs and/or implementation of NPDES Permit requirements.
- Encourage use of green infrastructure, LID, and multi-benefit regional projects.
- Place a new focus on stormwater as water supply with water quality compliance achieved through infiltration.
- Include in SWMPs BMPs, multi-benefit regional projects to retain stormwater runoff, and a detailed analysis (known as a Reasonable Assurance Analysis) to illustrate how projects would comply with TMDL limits.
- Achieve compliance through a combination of structural and non-structural control measures (e.g., retention basins, street sweeping, catch basins, etc.).

As discussed in Section 2.12.2, the County is currently in compliance with its Phase II MS4 Permit on the West Slope and implementation of the West Slope SWRP will support efforts to comply with applicable NPDES permits, WDRs, Areas of Special Biological Significance Compliance Plans (State Water Board Resolution 2012-0012), and/or conditional waivers issued by the State Water Board and/or RWQCBs (Water Code Section 10562, subds. (b)(5) & (6)).

2.13.2.2 Industrial General Permit

The Statewide General Permit for Storm Water Discharges Associated with Industrial Activities, Order 2014-0057-DWQ (Industrial General Permit or IGP) implements the federally required stormwater regulations in California for stormwater associated with industrial activities discharging to waters of the United States (State Water Board 2014). The IGP regulates discharges associated with 10 federally-defined categories of industrial activities. The IGP requires the implementation of BMPs, a site-specific Storm Water Pollution Prevention Plan (SWPPP), and monitoring plan. The IGP also includes criteria for demonstrating no exposure of industrial activities or materials to stormwater, and no discharges to waters of the United States.

There are currently 42 active industrial sites with IGP coverage in the West Slope area. Compliance with the IGP presents a number of challenges and issues for industrial facilities. These include, but are not limited to, the following:

- Meeting Numeric Action Levels
- Mandates to incorporate Advanced BMPs (structural treatment controls) at facilities that are in Level 2 status
- Incorporation of TMDLs into the IGP during the Spring of 2017, which will cause additional monitoring and advanced BMP implementation

- Notices of intent to sue are being issued by NGOs in counties throughout California

2.13.2.3 Statewide Construction General Permit

Dischargers with projects that either disturb one or more acres of soil, or that disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ (CGP) for the West Slope (State Water Board 2009). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

The Construction General Permit requires the development of a SWPPP by a certified Qualified SWPPP Developer.

CGP compliance presents a number of challenges and issues for construction sites including, but not limited to, the following:

- Meeting Numeric Action Levels
- Performing inspections and monitoring
- Demonstrating the site can submit a notice of termination
- Preparing annual reports
- Addressing notice of violations and cleanup and abatement orders
- Addressing citizen law suits

2.13.2.4 TMDLs

CWA Section 303(d) requires that the states make a list of waters that are not attaining standards after technology-based limits are put into place. For waters on this list (and where the USEPA administrator deems they are appropriate), states are to develop TMDLs. As discussed in Section 2.5, the West Slope area contains water bodies in the South Fork American and Upper Cosumnes Watersheds that do not meet water quality standards. As such, TMDLs are under development for the affected water bodies.

2.13.2.5 Trash Amendment

In April 2015, the State Water Board adopted Water Quality Control Plan amendments to implement trash control policies (Resolution 2015-0019). The amendments require the policy to be implemented through applicable NPDES permits and other regulatory mechanisms.

The Trash Policy prohibits the discharge of trash into State waters. Implementing full capture devices or full trash capture equivalency is deemed to be compliant. Monitoring and assessment of trash in California

waters is required, and the State Water Board is leading efforts to identify and develop acceptable methods to measure ambient trash conditions. Dischargers may select one of two options:

- **Option 1, Full Capture:** Install, operate, and maintain full capture systems in storm drains that capture trash ≥ 5mm from one or more of the priority land uses/facility/site.
- **Option 2, Full Capture System Equivalency:** Implement a plan with a combination of full capture systems, other treatment controls, institutional controls, and/or multi-benefit projects with same performance results of Option 1 with the MS4 jurisdiction/significant trash generating areas/facility/site.

State Water Board staff developing guidance for NPDES permittees on how to implement the new Trash Policy.

2.13.2.6 Biological Objectives

Biological objectives (or biological criteria) are expressions of desired biological conditions that are adopted into a state's water quality standards. They are derived from bioassessment data and may be expressed as either narrative statements or numeric limits (or both). Many states have adopted biological objectives (USEPA 2002).

The State Water Board is proposing to develop a statewide policy for biological objectives to improve protection of aquatic life beneficial uses in perennial wadeable streams. The biological objectives will be implemented via a statewide policy. On approval by the USEPA, the objectives will have the same regulatory authority as existing chemical, physical, and toxicological water quality objectives. The State Water Board will develop the implementation program that describes how biological objectives will be incorporated into permits and other regulatory actions, such as assessing attainment of aquatic life beneficial uses for CWA Section 303(d) listing.

The biological objectives will incorporate consideration of uncontrollable anthropogenic impacts. In areas where degradation is due to uncontrollable factors, the reference conditions may reflect "best attainable" conditions.

The State Water Board will work to ensure that the Biological Objectives Policy will be well coordinated with other related policies such as the Wetland and Riparian Protection Policy, the Biostimulatory Substances Objective, the Toxicity Policy, and the Division of Water Rights efforts to develop instream flow criteria.

2.13.2.7 Wetland and Riparian Protection Policy

The State Water Board is proposing Procedures for Discharges of Dredged or Fill Material to Waters of the State, for inclusion in the ISWEBE Plan. The proposed procedures consist of three major elements: 1) a statewide wetland area definition, 2) wetland delineation procedures, and 3) procedures for the regulation of dredged or fill discharges to waters of the state (State Water Board 2017e).

The State Water Board has developed the proposed procedures to address several important issues. First, the State Water Board deems there is need to strengthen protection of waters of the state that are no longer

protected under the CWA due to U.S. Supreme Court decisions, as the RWQCBs have historically relied on CWA protections in dredged or fill discharge permitting practices. Second, there is inconsistency across the RWQCBs in requirements for discharges of dredged or fill material into waters of the state, including wetlands. There is no single accepted definition of wetlands at the state level, and the RWQCBs may have different requirements and levels of analysis with regard to the issuance of water quality certifications. Finally, current regulations are not adequate to prevent losses in the quantity and quality of wetlands in California, where there have been especially profound historical losses of wetlands.

2.13.2.8 Biostimulatory Substances Objective

The State Water Board is proposing to adopt a statewide water quality objective for biostimulatory substances along with a program of implementation as part of the Biostimulatory Substances Amendment to the ISWEBE Plan. The Biostimulatory Substances Amendment could include: 1) a statewide numeric objective or a statewide narrative objective (with a numeric translator), and 2) various regulatory control options for point and nonpoint sources.

It is anticipated that a comprehensive program to implement the water quality objective for biostimulatory substances would be established in three phases as three amendments to the ISWEBE Plan. Each phase would reflect implementation unique to three different water body types. If the Biostimulatory Substances Amendment establishes a numeric water quality objective, rather than a narrative water quality objective, then potentially each subsequent phase would also establish a new numeric water quality objective. The latter depends on whether the numeric water quality objective is developed from factors unique to the different types of waterbodies. The Biostimulatory Substances Amendment would be the first phase, applicable to wadeable streams. The second phase would focus on lakes and the third phase will focus on estuaries, enclosed bays, and non-wadeable rivers (State Water Board 2017c).

The Biostimulatory Substances Amendment would also include a water quality control policy to establish and implement biological condition assessment methods, scoring tools, and targets aimed at protecting the biological integrity in wadeable streams (State Water Board 2017d).

2.13.2.9 Toxicity Policy

Toxicity testing is an essential component of an integrated approach to water quality-based toxics control. Aquatic toxicity tests (toxicity tests) utilize aquatic organisms to examine the adverse chronic or acute effects of a given discharge. The results from these tests are used to detect aggregate toxic effects of known pollutants, and provide meaningful data when specific pollutants may not be known.

Previously, the RWQCBs developed toxicity provisions in their respective Regional Water Quality Control Plans, while the ISWEBE Plan established minimum testing requirements (State Water Board 2017f). As a result, toxicity requirements varied widely among the Regional Water Quality Basin Plans and permits. The proposed Policy for Toxicity Assessment and Control is intended to improve regulatory consistency through the adoption of statewide numeric objectives for chronic and acute toxicity. In addition, this policy will establish a uniform approach to toxicity monitoring, analysis, and remediation measures that fulfill the requirements of State Water Board Resolution No. 2005-0019.

2.13.2.10 Agriculture – Irrigated Lands Regulatory Program

California agriculture is extremely diverse, spans a wide array of growing conditions from northern to southern California, and includes more than 400 commodities. The State produces nearly half of all U.S.-grown fruits, nuts, and vegetables. Across the nation, U.S. consumers regularly purchase crops produced in California. Many of the products are exported to markets worldwide.

Water discharges from agricultural operations in California include irrigation runoff, flows from tile drains, and stormwater runoff. These discharges can affect water quality by transporting pollutants, including pesticides, sediment, nutrients, salts (including selenium and boron), pathogens, and heavy metals, from cultivated fields into surface waters. Many surface water bodies are impaired because of pollutants from agricultural sources. Groundwater bodies have suffered pesticide, nitrate, and salt contamination.

To prevent agricultural discharges from impairing the waters that receive these discharges, the Irrigated Lands Regulatory Program regulates discharges from irrigated agricultural lands (State Water Board 2017e). This is done by issuing WDRs or conditional waivers of WDRs to growers (State Water Board 2013) that contain conditions requiring water quality monitoring of receiving waters and corrective actions when impairments are found. Approximately 6 million acres of agricultural land and 40,000 growers are enrolled in the Irrigated Lands Regulatory Program.

3.0 ORGANIZATION, COORDINATION, AND COLLABORATION

This section identifies the local agencies, NGOs, and State and Federal agencies that play important roles in managing stormwater resources in the West Slope area. Entities that provided projects for inclusion in the West Slope SWRP are noted below, and their projects are included in Section 4. Refer to Section 5 for additional details on the identified entities' roles and responsibilities in developing the West Slope SWRP and in upcoming plan implementation. Refer to Section 6 for information on how the public and community were engaged in the development of the West Slope SWRP and the plan for continual engagement during the West Slope SWRP implementation.

3.1 LOCAL AGENCIES

The West Slope SWRP was developed in close collaboration with the local agencies that benefit from projects that use stormwater as a resource. Three agencies, termed "SWRP Partners," led development of the West Slope SWRP while multiple other local agencies were contacted to participate in the plan. A brief description of the SWRP Partners and other local agencies is below.

3.1.1 Partner Agencies

Development of the West Slope SWRP was led by the Agency in close collaboration with the County and Placerville.

3.1.1.1 El Dorado County Water Agency

The Agency's mission is to "ensure that the [El Dorado County] has adequate water for today and in the future (EDCWA 2017b)." The Agency represents the long-term interest of their community, purveyors, and residents. The 1959 Act provides the Agency the authority for providing adequate water for all beneficial uses in El Dorado County, power development, and flood control. In particular, Section 13 of the Act provides the following:

> *Sec. 13. The agency shall have the power to control the flood and storm waters of the agency and the flood and storm waters of streams that have their sources outside of the agency, which streams and floodwaters flow into the agency, and to conserve such waters for beneficial and useful purposes of said agency by spreading, storing, retaining and causing to percolate into the soil within or without said agency, or to save or conserve in any manner all or any of such waters and protect from damage from such flood or storm waters the watercourses, watersheds, public highways, life and property in said agency, and he watercourses outside of the agency of streams flowing into the agency.*

Phone Number: (530) 621-5392
Address: 4330 Golden Center Drive, Suite C Placerville, CA 95667

3.1.1.2 County of El Dorado

The County is another of the SWRP Partners, and it played a key role in developing and contributing projects to the West Slope SWRP. The County's Community Development Services (CDS) Long Range Planning Division will assist the Agency with implementing and updating the West Slope SWRP. The CDS's mission is "to deliver effective public service that coordinates development in [El Dorado County] with the goals of ensuring public safety, maintaining environmental sensitivity, and improving economic prosperity (County 2017)." One of these public services is stormwater management. The County has provided the service of stormwater management in the context of the CWA and its NPDES permits to help reduce the discharge of pollutants associated with the stormwater drainage systems in the West Slope area.

The Environmental Management Department is also part of the CDS and contributed projects for inclusion in the West Slope SWRP. Its mission is "to protect, preserve, and enhance the public health, safety, and environment through a balanced program of environmental monitoring and enforcement, innovative leadership, community education, customer service, and emergency response for the citizens of and the visitors to [El Dorado County] (County 2017)." This division has provided multi-benefit stormwater projects through environmental management.

Phone Number, Long Range Planning, Placerville Office: (530) 621-4650
Phone Number, Environmental Management Department, Placerville Office: (530) 621-5300
Address: 2850 Fairlane Court, Building "C" Placerville, CA 95667

3.1.1.3 City of Placerville

Placerville is the seat of government for El Dorado County and is the only incorporated city in the West Slope area. Placerville's Public Works Division manages the maintenance and operations of its streets; parking lots; and sewer, water, and storm drain systems. Regarding stormwater resource planning, Placerville provided projects focusing on managing urban runoff pollution discharge into Hangtown Creek.

Phone Number, Public Works (530) 642-5232
Address: 549 Main Street, Placerville, CA 95667

3.1.2 Other Local Agencies

The following describes other local agencies in the West Slope area and their contributions to this plan, as applicable.

3.1.2.1 El Dorado County and Georgetown Divide Resource Conservation Districts

The El Dorado County and Georgetown Divide Resource Conservation Districts are local, independent, non-enforcement, non-regulatory districts that are self-governed. They advise and assist individual landowners and public agencies in planning and implementing conservation practices for the protection, restoration, or development of land, water, and related natural resources. These resource conservation districts provided potential projects for inclusion in the West Slope SWRP.

Phone Number: (530) 295-5630
Address: 100 Forni Road, Suite A, Placerville, CA 95667

3.1.2.2 Retail Water Purveyors

In the West Slope area, there are three main retail water purveyors: GDPUD, GFCSD, and EID. Refer to Section 2.7 for more information on these districts.

3.2 NON-GOVERNMENTAL ORGANIZATIONS

NGOs and State conservancies were contacted to provide essential assistance and insight during development of the West Slope SWRP. These entities are active in conservancy and protection of natural resources areas that overlap with the West Slope area.

3.2.1.1 Cosumnes, American, Bear, Yuba Integrated Regional Water Management

The CABY region spans four watersheds, two of which are in the West Slope area (Cosumnes and American). Water from these watersheds flow into the Sacramento River. Water quality is considered an essential issue to CABY stakeholders, and BMPs and activities are performed to maintain its high water quality. The *2014 CABY IRWMP* describes resource management strategies to help solve water management issues.

E-mail: cabyirwmp@gmail.com

3.2.1.2 American River Basin Integrated Regional Water Management

A small portion of the West Slope area (generally the El Dorado Hills area) has been incorporated in the American River Basin IRWM region, which is located west of the El Dorado County line. Led by Regional Water Authority, the *American River Basin IRWMP* was last updated in 2013, and it captures the regional vision in developing integrated water management practice and planned actions for implementation (RWA 2013). Waters in this region drain to the Sacramento River where water quality is affected by agricultural runoff, acid mine drainage, stormwater, municipal and industrial wastewater discharges, water releases from dams, diversions, and urban runoff.

Phone Number, Regional Water Authority: (916) 967-7692
Address: 5620 Birdcage Street, Suite 180, Citrus Heights, CA 95610

3.2.1.3 American River Conservancy

The American River Conservancy is an entity that protects habitats, the environment, fisheries, and recreational lands that are found in the Upper American River and Cosumnes River Watersheds. Stormwater resource planning provides opportunities to improve conditions in these watershed.

Phone Number: (530) 621-1224
Address: 348 Highway 49, Coloma, CA 95613

3.3 STATE AND FEDERAL AGENCIES

In addition to local agencies, NGOs, and a state conservancy, several State and Federal agencies were also contacted during West Slope SWRP development.

3.3.1.1 California Department of Transportation

California Department of Transportation's (Caltrans) mission statement is to "provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability (Caltrans 2017)." Caltrans manages several California highways, including Highway 50. Highway 50 is a major corridor through El Dorado County and a significant source of stormwater pollution. Highway projects with adequate stormwater considerations provide opportunities to improve stormwater quality and other benefits, and were included in the West Slope SWRP.

Phone Number, District 3: (530) 741-4572
Address, Headquarters: California Department of Transportation, 1120 N Street, Sacramento, CA 95814

3.3.1.2 U.S. Department of Agriculture, Forest Service

The U.S. Department of Agriculture, Forest Service (USFS) manages the Eldorado National Forest. The USFS mission is to "sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations (USFS 2017a)." The average acre on the Eldorado National Forest receives about 56 inches of precipitation annually with an average annual runoff around 29 inches (USFS 2017b). After a series of storms hit in early 2017, extensive damage occurred to roads, trails, infrastructure, and ecosystems in the Eldorado National Forest. The USFS provided several projects for inclusion in the West Slope SWRP.

Phone Number, Laurence Crabtree, Forest Supervisor: (530) 622-5061
Address: 100 Forni Road, Placerville, CA 95667

4.0 QUANTITATIVE METHODS FOR IDENTIFICATION AND PRIORITIZATION OF STORMWATER AND DRY WEATHER RUNOFF CAPTURE PROJECTS

The purpose of this section is to summarize the process of identifying and evaluating projects for integrated multi-beneficial uses from managing stormwater as a resource, and the results of the evaluation.

4.1 WEST SLOPE STORMWATER RESOURCE PLAN SCOPE AND COMPONENTS

As previously mentioned, the West Slope is the headwaters of California's hydrologic and water supply systems and contains diverse land uses and challenging terrains as part of the Sierra Nevada. To adequately address this unique setting, the West Slope SWRP includes three main components to properly cover the nature of stormwater in El Dorado County: Surface Water Storage, Watershed Management, and the more conventional component of Stormwater Management.

The following provides brief descriptions of the types of projects identified for the three West Slope SWRP components:

1. **Surface Water Storage** projects consist of reservoir creation projects that provide multi- benefits which include hydroelectricity production, downstream water supply, irrigation, flood management, recreation, and greater operational flexibility on both the regional and statewide scales. This component is important for the foothill area because there are no significant groundwater resources or storage available. While it is recognized that these projects could be more involved and significant in nature, they are an important part of the consideration for stormwater resource management.

2. **Watershed Management** projects consist of proposed implementation of land use and water management practices that protect and improve the quality of water and other natural resources in the West Slope area. These projects include development of long-term water quality monitoring programs, creek restoration, fire restoration, anaerobic digestion system, biomass facility for energy generation, and composting plants. This component is critical for upper watersheds and headwaters because the presence of large forest lands and the consequent water quality impacts from a forest fire can be significant and long-lasting.

3. **Stormwater Management** projects are more in line with conventional stormwater projects in both their scale and that they are very relevant in areas where urban, rural, and agricultural activities occur. The identified projects were split into structural and non-structural groupings:

    - Structural - projects aim to reduce the amount surface runoff generated from storm events and/or provide treatment, in turn reducing the amount of nonpoint source pollution in local water bodies. These projects include: road, sewer, and water improvements; culvert replacements;

park and ride improvements; road improvements; new facilities for point-source pollution control and using rain harvesting; street sweeping and vactor trucks for reducing sediment load; and LID projects for stormwater management.

- Non-Structural - projects aim to integrate preventative measures into planning and design phases of projects and also incorporate those measures into post-construction stormwater management programs. These projects include: public demonstration of LID, green infrastructure, and stormwater projects; public education campaigns; data management program; watershed and pollutant studies; and development of LID and BMP manuals related to stormwater management and water quality.

The projects in these three components are being developed to meet the needs in the West Slope area and comply with the SWRP Guidelines. The following sections discuss the project development approach used in the West Slope SWRP and serve as the basis for recommended project prioritization.

4.2 PROJECT DEVELOPMENT APPROACH

As discussed in Section 1, the SWRP Partners adopted a collaborative approach to develop the West Slope SWRP consistent with legislative requirements and regional needs. As such, projects were developed through identification, evaluation, and prioritization in alignment with the guiding principles presented in Section 1.3.

The steps for developing projects included the following activities:

1. **Project Identification**: Open project solicitation where project proponents identified projects and developed project details. Project proponents submitted project information to the Agency for inclusion in the West Slope SWRP. Only projects that were multi-benefit were moved forward for evaluation.

2. **Project Evaluation**: The identified projects were evaluated to assess contributions to multi-benefits. Structural projects were evaluated both qualitatively and quantitatively, whereas non-structural projects were only qualitatively evaluated.

3. **Project Prioritization**: Evaluated projects were ranked using multi-benefit metric scoring. Separate rankings were developed for the three components, with the stormwater management rankings being further separated into structural and non-structural projects.

These project development steps were used for all identified projects in the West Slope SWRP. The process for identification, evaluation, and prioritization is shown in Figure 4-1 and described in more detail below.

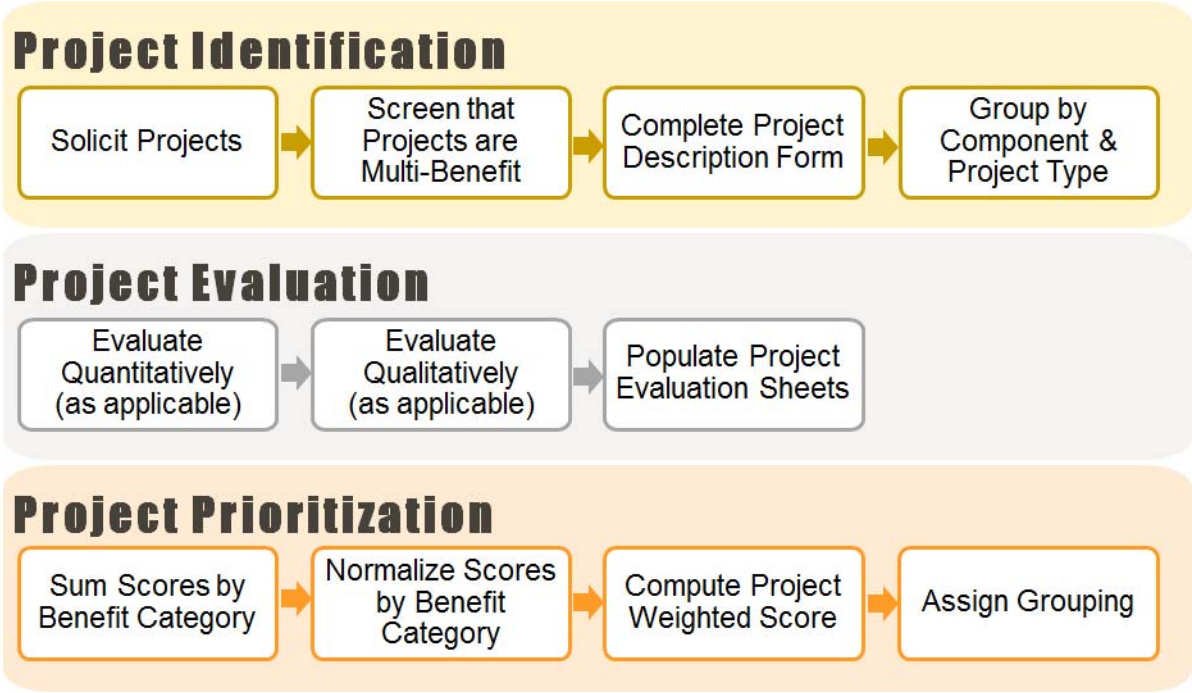


Figure 4-1. Project Development and Evaluation Approach

4.2.1 Project Identification

The SWRP Partners recognized the importance of receiving input from entities that have been working on stormwater and related resource management issues for relevancy, efficiency and applicability. As presented in Section 3, a wide range of local agencies, NGOs, and State and Federal agencies were identified that could have roles in the West Slope SWRP development. These entities were contacted with requests for multi-benefit surface water storage, watershed, and stormwater projects that could be implemented in the West Slope area. The following provides a summary of identified projects, including general features and emphases of each entity that provided input during the process. Appendix B includes specific details for each identified project.

4.2.1.1 Summary of Identified Projects

The identified projects were assigned a project type to aid in evaluation and comparison in addition to the wider component grouping. Table 4-1 summarizes all identified projects by component and project type. It provides a preliminary cost range and general description of projects by project type. The majority of projects are under the watershed and stormwater management components. Figure 4-2 presents the locations of all the identified projects. The locations of projects by Surface Water Storage, Watershed Management, and Stormwater Management component in El Dorado County are presented in Figures 4-3 to 4-5 respectively. As described in Section 2, given the distinct differences, approaches, and goals in managing stormwater in the West Slope, the Stormwater Management component projects were identified by planning area. Table 4-2 shows the project types within each Stormwater Management component planning area.

Table 4-1. Identified Projects by West Slope Stormwater Resource Plan Component and Project Type

Surface Water Storage West Slope SWRP Component			
Project Type	**Projects**	**Preliminary Cost ($M)[1]**	**Description**
Reservoir Creation	1	$909	Constructing a new reservoir would create regional supply of water to increase overall water supply reliability, decrease flood risk, improve river water temperature, and provide community benefits.
Watershed Management West Slope SWRP Component			
Creek Restoration	4	$2-2.5	Creek restoration through removal of sediment loads, culvert cleanout, bank stabilization and invasive weed removal would improve the environmental health of local water bodies and aim to restore the natural state of the river system in support of water quality and flood management.
Fire Restoration	2	$2.5-3	Fire restoration would improve the environmental health of local watersheds through removal of dead trees to reduce carbon emissions and pollutants to local water bodies.
Renewable Energy	5	$60-65	Construction of new biomass and compost facilities would provide community benefits by creating local energy generation and reducing the amount of waste in landfills.
Forest Management	21	$75-85	Forest management practices would aim to improve the environmental health of local watersheds through control of noxious weeds and reduce the risk of wildfires through preventative actions that include creating fuel breaks, reducing fire fuel, tree thinning and timber sales.
Water Quality Management	4	No costs available	Water quality management and monitoring practices would identify existing problems, or any issues that could emerge in the future. These efforts would support decision making on pollution prevention and management strategies to improve the health of the environment.
Stormwater Management West Slope SWRP Component			
Structural			
Water Capture[2]	8	$40-90	Water capture systems,like retention and detention ponds, collect stormwater runoff by storm drains and channels and would divert flows for infiltration and retention to help improve water quality, enhance the community, and facilitate habitat restoration. Potential project sites include County property, public parks, vacant parcels, and roadways. LID designs are incorporate in these projects, projects may include natural treatment and filtration designs like filter strips and grass swales to reduce the amount of runoff pollution to local waterbodies.
Water Quality Improvement	9	$25-30	Water quality improvements through facility maintenance and updates to roadway, sewer, and water infrastructure would directly improve the health of the local watershed.
Non-Point Source Pollution Control	8	$5-20	Non-point souce pollution control management through street sweeper and vactor truck programs and enclosing facilites with known sources of pollution would help to reduce the sources of pollution and directly improve water quality.
Flood Damage Reduction	15	$50-70	Drainage improvements through the replacement and addition of culverts and sewers would reduce the amount of stormwater runoff and decrease the occurrence and risk of flooding.

Table 4-1. Identified Projects by West Slope Stormwater Resource Plan Component and Project Type (continued)

Stormwater Management West Slope SWRP Component			
Non-Structural			
Project Type	**Projects**	**Preliminary Cost ($M)[1]**	**Description**
Outreach Project[2]	5	$0.5-0.75	Outreach projects like community and school educational programs, pesticide awareness campaigns, and public green infrastructure and garden demonstrations would allow for community engagement about stormwater management, littering, contamination, hydrology, watershed management, and would possibly have an indirect impact to local ecosystem health.
Management Programs	6	$4-6	Stormwater management programs would include management of road and drainage system data in the West Slope, create BMP manuals and internal protocols to develop procedures to manage stormwater projects, and develop urban, rural and agricultural pollution generation studies would impact the management of local watersheds water quality and environmental health.

Summary		
West Slope SWRP Component		**Number of Projects**
Surface Water Storage		1
Watershed Management		36
Stormwater Management	Structural	40
	Non-Structural	11
TOTAL		**88**

Notes:
[1] Preliminary cost estimates do not include operations and maintenance cost. Costs are subject to change as many projects are currently in the conceptual stage.
[2] Project 327 under the Stormwater Management SWRP Component is classified as a Water Capture and an Outreach Project. Cost esimates are only included under Outreach Project.
Key:
BMP = Best Management Practice
LID = Low Impact Development
M = million
SWRP = Stormwater Resource Plan

QUANTITATIVE METHODS FOR IDENTIFICATION AND PRIORITIZATION OF STORMWATER AND DRY WEATHER RUNOFF CAPTURE PROJECTS

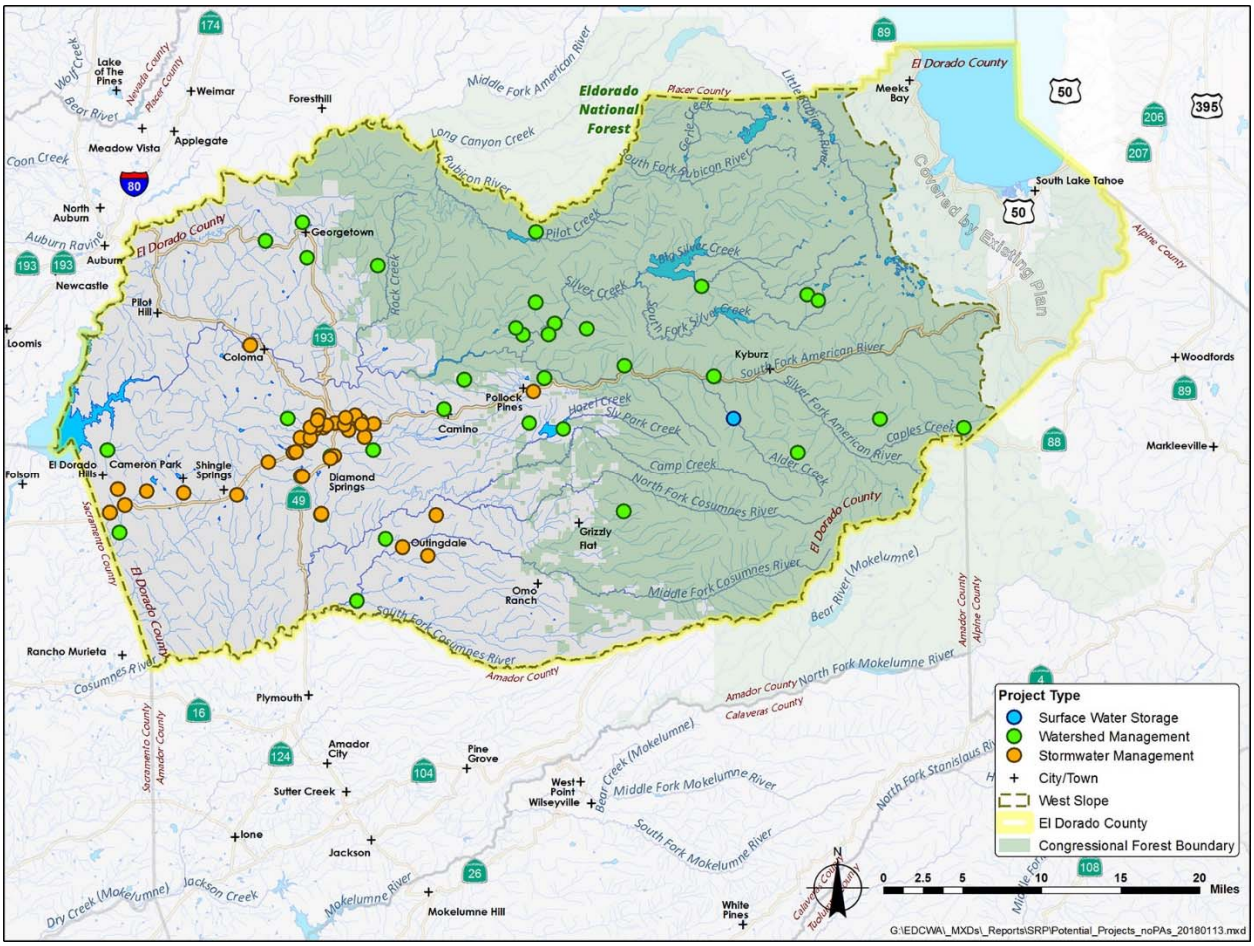


Figure 4-2. Project Locations

QUANTITATIVE METHODS FOR IDENTIFICATION AND PRIORITIZATION OF STORMWATER AND DRY WEATHER RUNOFF CAPTURE PROJECTS

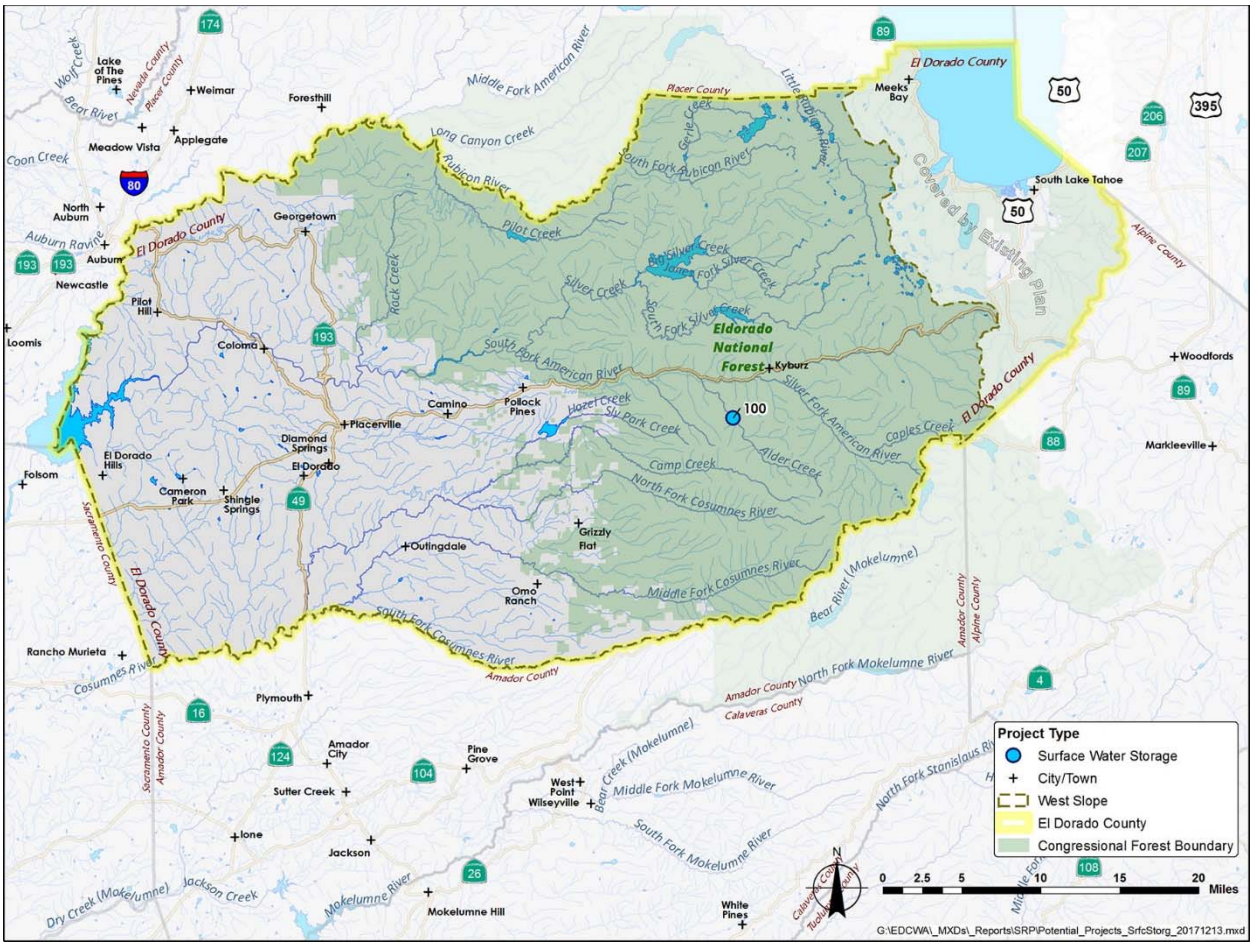


Figure 4-3. Surface Water Storage Project Locations

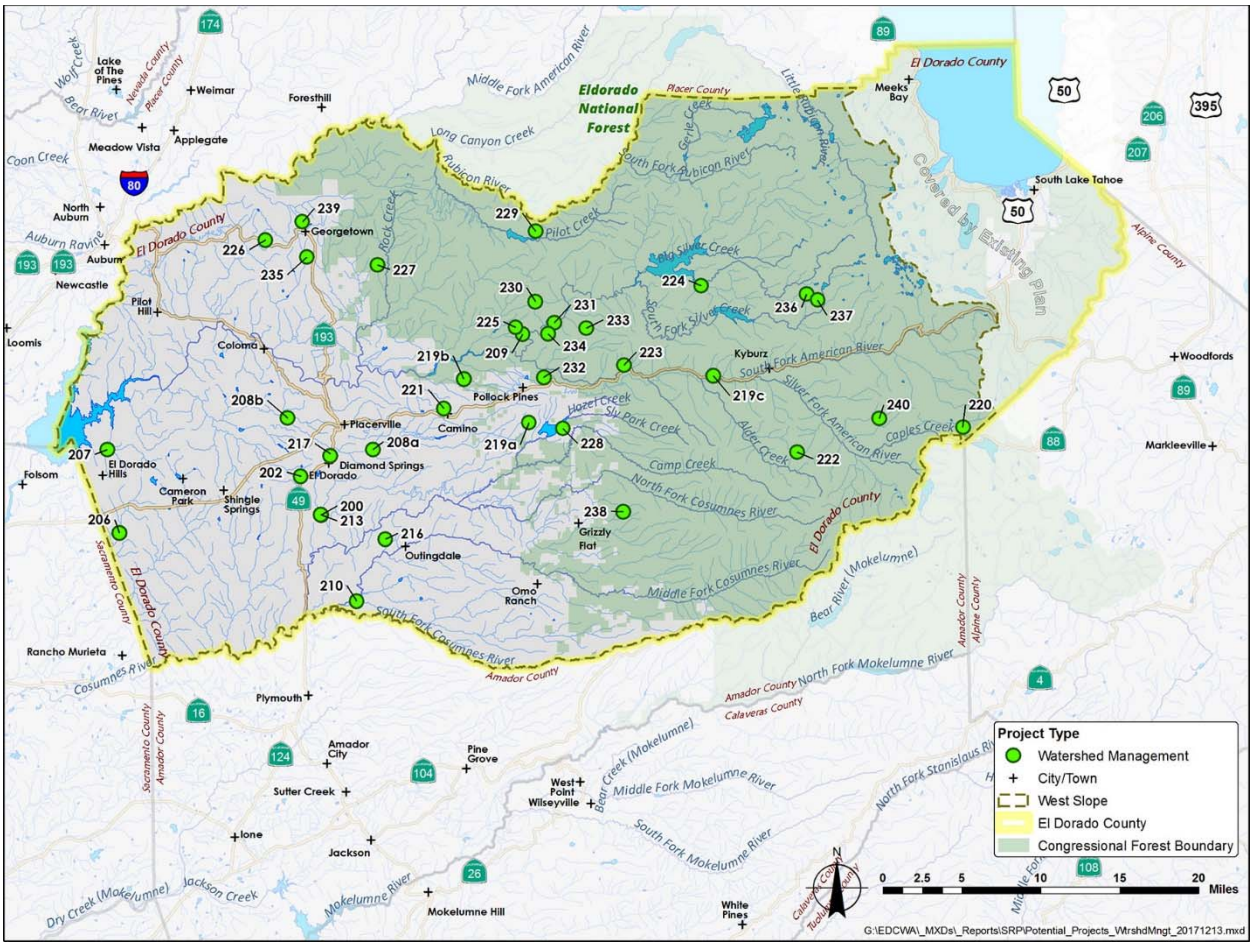


Figure 4-4. Watershed Management Project Locations

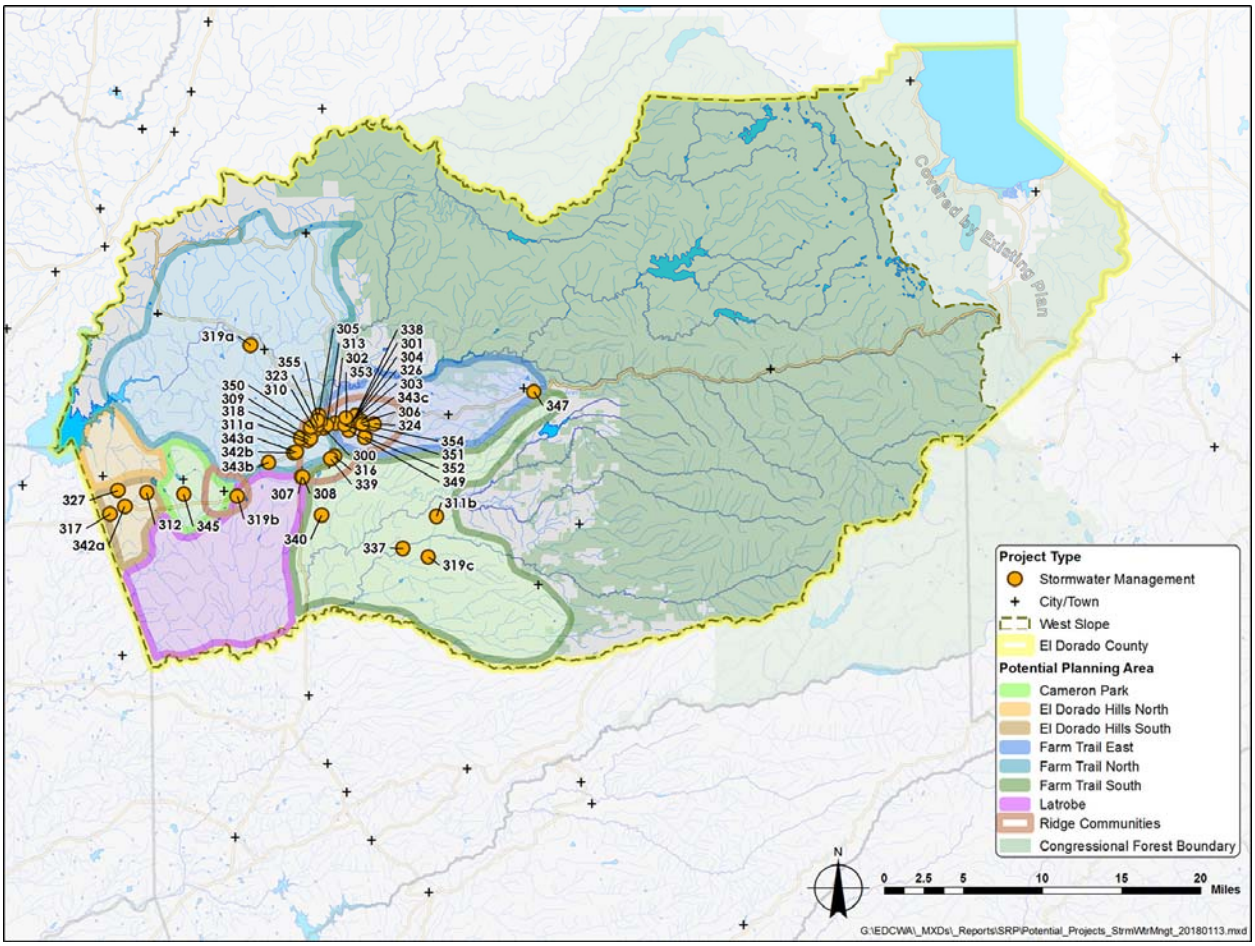


Figure 4-5. Stormwater Management Project Locations by Planning Area

Table 4-2. Stormwater Management Component Projects by Planning Areas

Planning Area	Stormwater Management Project Types[2]						
	Structural				Non-Structural		Total Projects
	Water Capture	Water Quality Improvement	Non-Point Source Pollution Control	Flood Damage Reduction	Outreach Project	Management Programs	
Cameron Park	-	-	-	1	-	-	1
El Dorado Hills North	-	-	-	-	-	-	0
El Dorado Hills South	1	-	1	-	1	-	3
Farm Trail North	-	-	-	-	-	-	0
Farm Trail East	1	-	-	-	-	-	1
Farm Trail South	1	-	-	-	-	1	2
Latrobe	-	-	-	-	-	-	0
Ridge Communities	4	8	3	10	-	-	25
Other[1]	1	1	4	4	4	5	19

Notes:
[1] Other refers to projects that would be implemented countywide or cover more than one planning area.
[2] Project 327 under the Stormwater Management SWRP Component is classified as a Water Capture and an Outreach Project.

4.2.1.2 Description of Identified Projects by Entity

The entities described in Section 3 were contacted to identify projects categorized under the three components. Table 4-3 shows the number of projects identified by each entity. Combined, the SWRP Partners contributed nearly 70 percent of the total projects identified. The following discussion summarizes the types of projects identified by each entity. Entities are discussed in alphabetical order.

Table 4-3. Projects Identified by Entity

West Slope SWRP Component		Project Type	Projects Identified by Entity						
			American River Conservancy	Caltrans	City of Placerville	County of El Dorado	El Dorado County & GDRCD	El Dorado County Water Agency	USFS
Surface Water Storage		Reservoir Creation	-	-	-	-	-	1	-
Watershed Management		Creek Restoration	-	-	-	4	-	-	-
		Fire Restoration	-	-	-	-	2	-	-
		Renewable Energy	-	-	-	4	-	1	-
		Forest Management	-	-	-	-	-	-	21
		Water Quality Management	1	-	-	3	-	-	-
Stormwater Management	Structural	Water Capture	-	-	2	6	-	-	-
		Water Quality Improvement	-	-	8	1	-	-	-
		Non-Point Source Pollution Control	-	-	-	8	-	-	-
		Flood Damage Reduction	-	2	8	5	-	-	-
	Non-Structural	Outreach Project	-	-	-	4	1	-	-
		Management Programs	1	-	-	5	-	-	-
Total Number of Identified Projects by Entity			*2*	*2*	*18*	*40*	*3*	*2*	*21*
Total Number of Project Identified			**88**						

Key:
Caltrans = California Department of Transportation
El Dorado County & GDRCD = El Dorado County & Georgetown Divide Resource Conservation District
USFS = U.S. Department of Agriculture, Forest Service

QUANTITATIVE METHODS FOR IDENTIFICATION AND PRIORITIZATION OF STORMWATER AND DRY WEATHER RUNOFF CAPTURE PROJECTS

American River Conservancy. Projects identified by the American River Conservancy included a water quality monitoring project and a stormwater management study. These projects could ultimately help improve the water quality conditions of the local water supplies, reduce nonpoint source pollution, enhance and protect the local environment and habitats, and provide employment opportunities, in addition to creating opportunities for the public to learn about the watershed, water quality monitoring, and water quality improvements.

California Department of Transportation. Projects provided by Caltrans are located along the major highways in El Dorado County. These projects included urban roadway improvement projects on Highway 50 that will improve road conditions, the environment, and local habitats.

City of Placerville. Placerville identified a list of projects for the West Slope SWRP that included urban roadway improvement, sanitary sewer improvement, and flood control. These projects could provide a series of benefits that include improving the local conditions of the environment and habitats, providing employment opportunities, reducing flood risk, and increasing the treatment and infiltration of runoff.

El Dorado County. County projects came from the CDS Long Range Planning Division and the Environmental Management Department. The County's Long Range Planning Division identified the majority of the stormwater management projects incorporated in the West Slope SWRP. The projects included flood control, MS4 compliance, water quality monitoring, stream restoration, erosion control, urban roadway projects, drainage improvement, remediation, public education programs, campaigns, and the development of manuals for BMPs. The Environmental Management Department identified projects related to waste management and a retention pond to help reduce nonpoint source pollution, reduce flood risk, and enhance local environmental and habitat conditions.

Several of the projects identified were conceptual but have high potential to incorporate LID principles to treat, capture, and infiltrate stormwater runoff. Several of the projects that were identified would also help improve local environmental and habitat conditions, reduce nonpoint source pollution, decrease flood risk, and have potential to provide employment opportunities and countywide educational opportunities related to stormwater management, watershed management, water quality, and pollution control.

El Dorado County and Georgetown Divide Resource Conservation Districts. Projects identified by the El Dorado County and Georgetown Divide Resource Conservation Districts included public education, watershed restoration, and reforestation projects. These projects could provide a series of benefits by creating opportunities for the public to learn about stormwater management practices, BMPs, and LID approaches. The watershed restoration and reforestation projects could help reduce nonpoint source pollution, improve water quality conditions, enhance the local environment and habits, and reduce greenhouse gas emissions.

El Dorado County Water Agency. Projects identified by the Agency included the development of a new reservoir and construction of a biomass facility. The reservoir project will augment water storage and increase the West Slope's water supply reliability. The biomass facility project will protect and enhance the local environment by reducing nonpoint source pollution and greenhouse gas emissions. These project could also provide long-term employment opportunities and public educational opportunities.

U.S. Department of Agriculture, Forest Service. The USFS provided watershed management projects that included fire restoration, forest fuel reduction, tree removal, tree thinning, and timber sales. These projects could improve forest health, the environment and local habitats.

4.2.1.3 Project Description Forms

Details of the identified projects were organized into project description forms. Project description forms explain the project goals and objectives, the need for the project and problem to be addressed, potential pitfalls and challenges, approaches and execution methods, resource estimates, people and entities involved, and other relevant information needed to explain the project and the amount of work planned for implementation. Project description forms are quick fact sheets that can be incorporated into future documents such as: environmental review documents, Water Quality Control Plans, applicable water quality control policies, water rights, IRWMPs, capital improvement projects, and monitoring plans. These forms contain quantitative data where available. Appendix B is a compilation of the project description forms for each project in the West Slope SWRP. These forms served as the basis for project evaluation.

4.2.2 Project Evaluation

Identified projects were then evaluated using both quantitative and qualitative metrics to inform which projects could provide the greatest benefit within each component. Information from project description forms was used to evaluate the project based on the benefit categories, criteria, and metrics outlined in section 4.2.2.1 and discussed further in Appendix C. The evaluation result for each project can be found in Appendix D.

4.2.2.1 Benefit Categories, Criteria, and Metrics

The West Slope SWRP used a metric-based approach to maximize water supply, water quality, flood management, environmental, and community benefits in the watersheds to be consistent with the SWRP Guidelines (Water Code section 10560 et). In addition to these benefit categories, two benefit categories (Project Cost and Implementation Complexity) were developed to help in project evaluation. These two additional benefit categories assess project funding opportunities and how likely a project is to achieve its potential benefits once implemented, respectively. The SWRP Guidelines Table 4 also identified main and additional benefits that should be considered when evaluating projects. Each project and program should address at least two or more main benefits (shown in bold in Table 4-3 below) and as many feasible additional benefits. The West Slope SWRP used these benefits (termed “criteria” in this document) and also developed several additional criteria to aid in project evaluation. The new criteria were added under the Environmental and Community benefit categories. Table 4-4 shows the benefit categories and criteria used for the West Slope SWRP that provided a consistent framework to evaluate and compare projects.

Table 4-4. West Slope Stormwater Resource Plan Benefit Categories and Criteria

Benefit Category	Criteria
Water Quality	**Increased Filtration and/or Treatment of Runoff**
	Nonpoint Source Pollution Control
	Reestablished Natural Water Drainage and Treatment
Water Supply	**Water Supply Reliability**
	Water Conservation
	Conjunctive Use
Flood Management	**Decreased Flood Risk By Reducing Runoff Rate and/or Volume**
	Reduced Sanitary Sewer Overflows
Environmental	**Environmental and Habitat Protection and Improvement**
	Increased Urban Green Space
	Reestablishment of the Natural Hydrograph
	Improved Air Quality*
	Ecological Improvement*
	Energy Footprint
	Water Temperature Improvements
Community	**Public Education**
	Community Involvement
	Environmental Justice*
	Recreational Benefit
	Employment Opportunities Provided
Project Cost*	Project Funding Mechanism*
	Eligibility for External Funding*
	Constructability*
Implementation Complexity*	Institutional Complexity*
	Regulatory & Permitting Compliance*
	Public Acceptance*
	Right of Way*

Notes:
Criteria in **bold** represent the main benefits identified by the State Water Resources Control Board's Stormwater Resource Plan Guidelines (Guidelines) (2015). Projects must address at least two or more of these main benefits.
* Benefit categories and criteria added beyond those identified in the Guidelines.

Each criterion listed in Table 4-3 was assigned a metric to allow for qualitative or quantitative measurement. The metrics ranged from a low score of zero (no benefit or not applicable) up to a high score of 3 (highest benefit). Examples of both a qualitative and quantitative metric and scoring are shown in Table 4-5. Appendix C includes the complete metrics and scoring descriptions.

Table 4-5. Metric Examples

Benefit Category	Criteria	Metric	Assessment Value	Scoring
Water Quality	Increased filtration and/or treatment of runoff	Volume of Treated Water (quantitative)	High Volume (> 400 AF/year)	3
			Moderate Volume (200 – 400 AF/year)	2
			Low Volume (< 200 AF/year)	1
			Not Applicable	0
Environmental	Increased Urban Green Space	Creation and/or Reduction of Green Space (qualitative)	Creates Green Space at Multiple Locations	3
			Creates Green Space at One Location	2
			Improves Existing Green Space	1
			Not Applicable	0

Key:
AF/yr = acre-feet per year

Projects were then evaluated using quantitative and qualitative metrics using the abovementioned metrics and information in the project descriptions forms (Appendix B). The methodology and analysis for quantitative evaluation of projects is summarized below. Additional details can be found in Appendix D.

4.2.2.2 Quantitative Analysis

This section discusses the methodology for the quantitative analysis. Table 4-6 is a shortened version of Table C.1 in Appendix C and only lists the quantitative metrics used. The range of assessment values for the Water Quality and Flood Management benefit category metrics were determined through quantitative analysis of a project's ability to capture and infiltrate stormwater runoff. Stormwater runoff volume was calculated using a project's proposed area of extent, soil type by area, slope of soil, and land use. The range of assessment values for the Environmental benefit category were determined using a project's proposed area of extent and ability to increase the health of the local watershed. See Appendix D for more details on development of the quantitative assessment values.

Table 4-6 Project Evaluation Metrics and Scoring – Quantitative Analysis

Benefit Category	Criteria	Metric	Assessment Value	Scoring
Water Quality 	Increased filtration and/or treatment of runoff	Volume of Treated Water (AF/year)	High Volume (>400 AF/year)	3
			Moderate Volume (200-400 AF/year)	2
			Low Volume (<200 AF/year)	1
			Not Applicable	0
	Reestablished natural water drainage and treatment	Volume of runoff reduced and/or treated (AF/year)	High Volume (>400 AF/year)	3
			Moderate Volume (200-400 AF/year)	2
			Low Volume (<200 AF/year)	1
			Not Applicable	0
Flood Management 	Decreased flood risk by reducing runoff rate and/or volume	Inundated area reduced (AF/year)	High Reduction (>400 AF/year)	3
			Moderate Reduction (200-400 AF/year)	2
			Limited or No Reduction (<200 AF/year)	1
			Not Applicable	0
Environmental 	Environmental and habitat protection and improvement	Acres of habitat/ecosystem improved (varies)	High Improvement (>15,000 feet or > 4,000 acres)	3
			Moderate Improvement (2000-15,000 feet or 900-4,000 acres)	2
			Low Improvement (<2000 feet or <900 acres)	1
			Not Applicable	0
	Ecological Improvement*	Degree of potential benefit or damage to ecosystems/flora/ fauna (varies)	High Improvement (>15,000 feet or > 4,000 acres)	3
			Moderate Improvement (2000-15,000 feet or 900-4,000 acres)	2
			Low Improvement (<2000 feet or <900 acres)	1
			Not Applicable	0

*Benefit categories and criteria added beyond the suggested State Water Board's Stormwater Resources Plan Guidelines Table 4
Units:
AF/yr = acre-feet per year

Only the above criteria in the benefit categories were quantitatively analyzed. All other criteria (see Table 4-4) were qualitatively assessed either due to the conceptual nature and lack of quantifiable project data, or the qualitative nature of the criteria itself (e.g., availability of funding mechanisms is not a quantifiable criterion). If projects were too conceptual in nature, best engineering judgment was used to assign a quantitative value based on similar quantifiable projects. Also, non-structural projects were not quantitatively assessed, as most project benefits would be indirect. Table 4-7 lists which quantitatively metric was used for applicable project types.

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Table 4-7. Quantitative Criteria and Metrics Applied by Project Type

Benefit Category	Criteria	Metric (unit)	Quantitative Value Applied to Metric by Project Type								
			SS	Watershed Management Component				Stormwater Management Component			
			Reservoir Creation	Creek Restoration	Fire Restoration	Forest Management	Water Quality Management	Water Capture	Water Quality Improvement	Non-Point Source Pollution Control	Flood Damage Reduction
Water Quality	Increased filtration and/or treatment of runoff	Volume of Treated Water (AF/year)	-	X	-	-	-	X	X	X	X
	Reestablished natural water drainage and treatment	Volume of runoff reduced and/or treated (AF/year)	-	X	-	-	-	X	X	X	X
Flood Management	Decreased flood risk by reducing runoff rate and/or volume	Inundated area reduced (AF/year)	X	X	-	-	-	X	X	-	X
Environmental	Environmental and habitat protection and improvement	Acres of habitat/ecosystem improved (varies)	X	X	X	X	X	X	-	X	X
	Ecological Improvement	Degree of potential benefit or damage to ecosystems/ flora/fauna (varies)	X	X	X	X	X	X	-	X	X

Key:
X = Quantitative value applied to metric. - = not applicable, or only qualitative values used.
SS = surface water storage component
AF/year = acre-feet per year

The Surface Water Storage component project type that was quantitatively analyzed was Reservoir Creation. Metrics for the Reservoir Creation project type were based on the size (acre-feet) of the proposed reservoir. The larger the storage volume, the larger the assumed potential to provide: 1) measurable benefits to existing flood control operations for protection of the Sacramento region, and 2) aquatic habitat enhancement and improve habitat quality to upper and lower reaches of the South Fork American River in the West Slope area.

Watershed Management component project types that were quantitatively analyzed were: Creek Restoration, Fire Restoration, Forest Management and Water Quality Management project types. These project types were quantitatively analyzed based on the project area of extent (acres or linear feet). The

larger the project area of extent, the greater potential ability to protect and improve the quality of water or other natural resources in the West Slope.

Stormwater Management component project types that were quantitatively analyzed were: Water Capture, Water Quality Improvement, Non-Point Source Pollution Control, and Flood Damage Reduction. Water Capture project type was analyzed based on the computed volume of water captured (acre-feet/year). It included structural projects that reduce the amount of surface runoff generated from storm events and in turn reduce the amount of nonpoint source pollution in local water bodies. All other listed project types were analyzed based on project area of extent (acres or linear feet). These project types were quantitatively analyzed for their ability to protect and improve the quality of water or other natural resources in the West Slope.

4.2.3 Project Prioritization

Once each project was evaluated using the methods outlined above, the projects in each component were prioritized following the steps outlined below. Additional details are located in Appendix E.

1. **Sum Scores in Each Benefit Category:** Scores ranged from 0 to 3 and are found on the project evaluation summary sheets (Appendix D).

2. **Compute Normalized Benefit Category Score:** The summed score was normalized to a scale of 0 to 3, with 0 being the lowest score and 3 being the highest score. This allowed for comparison amongst benefit categories that were measured using different criteria.

3. **Compute Project Weighted Score:** The project weighted score was the sum of each benefit category score multiplied by its respective benefit category weight (shown in Table 4-10 and described below).

4. **Assign Grouping:** After the weighted score was calculated, the projects were assigned an A, B, or C grouping in one of the three components. Projects in the “A” group were those receiving a score in the top third for a given component, “B” group projects were the middle third scores, and “C” group projects were the bottom third scores. “A” group projects typically have the potential to provide the most benefits and address more benefit categories, than “C” group projects.

4.2.3.1 Benefit Category Weights

Benefit category weights were developed to help identify projects that best meet the priorities and goals of each of the SWRP Partners. Benefit category weights were developed using a paired comparison analysis during one of the public workshops to determine the relative importance of each benefit category used in the West Slope SWRP. The paired comparison analysis done, is a decision-making method used to identify the relative importance of each possible benefit category by pairing it against all other benefit categories. This method informs which benefit category is the most important based on the participant’s compared results. The distribution of the weighted scores of the benefit categories was analyzed and it was decided during the group workshop that the average value of the participant’s weighted value would most accurately represented each benefit category. Table 4-8 shows the results of the paired comparison analysis and

corresponding weights assigned to each benefit category. The full paired comparison analysis is described in Appendix C.2.

Table 4-8. Benefit Category Weights

Benefit Category	Weights
Water Quality	15%
Water Supply	23%
Flood Management	11%
Environmental	14%
Community	10%
Project Cost	18%
Implementation Complexity	9%
TOTAL	**100%**

4.3 EVALUATION OUTCOMES

As described above, the projects were grouped by component and project type to aid in the evaluation and prioritization process. Table 4-9 through 4-12 summarizes the results of project evaluations by project type within the three components and shows the project proponent, overall benefit category score, weighted score, and assigned grouping. As discussed above, projects assigned to Group A displayed the highest potential for providing the most benefits and address more benefit categories, Slope SWRP. Group B projects would have moderate potential, and Group C projects would have the least potential.

Table 4-9. Project Prioritization Results for Surface Water Storage Component

Surface Water Storage Component											
Project Information			Results	Overall Benefit Category Score							
Project ID	Project Name	Project Proponent	Grouping	Water Quality	Water Supply	Flood Management	Environmental	Community	Project Cost	Implementation Complexity	**Weighted Score**
Reservoir Creation											
100	Alder Creek Reservoir	Agency	A	3.0	0.0	1.8	1.7	2.4	2.2	1.7	**1.68**

Key:
Agency= El Dorado County Water Agency

Table 4-10. Project Prioritization Results for Watershed Management Component

Watershed Management Component											
Project Information			Results	Overall Benefit Category Score							
Project ID	Project Name	Project Proponent	Grouping	Water Quality	Water Supply	Flood Management	Environmental	Community	Project Cost	Implementation Complexity	**Weighted Score**
Creek Restoration											
208	Weber Creek Restoration	County	A	3.0	0.0	1.8	1.7	2.4	2.2	1.7	**1.68**
206	Carson Creek Restoration	County	A	3.0	0.0	1.8	1.7	2.0	2.2	2.0	**1.66**
207	New York Creek Restoration	County	A	3.0	0.0	1.8	1.5	2.0	2.2	2.1	**1.65**
216	Sand Ridge Road Paving	County	A	3.0	0.0	0.0	1.5	1.4	2.2	2.3	**1.40**
Fire Restoration											
209	King Fire Watershed Restoration & Reforestation Project	El Dorado County & GDRCD	B	1.5	0.0	0.0	1.6	1.9	2.2	2.4	**1.25**
210	Sand Fire Watershed Restoration & Reforestation Project	El Dorado County & GDRCD	B	1.5	0.0	0.0	1.4	1.9	2.2	2.4	**1.22**
Renewable Energy											
200	Biomass Plant-Union Mine	Agency	A	1.0	1.5	0.0	1.2	2.6	2.2	2.0	**1.50**
221	Camino Biomass Facility	County	A	1.0	1.5	0.0	1.2	2.6	2.2	2.0	**1.50**
213	Anaerobic Digestion System at Union Mine WWTP	County	B	1.0	0.0	0.0	1.2	2.4	2.2	2.3	**1.16**
214	In-Vessel Composting System at Union Mine Landfill or MRF	County	C	1.0	0.0	0.0	0.0	2.4	2.2	2.3	**0.99**
215	Compost Facility within El Dorado County	County	C	1.0	0.0	0.0	0.0	2.4	2.2	2.3	**0.99**
Forest Management											
220	Caples Watershed Improvement	USFS	A	1.5	0.0	0.0	1.7	2.1	2.6	2.3	**1.35**
219	Fire Adaptive along Highway 50-Fuels Reduction	USFS	A	1.5	0.0	0.0	1.3	2.4	2.6	2.3	**1.32**
231	Pompeii Fire Salvage Stewardship	USFS	A	1.5	0.0	0.0	1.3	2.1	2.6	2.6	**1.32**

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Watershed Management Component											
Project Information			Results	Overall Benefit Category Score							
Project ID	Project Name	Project Proponent	Grouping	Water Quality	Water Supply	Flood Management	Environmental	Community	Project Cost	Implementation Complexity	**Weighted Score**
Forest Management (continued)											
232	Quidazoic Fire Salvage Stewardship	USFS	A	1.5	0.0	0.0	1.3	2.1	2.6	2.6	**1.32**
234	King Fire Pile Burning	USFS	A	1.5	0.0	0.0	1.3	2.1	2.6	2.6	**1.32**
229	Cesar Fire Salvage Stewardship	USFS	A	1.5	0.0	0.0	1.3	1.7	2.6	2.6	**1.28**
236	John Don't Fuels Reduction	USFS	B	1.5	0.0	0.0	1.5	2.1	2.2	2.3	**1.25**
226	Western Georgetown Fuel Reduction Integrated Resource Timber Contract-Timber Sale	USFS	B	1.5	0.0	0.0	1.3	2.1	2.2	2.1	**1.21**
227	Georgetown Divide Fuelbreak	USFS	B	1.5	0.0	0.0	1.5	1.7	2.2	2.1	**1.20**
228	Jenkinson Lake Fuels Reduction	USFS	B	1.5	0.0	0.0	1.3	1.7	2.2	2.3	**1.18**
235	Tobacco Gulch Integrated Resource Timber Contract-Timber Sale & Thinning Project	USFS	B	0.0	0.0	0.0	1.5	2.1	2.6	2.3	**1.10**
230	2-Chaix Fire Thinning	USFS	B	0.0	0.0	0.0	1.3	2.1	2.6	2.6	**1.10**
223	Two-fer Integrated Resource Timber Contract-Timber Sale	USFS	B	0.0	0.0	0.0	1.5	2.1	2.2	2.1	**1.01**
233	Fred's Noxious Weed Treatment-Vegetation Management	USFS	C	0.0	0.0	0.0	1.1	2.1	2.2	2.6	**1.00**
224	Reservoir Thinning Integrated Resource Timber Contract	USFS	C	0.0	0.0	0.0	1.3	2.1	2.2	2.1	**0.99**
225	Quintette Integrated Resource Timber Contract – Supplemental Information Report-Timber Sale	USFS	C	0.0	0.0	0.0	1.3	2.1	2.2	2.1	**0.99**
238	Trestle Integrated Resource Timber Contract-Timber Sale	USFS	C	0.0	0.0	0.0	1.3	1.7	2.2	2.6	**0.98**
237	O'leary Cow Integrated Resource Service Contract/ Integrated Resource Timber Contract-Timber Sale & Thinning Project	USFS	C	0.0	0.0	0.0	1.1	2.1	2.2	2.3	**0.97**

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Watershed Management Component											
Project Information			Results	Overall Benefit Category Score							
Project ID	Project Name	Project Proponent	Grouping	Water Quality	Water Supply	Flood Management	Environmental	Community	Project Cost	Implementation Complexity	**Weighted Score**
Forest Management (continued)											
239	Georgetown Insect Salvage Timber Sale	USFS	C	0.0	0.0	0.0	1.1	1.9	2.2	2.6	**0.97**
222	General Sherman Integrated Resource Timber Contract-Timber Sale	USFS	C	0.0	0.0	0.0	1.3	1.7	2.2	2.1	**0.94**
240	Middle Creek Integrated Resource Timber Contract-Timber Sale & Fuels Reduction Project	USFS	C	0.0	0.0	0.0	1.1	1.7	2.2	2.3	**0.93**
Water Quality Management											
217	Residual Lime Remediation near El Dorado Trail	County	B	1.5	0.0	0.0	1.1	2.6	2.2	2.3	**1.24**
202	Slate Creek Monitoring Project	County	B	0.0	0.0	0.0	1.5	2.1	2.2	2.4	**1.04**
212	Cosumnes River Water Quality Monitoring Program	American River Conservancy	C	0.0	0.0	0.0	0.0	2.7	2.2	2.7	**0.91**
218	Countywide Water Quality Monitoring	County	C	0.0	0.0	0.0	0.0	2.3	2.2	2.6	**0.86**

Key:
County = County of El Dorado
El Dorado County & GDRCD= El Dorado County & Georgetown Divide Resource Conservation District
Agency= El Dorado County Water Agency
WWTP= Wastewater Treatment Plant
MRF= Material Recovery Facility
USFS. = U.S. Department of Agriculture, Forest Service

Table 4-11. Project Prioritization Results for Stormwater Management Component - Structural

Stormwater Management Component - Structural											
Project Information			Results	Overall Benefit Category Score							
Project ID	Project Name	Project Proponent	Grouping	Water Quality	Water Supply	Flood Management	Environmental	Community	Project Cost	Implementation Complexity	**Weighted Score**
Water Capture											
310	Fairgrounds Water Quality Improvements	County	A	2.3	2.0	1.4	1.1	2.7	2.2	2.4	**1.99**
319	Countywide Park BMP Retrofit Improvements	County	A	3.0	0.0	2.6	1.4	2.7	2.2	2.6	**1.83**
347	Sly Park Portal Subdivision Flood Management Project	County	A	3.0	0.0	3.0	1.3	2.1	2.2	2.3	**1.78**
302	Canal Street LID Projects	Placerville	A	2.8	0.0	2.2	1.2	1.9	2.2	2.6	**1.64**
317	South East Connector-Expressway LID Projects	County	A	2.8	0.0	1.8	1.3	2.0	2.2	2.3	**1.59**
338	Stormwater Detention Basin-Hangtown Creek Flood Damage Reduction Project	Placerville	A	2.3	0.0	1.8	1.3	2.1	2.2	2.3	**1.53**
308	Town of El Dorado Green Street Project	County	B	1.8	0.0	1.4	1.5	2.1	2.2	2.1	**1.43**
340	Union Mine Landfill Retention Ponds	County	B	1.5	0.0	1.8	0.0	1.7	2.2	2.4	**1.21**
Water Quality Improvements											
316	Diamond Springs Parkway-Roadway and Drainage Improvement Project	County	B	2.3	0.0	1.4	1.1	1.9	2.2	2.3	**1.43**
300	Urban Roadway Improvement Project - Western Placerville Interchange	Placerville	B	1.8	0.0	0.0	0.0	2.6	2.6	2.4	**1.21**
304	Mosquito Road Sewer Main Replacement	Placerville	B	1.5	0.0	1.0	0.0	1.9	2.2	2.9	**1.17**
305	Urban Roadway Improvement Project - Woodridge Court, Grind & Overlay Project	Placerville	B	1.5	0.0	1.0	0.0	1.9	2.2	2.7	**1.16**
306	Urban Roadway Improvement Project - Martin Lane, Grind & Overlay Project	Placerville	C	1.8	0.0	0.0	0.0	1.9	2.2	2.9	**1.10**
303	Urban Roadway Improvement Project - Mosquito Road Stabilization, Grind & Overlay Project	Placerville	C	1.8	0.0	0.0	0.0	1.9	2.2	2.7	**1.09**

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Stormwater Management Component - Structural											
Project Information			Results	Overall Benefit Category Score							
Project ID	Project Name	Project Proponent	Grouping	Water Quality	Water Supply	Flood Management	Environmental	Community	Project Cost	Implementation Complexity	**Weighted Score**
326	Sewer Relocation-Clay to Locust	Placerville	C	0.0	0.0	1.0	0.0	2.0	2.2	2.4	**0.92**
301	Placerville Station II-Park and Ride Facility Improvements	Placerville	C	0.0	0.0	0.0	0.0	2.1	2.6	2.4	**0.90**
323	Urban Roadway Improvement Project-Ray Lawyer Drive, Grind & Overlay Project	Placerville	C	0.0	0.0	0.0	0.0	1.9	2.2	2.9	**0.84**
Non-Point Source Pollution Control											
309	Headington Yard Wash Rack	County	A	1.8	2.0	1.0	1.1	2.0	2.2	2.9	**1.84**
312	Future Bass Lake Maintenance Station	County	A	2.3	2.0	0.0	1.1	1.9	2.2	2.6	**1.76**
339	Facility Upgrades for the El Dorado Disposal MRF	County	A	1.3	2.0	0.0	1.0	1.7	2.2	2.6	**1.59**
311	Maintenance Material Storage Buildings at Missouri Flat Rd and Somerset Sand Mine	County	A	1.3	2.0	0.0	1.0	1.3	2.2	2.6	**1.54**
314	Street Sweeping Program	County	B	1.0	0.0	0.0	1.5	2.0	2.2	2.7	**1.20**
313	Forni Road Slope Stabilization	County	C	1.8	0.0	0.0	0.0	1.9	2.2	2.3	**1.05**
329	Trash Policy - TMDL Implementation	County	C	1.0	0.0	0.0	0.0	2.9	2.2	2.3	**1.04**
315	Vactor Truck Program	County	C	1.0	0.0	0.0	0.0	2.0	2.2	2.7	**0.99**
Flood Damage Reduction											
345	Cameron Park Drainage Improvements	County	A	3.0	0.0	2.2	1.4	1.9	2.2	2.4	**1.69**
348	Fish and Wildlife Routine Maintenance Agreement	County	A	2.3	0.0	1.8	1.8	2.6	2.2	2.3	**1.65**
346	Priority County Culvert Replacements	County	A	2.3	0.0	1.8	1.2	2.4	2.2	2.6	**1.57**
343	Culvert Rehabilitation along Highway 50 near the City of Placerville	Caltrans	A	2.3	0.0	1.8	1.2	1.9	2.2	2.4	**1.50**
318	Headington Yard to Weber Creek Conveyance	County	B	2.3	0.0	1.4	1.5	1.4	2.2	2.9	**1.50**
307	Town of El Dorado Drainage Improvements	County	B	2.0	0.0	1.0	1.8	2.1	2.2	2.1	**1.47**

QUANTITATIVE METHODS FOR IDENTIFICATION AND PRIORITIZATION OF STORMWATER AND DRY WEATHER RUNOFF CAPTURE PROJECTS

Stormwater Management Component - Structural											
Project Information			Results	Overall Benefit Category Score							
Project ID	Project Name	Project Proponent	Grouping	Water Quality	Water Supply	Flood Management	Environmental	Community	Project Cost	Implementation Complexity	**Weighted Score**
342	Culvert Rehabilitation along Highway 50 near Cameron Park and Shingle Springs	Caltrans	B	2.3	0.0	1.8	1.2	1.4	2.2	2.4	**1.46**
349	Cedar Ravine Road Drainage Improvement	Placerville	B	1.5	0.0	1.8	1.1	1.4	2.2	2.6	**1.35**
324	Airport Road/Broadway Culvert Storm Drain Improvement	Placerville	B	1.5	0.0	1.0	1.0	1.7	2.2	2.9	**1.30**
350	Debby Lane/Green Valley Road Culvert Improvement	Placerville	B	1.3	0.0	1.4	1.1	1.4	2.2	2.6	**1.27**
351	Full Capture Storm Drain Inlet Replacements in Placerville	Placerville	C	1.5	0.0	1.4	0.0	1.4	2.2	2.4	**1.14**
352	Lions Park Drainage Improvement	Placerville	C	0.0	0.0	1.4	1.0	1.4	2.2	2.6	**1.06**
353	Pleasant Street Storm Drain Improvement	Placerville	C	0.0	0.0	1.4	1.0	1.4	2.2	2.6	**1.06**
354	Wiltse Road Storm Drain Improvement	Placerville	C	0.0	0.0	1.4	1.0	1.4	2.2	2.6	**1.06**
355	Pierroz Road at Hangtown Creek, Drainage Improvement	Placerville	C	0.0	0.0	1.4	1.0	1.4	2.2	2.6	**1.06**

Key:
County = County of El Dorado
BMP = Best Management Practices
LID = Low Impact Development
Placerville = City of Placerville
MRF = Material Recovery Facility
TMDL= Total Maximum Daily Load
Caltrans= California Department of Transportation

QUANTITATIVE METHODS FOR IDENTIFICATION AND PRIORITIZATION OF STORMWATER AND DRY WEATHER RUNOFF CAPTURE PROJECTS

Table 4-12. Project Prioritization Results for Stormwater Management Component – Non-Structural

Stormwater Management Component – Non-Structural											
Project Information			Results	Overall Benefit Category Score							
Project ID	Project Name	Project Proponent	Grouping	Water Quality	Water Supply	Flood Management	Environmental	Community	Project Cost	Implementation Complexity	**Weighted Score**
Outreach Project											
320	BMP Countywide Demonstration Projects	County	A	1.5	1.8	0.0	1.4	2.7	2.2	2.9	**1.75**
327	El Dorado Hills Library Water Conservation Project	El Dorado County & GDRCD	A	1.5	1.3	0.0	1.3	2.7	2.2	2.6	**1.59**
333	Splash in the Class - Outreach Program	County	A	1.0	1.0	0.0	0.0	2.3	2.2	3.0	**1.27**
328	Our Water Our World - Outreach Program	County	B	1.0	0.0	0.0	0.0	2.3	2.2	2.6	**1.01**
330	Countywide Water Quality Awareness Campaign	County	B	1.0	0.0	0.0	0.0	2.3	2.2	2.3	**0.98**
Management Programs											
331	Countywide Stormwater Asset Management Program	County	A	1.0	0.0	0.0	0.0	2.4	2.2	2.4	**1.01**
334	County Water Quality Standards Improvement Project	County	C	1.0	0.0	0.0	0.0	1.7	2.2	2.7	**0.96**
335	West Slope Watershed and Pollutant Generation Study	County	C	0.0	0.0	0.0	0.0	2.1	2.2	2.4	**0.83**
336	West Slope BMP Manual	County	C	1.0	0.0	0.0	0.0	2.1	2.2	2.3	**0.97**
341	BMP for Agricultural Erosion and Sediment Control Manual	County	C	1.0	0.0	0.0	0.0	2.1	2.2	2.3	**0.97**
337	Outingdale Stormwater Management Study/Pre-Design	American River Conservancy	C	0.0	0.0	0.0	0.0	2.1	2.2	2.3	**0.82**

Note: Project ID 327 is evaluated under two project types: Water Capture and Outreach Project
Key:
BMP= Best Management Practices
County= County of El Dorado
El Dorado County & GDRCD= El Dorado County & Georgetown Divide Resource Conservation District

5.0 PLAN IMPLEMENTATION STRATEGY AND SCHEDULING OF PROJECTS

West Slope SWRP development relied on a complex web of interconnected entities. Coordination amongst entities will continue to be needed to identify project constraints, funding sources, required permits, land acquisition requirements, operations and maintenance needs, resource needs, and applicable regulations in order to successfully implement these multi-benefit projects. This section describes the funding sources, regulations, and policies to give a holistic view of the current regulatory landscape. Also, the ongoing monitoring and revision efforts as well as roles and responsibilities necessary for successful implementation of the West Slope SWRP are described.

5.1 RESOURCES FOR PLAN IMPLEMENTATION

Project planning, approval, and financing are all barriers to project implementation. Implementation of projects identified in the West Slope SWRP will require cooperation and collaboration of multiple entities to identify and address challenges throughout the entire project lifecycle. Each of the three West Slope SWRP components has intricacies and unique resources result in distinct challenges.

Lack of funding is often the most significant barrier to plan implementation. The current funding situation as well as a strategy for addressing lack of funding are described in the following subsections. There are many local, State, and Federal funding vehicles for water, green infrastructure (USEPA 2014), grey water, groundwater, reuse, wastewater, and stormwater that are available to the project proponents.

5.1.1 Statement of Funding Adequacy

West Slope SWRP includes research on various grant opportunities, loan opportunities, technical assistance, and emergency assistance in an effort to be proactive in implementing projects, as many funding sources are transient. Funding sources for projects are determined by the project proponent on a case-by-case basis, and current funding allocations and needs are identified in the project description forms in Appendix B. Due to the conceptual nature of many of the projects, some projects have currently unidentified funding sources, as many require annual appropriation and approval, and the opportunities for potential State and Federal assistance vary. Project proponents will update project information annually and, during the West Slope SWRP update cycle, status of funding sources will be updated on the project description forms when available. Project proponents will coordinate with local, State, and Federal officials to determine the most appropriate funding for each project.

In addition, resources for administration and implementation needs will continue to be incorporated in each SWRP Partners' annual budgets for staffing and materials associated with stormwater and watershed activities.

5.1.2 Potential Funding Opportunities

The availability of funding for surface water storage, watershed management, and stormwater management projects are split into the following three categories:

- Local funding that can be procured from local sources. Local funding sources are presented in Table 5-1.
- State funding sources including grants, loans, and technical assistance. Tables 5-2 through 5-5 present applicable State funding sources.
- Federal funding sources including emergency relief, and economic and agricultural development. Tables 5-6 through 5-10 present applicable funding sources.

The West Slope SWRP only includes multi-benefit projects. As such, this has led to many of the projects being eligible for multiple funding opportunities. This section of the document identifies potentially applicable funding sources; however, these tables represent only a snapshot-in-time of available funding opportunities.

5.1.2.1 Local Government Funding Opportunities

Table 5-1 identifies and compares various local government funding sources that may be used to support larger programs or finance individual projects. Information contained in this section should be used as a guide and tailored to specific project needs. Some funding sources may be more applicable to capital projects while others are meant to sustain program development including operations and maintenance.

Table 5-1. Potential Local Funding Sources for Project Implementation

Funding Source	Description	Advantages	Disadvantages
Taxes/ General Funds	Funds raised through taxes such as, property, income, and sales that are paid into a general fund.	• Consistent from year-to-year • Utilizes an existing funding system	• Competition for funds • Tax-exempt properties do not contribute • System is not equitable (does not fully reflect contribution of stormwater runoff)
Fees	Funds raised through charges for services such as inspections and permits. Funds raised through developer impact fees are one-time charges linked with new development.	• Specific permit and inspection fees allow for more direct allocation of costs for services provided • Addresses potential stormwater impacts related to new construction	• Funding not available for larger projects, system-wide improvements, or operations and maintenance • Developer impact fees may be an unreliable source when development slows (due to market downturns/contractions) • Requires administrative framework to assess and manage
Stormwater Utility	A stormwater utility generates its revenue through user fees and the revenues from the stormwater charges will go into a separate fund that might be used only for stormwater services.	• Dedicated funding source • Directly related to stormwater impacts • Sustainable, stable revenue • Shared cost • Improved watershed stewardship • Addresses existing stormwater issues	• Proposition 218 (1996) and Proposition 218 Omnibus Implementation Act (1997) block funding stormwater programs in California; gave special status to water, wastewater, and refuse utilities; stormwater not recognized as a utility, nor as a source of water; Senate Bill 231 signed by the Governor in 2017 could become a dedicated sources of revenue for stormwater funding • Feasibility study required for implementation, fee structure, and administration of utility • Approval by vote of the local legislative body • Perception by the public of a “tax on rain”

Table 5-1. Potential Local Funding Sources for Project Implementation (contd.)

Funding Type	Description	Advantages	Disadvantages
Bonds	Bonds are not a true revenue source, but are a means of borrowing money. “Green” bonds are a new source of funding dedicated to environmentally friendly projects, including clean water projects.	• Existing sources available for stormwater-related funding • Can support construction-ready projects • Can provide steady funding stream over the period of the bond	• One-time source of funds • Requires individual approval for each issuance • Requires full repayment • Possible interest charges • Requires dedicated repayment revenue stream • May require design-level documents to be prepared in advance • Likely requires voter approval • Can have high transaction costs relative to requested amount • May require significant administrative preparation to issue
Public-Private Partnerships	Contractual agreement between a public agency and a private sector entity that allows for the private sector participation in the financing, planning, design, construction, and maintenance of stormwater facilities.	• Can reduce costs to government • Significantly leverages public funding and government resources • Ensures adequate, dedicated funding • Improved operations and maintenance • Shared risk	• Perceived loss of public control • Assumption that private financing is more expensive and belief that contract negotiations are difficult
Cooperative Implementation Agreements	Collaboration between Agencies to share financial resources to implement region-scale best management practice (BMP) implementation.	• Applied statewide • Objective compliance measure • Greatest water quality benefit per dollar spent • Flexibility in implementation	• Limited funding • Project competition – some projects will not achieve prioritization

Table 5-1. Potential Local Funding Sources for Project Implementation (contd.)

Funding Type	Description	Advantages	Disadvantages
Credit Trading Program	System of tradable runoff credits that would create economic incentives for individual property owners to build small BMPs distributed throughout a watershed.	• Incentive to increase construction of BMPs in the watershed, parcel owners can trade responsibility for runoff detention, much like emissions allowances in the air quality trading market • Alternative to onsite BMP implementation where found to be infeasible	• Complex system needs to be established • Different types of credits may need to be established (water quality, hydromodification, etc.) • Credit value may need to account for BMP operations and maintenance, rehabilitation, and replacement into perpetuity
Enhanced Infrastructure Financing Districts (EIFD)	EIFDs are separate government entities, formed through a Joint Powers Authority consisting of cooperating cities, counties, and special districts. EIFDs allow for regional cooperation on infrastructure investment and economic development.	• Two recent laws (Senate Bill 628 in 2014; Assembly Bill 313 in 2015) allow cities, counties, and special districts to form EIFDs and issue tax increment financing bonds under specific circumstances. • Economic development and job creation tool • Voter approval is not required to form an EIFD	• 55 percent voter approval to authorize bonds • Each participant must agree to the amount of tax increment that they will contribute.

Key:
EIFD = Enhanced Infrastructure Financing District
BMP = Best Management Practice

5.1.2.2 State Funding Opportunities

The following are potential State funding opportunities for project implementation:

- State Water Resources Control Board Funding Sources

  The State Water Board and nine RWQCBs, collectively known as the California Water Boards, are dedicated to a single vision: abundant clean water for human uses and environmental protection to sustain California's future. Under the Federal CWA and the State's pioneering Porter-Cologne Water Quality Control Act, the RWQCBs have regulatory responsibility for protecting the water quality of nearly 1.6 million acres of lakes, 1.3 million acres of bays and estuaries, 211,000 miles of rivers and streams, and about 1,100 miles of exquisite California coastline. Table 5-2 presents applicable funding sources from the State Water Board.

- Proposition 1 Funding Sources

  The single largest potential funding opportunity for the West Slope is Proposition 1, which was approved by California voters on November 4, 2014, and authorized $7.545 billion in general obligation bonds. Proposition 1 funds investments as part of a statewide comprehensive effort to provide opportunities relating the planning, design, and implementation of water conservation, recycling, groundwater cleanup, storage and other water related projects and programs. A significant portion of these bond funds are being distributed through grant and loan opportunities administered by various State agencies including DWR, the State Water Board, and the California Water Commission. These agencies are tasked with overseeing competitive application processes, and developing guidelines for soliciting and evaluating project proposals. Approximately 30 different Proposition 1 grant and loan administration efforts are planned or underway across the State - all on individual timelines. Relevant funding sources for the West Slope SWRP projects are in Proposition 1 Chapters 5 through 11. Table 5-3 summarizes the key areas for funding identified in Proposition 1.

- California Department of Forestry and Fire Protection Funding Sources

  California Department of Forestry and Fire Protection (CAL FIRE) offers several grant opportunities available through three programs: Greenhouse Gas Reduction Funds, State Responsibility Area Fire Prevention Fund and Volunteer Fire Assistance. Table 5-4 summarizes the key areas for funding identified in the CAL FIRE grant program.

- Miscellaneous State Funding Sources

  A variety of other funding sources existing from the California Department of Housing and Community Development, Caltrans, California Infrastructure and Economic Development Bank, Rural Community Assistance Corporation, and Sierra Institute. Miscellaneous State funding sources are presented in Table 5-5.

Table 5-2. State Water Board Funding Sources for Project Implementation

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
California Environmental Protection Agency - State Water Board	Drinking Water State Revolving Fund Program	This program assists public water systems in financing the cost of drinking water infrastructure projects needed to achieve or maintain compliance with Safe Drinking Water Act requirements.	Loan	Surface Water Storage
	Proposition 84 Funding for Public Water Systems	This program provides funding for emergency clean water grants (Public Resources Code Section 75021), small community infrastructure improvements for chemical and nitrate contaminants (Public Resources Code Section75022), or grants to prevent or reduce contamination of groundwater that serves as a source of drinking water (Public Resources Code Section 75025).	Grant	Watershed Management
	Clean Water State Revolving Fund Program (CWSRF)	CWSRF program offers low cost financing for a wide variety of water quality projects. The program has significant financial assets, and is capable of financing projects from <$1 million to >$100 million.	Loan	Watershed Management, Stormwater Management
	Water Recycling Funding Program	Promotes the beneficial use of treated municipal wastewater (water recycling) in order to augment fresh water supplies in California by providing technical and financial assistance to agencies and other stakeholders in support of water recycling projects and research.	Loan/ Technical Assistance	Watershed Management
	Stormwater Grant Program	Prop 1 (Assembly Bill 1471, Rendon) authorized $7.545 billion in general obligation bonds for water projects including surface and groundwater storage, ecosystem and watershed protection and restoration, and drinking water protection. The State Water Board will administer Proposition 1 funds for five programs. Of the $7.545 billion, Proposition 1 (Section 79747) provides $200 million in grant funds for multi-benefit stormwater management projects.	Grant	Surface Water Storage, Watershed Management, Stormwater Management

Table 5-2. State Water Board Funding Sources for Project Implementation (contd.)

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
California Environmental Protection Agency - State Water Board	Water or Energy Audit Financial Assistance	The purpose of the Water or Energy Audit is to encourage public agencies to take an independent look into their current practices, identify potentially inefficient water or energy use and follow up with a well thought out plan to improve consumption of these valuable resources. The agency is encouraged to study water and energy in the audit, but may focus on one or the other. All audits must be related to projects, facilities, or activities that are otherwise eligible for CWSRF funding. Agencies may hire consultants to perform the audit, or perform the work with their own staff.	Technical Assistance	Watershed Management

Key:
CWSRF = Clean Water State Revolving Fund

Table 5-3. Proposition 1 Funding Sources for Project Implementation

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
California Proposition 1(2014)	Chapter 5 – Drinking Water Quality ($520M).	To improve access to clean drinking water for disadvantaged communities ($260M) and help small communities pay for wastewater treatment ($260M).	Grant	Surface Water Storage, Watershed Management
	Chapter 6 – Watershed Protection and Restoration ($1.5B).	To protect and restore watersheds and other habitat throughout the state.	Grant	Watershed Management
	Chapter 7 – Regional Water Management ($810M).	$510M for allocations to specific regions throughout the state through the Integrated Regional Water Management program, $200M for projects and plans to manage runoff from storms in urban areas, and $100M for water conservation projects and programs.	Grant	Surface Water Storage, Watershed Management, Stormwater Management
	Chapter 8 – Water Storage ($2.7B).	Funds will go to “public benefits” of projects only. Projects must be in regions connected to the Bay-Delta watershed	Grant	Surface Water Storage
	Chapter 9 – Water Recycling and Desalination ($725M).	$100M for contaminant and salt removal projects, and $625M for water recycling, dedicated distribution infrastructure, pilot projects for new potable reuse and other salt removal technology, and multi-benefit recycled water projects that improve water quality, and technical grant writing assistance for disadvantaged communities.	Grant	Surface Water Storage, Watershed Management
	Chapter 10 – Groundwater Sustainability ($900M).	For groundwater protection and cleanup programs, and development and implementation of groundwater sustainability plans.	Grant	Watershed Management
	Chapter 11 – Flood Protection ($395M).	$295M to improve levees or respond to flood emergencies specifically in the Delta and $100M for flood control projects anywhere in the state.	Grant	Stormwater Management

Key:
B = Billion
M= Million

Table 5-4. California Department of Forestry and Fire Protection Funding Sources for Project Implementation

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
California Department of Forestry and Fire Protection (CAL FIRE)	State Responsibility Area Fire Prevention Fund and Tree Mortality Grant Program	This program has $15.75 million available for projects that focus on supporting local efforts to remove dead and dying trees that pose a threat to public health and safety and for projects that reduce the wildfire threat to habitable structures within State Responsibility Areas.	Grant	Watershed Management
	Forest Health Greenhouse Gas Reduction Fund (GGRF) Grants	The Forest Health GGRF Grant Program will use funds provided by the Greenhouse Gas Reduction Fund for California Climate Investments administered by CAL FIRE. Through the Forest Health GGRF Grant Program, CAL FIRE funds and implements projects to proactively restore forest health in order to reduce greenhouse gases, to protect upper watersheds where the state's water supply originates, to promote the long-term storage of carbon in forest trees and soils, minimize the loss of forest carbon from large, intense wildfires, and to further the goals of the California Global Warming Solutions Act of 2006 (Assembly Bill 32, Health and Safety Code Section 38500 et seq.).	Grant	Watershed Management
	Urban Forest Expansion and Improvement	Urban tree planting and planting of urban vegetation to reduce greenhouse gas (GHG) emissions, tree and plant establishment care, and planting site preparation. In addition to tree planting, a project may also involve lightly engineered planting sites (e.g. bioswales, etc) and acquisition of small, vacant parcels to be improved for purposes consistent with the California Urban Forestry Act.	Grant	Watershed Management
	Urban Forest Management Activities	For local governments (cities, counties, districts). Improving long-term management of urban forests to reduce GHG emissions and improve urban forest performance over time. Projects may involve the establishment or updating of a jurisdiction-wide tree inventory, urban forest mapping and analysis, and/or long-term management plan. May include policy integration and ordinance development.	Grant	Watershed Management

Table 5-4. California Department of Forestry and Fire Protection Funding Sources for Project Implementation (contd.)

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
	Urban Wood and Biomass Utilization	Creation, development, and implementation of projects to better utilize trees and/or other vegetation from urban forests to reduce GHG emissions. The trees that are utilized must not have been removed solely for the purpose of utilization; there must be another valid management objective behind the removal of the trees. Projects that will use urban woody biomass for its highest and best use, thus diverting it from the urban waste stream.	Grant	Watershed Management

Key:
CAL FIRE = California Department of Forestry and Fire Protection
GGRF = Greenhouse Gas Reduction Fund
GHG = Greenhouse Gas

Table 5-5. Miscellaneous State Funding Sources for Project Implementation

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
California Department of Housing and Community Development	Community Development Block Grant	This agency partners with rural cities and counties to improve the lives of their low- and moderate-income residents through the creation and expansion of community and economic development opportunities in support of livable communities.	Loan	Watershed Management, Stormwater management
California Department of Transportation	Cooperative Implementation Agreements	Cooperative Implementation Agreements between the Department and other responsible parties to conduct work to comply with a Total Maximum Daily Load (TMDL), and a Cooperative Implementation Grant Program funded by the Department and administered by the State Water Board. The grant program will be used to fund capital projects in impaired watersheds in which the Department has been assigned a Waste Load Allocation or otherwise has responsibility for implementation of the TMDL. Cooperative implementation will satisfy some or all of the Department's obligations under a TMDL, whether or not discharges from the Department's right of way are controlled or treated (Kontaxis 2017).	Grant	Watershed Management, Stormwater management
California Infrastructure and Economic Development Bank	Infrastructure State Revolving Fund Program	The Infrastructure State Revolving Fund Program provides financing to public agencies and non-profit corporations sponsored by public agencies for a wide variety of infrastructure and economic development projects (excluding housing).	Loan	Surface Water Storage, Watershed Management, Stormwater management
Rural Community Assistance Corporation (RCAC)	Environmental Infrastructure Loans	This program helps create, improve or expand the supply of safe drinking water, waste disposal systems and other facilities that serve communities in the rural West. RCAC loan programs provide the early funds small rural communities need to determine feasibility and pay pre-development costs prior to receiving state and federal program funding. RCAC also may provide interim construction financing, as well as intermediate and long-term loans for system improvements.	Loan	Surface Water Storage, Watershed Management, Stormwater management

Table 5-5. Miscellaneous State Funding Sources for Project Implementation (contd.)

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
Sierra Institute (non-profit, non-public organization)	Disadvantaged Community Involvement Program	The program will conduct needs assessments of communities throughout the region to determine specific challenges in each community, project priorities and the tools necessary to build capacity. The grant runs for three years, and includes support for technical assistance training and workshops, capacity building and other activities as identified by the communities themselves during the needs assessments and targeted outreach	Grant/Technical Assistance	Surface Water Storage, Watershed Management, Stormwater management

Key:
TMDL = Total Maximum Daily Load
RCAC = Rural Community Assistance Corporation

5.1.2.3 Federal Funding Assistance

- U.S. Army Corps of Engineers Funding Sources

  The USACE is responsible for planning, designing, building, and operating locks and dams. Other civil engineering projects include flood control, beach nourishment, and dredging for waterway navigation, design and construction of flood protection systems through various federal mandates, environmental regulation, and ecosystem restoration. Applicable funding sources from the USACE are presented in Table 5-6.

- U.S. Department of Agriculture Funding Sources: The following are several funding sources from the U.S. Department of Agriculture (USDA) (Table 5-7):

  - **USDA Rural Development** is committed to helping improve the economy and quality of life in all of rural America by providing financial programs to support essential public facilities and services as water and sewer systems, housing, health clinics, emergency service facilities and electric and telephone service. USDA Rural Development promotes economic development by providing loans to businesses through banks and community-managed lending pools, while also assisting communities to participate in community empowerment programs.

  - **USDA Natural Resources and Environment** ensures the health of the land through sustainable management and works to prevent damage to natural resources and the environment, restore the resource base, and promote good land management.

  - **USDA Farm Production and Conservation** is the USDA's focal point for the nation's farmers and ranchers and other stewards of private agricultural lands and non-industrial private forest lands. Farm Production and Conservation agencies implement programs designed to mitigate

the significant risks of farming through crop insurance services, conservation programs and technical assistance, and commodity, lending, and disaster programs.

- U.S. Environmental Protection Agency Funding Sources

  Nearly half of the USEPA's budget goes into grants to state environmental programs, non-profits, educational institutions, and others. These funds are used to implement a wide variety of projects, from scientific studies that help make decisions to community cleanups. Overall, grants help the USEPA achieve its mission of protect human health and the environment. Funding sources from the USEPA are presented in Table 5-8.

- Federal Emergency Management Agency Funding Sources

  FEMA's mission is to support U.S. citizens and be the first responders to ensure that citizens and agencies work together to build, sustain and improve capability to prepare for, protect against, respond to, recover from and mitigate all hazards. FEMA funding sources are presented in Table 5-9.

- Miscellaneous Federal Funding Sources

  A variety of other funding sources are presented in Table 5-10, including the U.S. Departments of Commerce, Housing and Urban Development, Interior, Transportation, and Economic Development Administration.

Table 5-6. U.S. Army Corps of Engineers Funding Sources for Project Implementation

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
U.S. Army Corps of Engineers (USACE)	Aquatic Ecosystem Restoration Continuing Authorities Program (CAP Section 206)	Work under this authority may carry out aquatic ecosystem restoration projects that will improve the quality of the environment, are in the public interest, and are cost-effective. Additional information about this program: http://www.spk.usace.army.mil/Portals/64/docs/Outreach/Information/Section206.pdf	Design and Construction Assistance	Watershed Management, Stormwater Management
	Project Modifications for Improvement of the Environment (CAP Section 1135)	Work under this authority provides for modifications in the structures and operations of water resources projects constructed by the USACE to improve the quality of the environment. Additionally, the USACE may undertake restoration projects at locations where an existing USACE project has contributed to the degradation. Additional program information: http://www.spk.usace.army.mil/Portals/64/docs/Outreach/Information/1135.pdf	Design and Construction Assistance	Stormwater Management
	Small Flood Damage Reduction Projects (CAP Section 205)	Work under this authority provides for local protection from flooding by the construction or improvement of structural flood damage reduction features such as levees, channels, and dams. Non-structural alternatives are also considered and may include measures such as installation of flood warning systems, raising and/or flood proofing of structures, and relocation of flood prone facilities. Additional information about this program: http://www.spk.usace.army.mil/Portals/64/docs/Outreach/Information/Section205.pdf	Design and Construction Assistance	Surface Water Storage, Stormwater Management
	Snagging and Clearing for Flood Control (CAP Section 208)	Work under this authority provides for local protection from flooding by channel clearing and excavation, with limited embankment construction by use of materials from the clearing operation only. Additional information about this program: http://www.spk.usace.army.mil/Portals/64/docs/Outreach/Information/Section208.pdf	Design and Construction Assistance	Watershed Management, Stormwater Management

Key:
USACE = U.S. Army Corp of Engineers
CAP = Continuing Authorities Program

Table 5-7. U.S. Department of Agriculture Funding Sources for Project Implementation

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
U.S. Department of Agriculture (USDA)	Conservation Reserve Program (CRP)	This voluntary program provides agricultural landowners with annual rental payments and cost-share assistance to establish long-term, resource conserving covers on eligible farmland. The long-term goal of the program is to re-establish valuable land cover to help improve water quality, prevent soil erosion, and reduce loss of wildlife habitat.	Cost Share	Watershed Management, Stormwater Management
	Agricultural Management Assistance	This program provides cost share assistance to agricultural producers to voluntarily address issues such as water management, water quality, and erosion control by incorporating conservation into their farming operations.	Cost Share	Watershed Management, Stormwater Management
	Emergency Watershed Protection	This program helps protect lives and property threatened by natural disasters such as floods, hurricanes, tornadoes, droughts, and wildfires. The program provides funding for such work as clearing debris from clogged waterways, restoring vegetation, and stabilizing river banks.	Grant	Watershed Management, Stormwater Management
	Conservation Reserve Enhancement Program	This voluntary land retirement program that helps agricultural producers protect environmentally sensitive land, decrease erosion, restore wildlife habitat, and safeguard ground and surface water.	Grant	Surface Water Storage, Watershed Management, Stormwater Management

Table 5-7. U.S. Department of Agriculture Funding Sources for Project Implementation (contd.)

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
U.S. Department of Agriculture (USDA) - Natural Resources Conservation Service (NRCS)	Agricultural Easement Conservation Program	This program provides financial and technical assistance to help conserve agricultural lands and wetlands and their related benefits. Under the Wetlands Reserve Easements component, the NRCS helps to restore, protect and enhance enrolled wetlands.	Grant/Technical Assistance	Watershed Management, Stormwater management
	Regional Conservation Partnership Program	This program provides an opportunity for partners to scope a five year project in partnership with NRCS to enhance and accelerate conservation efforts, innovation and locally-driven solutions. Partnering organizations design, promote, implement, and evaluate the project outcomes in partnership with NRCS programs.	Technical Assistance	Watershed Management, Stormwater management
	Watershed and Flood Prevention Operations Program	This program works to prevent erosion, floodwater, and sediment damage; to further the conservation, development, utilization, and disposal of water; and to further the conservation and proper utilization of land in authorized watersheds.	Grant/Technical Assistance	Watershed Management, Stormwater management

Table 5-7. U.S. Department of Agriculture Funding Sources for Project Implementation (contd.)

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
U.S. Department of Agriculture (USDA) - Rural Development	Special Evaluation Assistance for Rural Communities and Households	This program helps very small, financially distressed rural communities with predevelopment feasibility studies, design assistance, and technical assistance on proposed water and waste disposal projects.	Technical Assistance	Watershed Management
	Water & Waste Disposal Loan & Grant Program	Program provides funding to rural areas and towns with fewer than 10,000 people for clean and reliable drinking water systems, sanitary sewage disposal, sanitary solid waste disposal, and stormwater drainage to households and businesses in eligible rural areas.	Loan/Grant	Watershed Management
	Water and Waste Disposal Guaranteed Loan Program	This program helps private lenders provide affordable financing to qualified borrowers to improve access to clean, reliable water and waste disposal systems for households and businesses in rural areas. This is achieved through bolstering existing private credit structure through the guarantee of quality loans. Guarantees up to 90% available to eligible lenders.	Loan	Watershed Management
	Water & Waste Disposal Loan Guarantees	The program helps private lenders provide affordable financing to qualified borrowers to improve access to clean, reliable water and waste disposal systems for households and businesses in rural areas.	Loan	Watershed Management
	Water & Waste Disposal Revolving Loan Funds	This program assists communities with water and wastewater systems. Qualified private non-profit organizations will receive grant funds to establish a lending program for eligible entities. This grant program is to serve a rural area with a population not in excess of 10,000.	Grant	Watershed Management

Table 5-7. U.S. Department of Agriculture Funding Sources for Project Implementation (contd.)

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
USDA - Rural Development	Water & Waste Disposal Predevelopment Planning Grants	This program assists low-income communities with initial planning and development of an application for USDA Rural Development Water and Waste Disposal direct loan/grant and loan guarantee programs.	Loan/Grant	Watershed Management
	Emergency Community Water Assistance Grants	This grant program is designed to assist rural communities that have experienced a significant decline in quantity or quality of drinking water due to an emergency, or in which such decline is considered imminent, to obtain or maintain adequate quantities of water that meets the standards set by the Safe Drinking Water Act.	Grant	Watershed Management, Stormwater Management
	Water & Waste Disposal Grants to Alleviate Health Risks on Tribal Lands and Colonias	This program provides access to safe reliable drinking water and waste disposal facilities and services to low-income communities that face significant health risks.	Grant	Watershed Management

Key:
CRP = Conservation Reserve Program
NRCS = Natural Resources Conservation Service
USDA = U.S. Department of Agriculture

Table 5-8. U.S. Environmental Protection Agency Funding Sources for Project Implementation

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
U.S. Environmental Protection Agency (USEPA)	Source Reduction Assistance Grant Program	This program awards support pollution prevention through source reduction and resource conservation work. As authorized under the statutory authorities for this grant program, proposals must carry out project activities using one or more of the following methods of surveys, studies, research, investigation, experimentation, education, training and/or demonstrations.	Grant	Watershed Management, Stormwater Management
	Environmental Workforce Development and Job Training Grants	Funds are available for Environmental Workforce Development and Job Training programs that recruit, train, and place local, unemployed and under-employed residents with the skills needed to secure full-time employment in the environmental field. Wastewater treatment training is eligible, such as wastewater treatment facility operations (treatment, collection, storage, and disposal) training, decentralized wastewater treatment systems maintenance, or other related wastewater management topics.	Grant	Surface Water Storage, Watershed Management, Stormwater Management
	Clean Water State Revolving Fund	This program provides a permanent source of low-cost financing for a wide range of water quality infrastructure projects. These projects include municipal wastewater treatment and collection, nonpoint source pollution controls, decentralized wastewater treatment systems, green infrastructure, water efficiency, and estuary management.	Loan	Surface Water Storage, Watershed Management, Stormwater Management

Table 5-8. U.S. Environmental Protection Agency Funding Sources for Project Implementation (contd.)

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
USEPA	Urban Waters Small Grants	This program has an emphasis on engaging communities with environmental justice concerns. The objective of the Urban Waters Small Grants is to fund projects that will foster a comprehensive understanding of local urban water issues, identify and address these issues at the local level, and educate and empower the community. In particular, the Urban Waters Small Grants seek to help restore and protect urban water quality and revitalize adjacent neighborhoods by engaging communities in activities that increase their connection to, understanding of, and stewardship of local urban waterways.	Grant	Watershed Management, Stormwater Management
	Wetlands Program Development Grants	These grants Wetland Program Development Grants are intended to encourage comprehensive wetlands program development by promoting the coordination and acceleration of research, investigations, experiments, training, demonstrations, surveys, and studies relating to the causes, effects, extent, prevention, reduction, and elimination of water pollution.	Grant	Watershed Management, Stormwater Management
	Water Infrastructure Finance and Innovation Act (WIFIA)	The WIFIA program was created in 2014 and provides direct loans and loan guarantees to cover up to 49% of eligible costs for drinking water and wastewater infrastructure projects of regional or national significance. WIFIA was designed to offer credit assistance with flexible terms in order to attract private participation, encourage new revenue streams for infrastructure investment, and allow public agencies to get more projects done with fewer local dollars. WIFIA lends at the Treasury rate for a comparable maturity currently below 3 percent for a 30-year loan. Further, WIFIA will look to the project with a long term repayment horizon rather than focusing on immediate returns.	Loan	Surface Water Storage, Watershed Management, Stormwater Management

Table 5-8. U.S. Environmental Protection Agency Funding Sources for Project Implementation (contd.)

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
USEPA	Nonpoint Source Implementation Grants (319 Program)	Under Section 319, states, territories and tribes receive grant money that supports a wide variety of activities including technical assistance, financial assistance, education, training, technology transfer, demonstration projects and monitoring to assess the success of specific nonpoint source implementation projects.	Grant	Watershed Management, Stormwater Management
	Drinking Water State Revolving Fund	This program is a federal-state partnership to help ensure safe drinking water. Created by the 1996 Amendments to the Safe Drinking Water Act the program provides financial support to water systems and to state safe water programs.	Loan	Watershed Management, Stormwater Management

Key:
USEPA = U.S. Environmental Protection Agency
WIFIA = Water Infrastructure Finance and Innovation Act

Table 5-9. Federal Emergency Management Agency Funding Sources for Project Implementation

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
U.S. Federal Emergency Management Agency (FEMA)	FEMA Public Assistance Program	This program provides grants to state, tribal and local governments, and certain types of private nonprofit organizations so that communities can quickly respond to and recover from major disasters or emergencies.	Grant	Surface Water Storage, Watershed Management, Stormwater Management
		Through the program, FEMA provides supplemental federal disaster grant assistance for debris removal, life-saving emergency protective measures, and the repair, replacement, or restoration of disaster-damaged publicly owned facilities, and the facilities of certain private non-profit organizations. This program also encourages protection of these damaged facilities from future events by providing assistance for hazard mitigation measures during the recovery process.	Grant	Surface Water Storage, Watershed Management, Stormwater Management
	Pre-Disaster Mitigation Program	This program is designed to assist States, U.S. Territories, Federally-recognized tribes, and local communities in implementing a sustained pre-disaster natural hazard mitigation program. The goal is to reduce overall risk to the population and structures from future hazard events, while also reducing reliance on Federal funding in future disasters.	Grant/Technical Assistance	Surface Water Storage, Watershed Management, Stormwater Management

Table 5-9. Federal Emergency Management Agency Funding Sources for Project Implementation (contd.)

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
FEMA	Flood Mitigation Assistance Program (FMA)	This program is authorized by Section 1366 of the National Flood Insurance Act of 1968, with the goal of reducing or eliminating claims under the National Flood Insurance Program (NFIP). FMA provides funding to States, Territories, federally-recognized tribes and local communities for projects and planning that reduces or eliminates long-term risk of flood damage to structures insured under the NFIP. FMA funding is also available for management costs.	Grant/Technical Assistance	Surface Water Storage, Watershed Management, Stormwater Management
	Hazard Mitigation Grant Program	This program is to help communities implement hazard mitigation measures following a Presidential major disaster declaration. Hazard mitigation is any action taken to reduce or eliminate long term risk to people and property from natural hazards. Mitigation planning is a key process used to breaking the cycle of disaster damage, reconstruction, and repeated damage.	Grant	Surface Water Storage, Watershed Management, Stormwater Management

Key:
FEMA = Federal Emergency Management Agency
FMA = Flood Mitigation Assistance
NFIP = National Flood Insurance Program

Table 5-10. Miscellaneous Federal Funding Sources for Project Implementation

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
U.S. Department of Commerce Economic Development Administration	Investments for Public Works and Economic Adjustment Assistance Programs	Empowers distressed communities to revitalize, expand, and upgrade their physical infrastructure, and generate or retain long-term, private sector jobs and investment.	Technical Assistance	Surface Water Storage, Watershed Management, Stormwater Management
U.S. Department of Housing and Urban Development (HUD)	Community Development Block Grant Disaster Recovery Program	HUD provides flexible grants to help cities, counties, and States recover from Presidentially declared disasters, especially in low-income areas, subject to availability of supplemental appropriations. Example of eligible activities include buying, constructing, or rehabilitating public facilities such as water, sewer and drainage systems.	Grant	Surface Water Storage, Watershed Management, Stormwater Management
	Community Development Block Grant	This program is a flexible program that provides communities with resources to address a wide range of unique community development needs.	Grant	Surface Water Storage, Watershed Management, Stormwater Management
U.S. Department of the Interior, Bureau of Reclamation (Reclamation)	Drought Response Program	Reclamation's Drought Response Program supports a proactive approach to drought. It will provide assistance to water users for drought contingency planning, including consideration of climate change information and to take actions that will build long-term resiliency to drought.	Technical Assistance	Surface Water Storage, Watershed Management, Stormwater Management
	Title XVI Water Reclamation & Reuse Program	Though this program, Reclamation identifies and investigates opportunities to reclaim and reuse wastewaters and naturally impaired ground and surface water in the 17 Western States and Hawaii. Title XVI includes funding for feasibility studies and research, and the construction of water recycling projects on a project specific basis, in partnership with local governmental entities.	Technical Assistance	Surface Water Storage, Watershed Management, Stormwater Management
	Cooperative Watershed Management Program	Through this program, Reclamation provides financial assistance to locally led watershed groups to encourage diverse stakeholders to form local solutions to water management needs. Starting in 2017, Reclamation will provide cost-shared financial assistance to watershed groups to implement watershed management projects (Phase II). Proposals are currently due January 31, 2018.	Grant	Surface Water Storage, Watershed Management, Stormwater Management

Table 5-10. Miscellaneous Federal Funding Sources for Project Implementation (contd.)

Funding Agency/Source	Program Name	Description	Type of Assistance	Applicable Component
U.S. Department of Transportation	Transportation Investment	This program provides assistance for capital projects related to highways, bridges, public transportation, rail, ports, and intermodal projects. A primary selection criterion specifically mentions addressing environmental sustainability including avoiding adverse environmental impacts to water quality, providing environmental benefits such as ground water recharge in areas of water scarcity, and stormwater mitigation, including green infrastructure.	Grant	Watershed Management, Stormwater Management
U.S. Economic Development Administration	Planning Program and Local Technical Assistance Program	Through its Planning Program and Local Technical Assistance Program, this administration assists eligible recipients in developing economic development plans and studies designed to build capacity and guide the economic prosperity and resiliency of an area or region.	Technical Assistance	Surface Water Storage, Watershed Management, Stormwater Management

Key:
HUD = Housing and Urban Development
Reclamation = Bureau of Reclamation

5.2 INCORPORATION INTO AN INTEGRATED REGIONAL WATER MANAGEMENT PLAN

After completion of the West Slope SWRP, projects identified in this plan will be submitted for project screening, review, and inclusion in the CABY IRWMP. At this time, while a portion of the projects also lie within the American River Basin IRWMP, for consistency, all projects will only be incorporated into the CABY IRWMP. The SWRP Partners will continue to coordinate with the CABY IRWMP Coordinating Committee as many of the West Slope goals correlate to the CABY IRWMP. Future projects added to the West Slope SWRP will continue to be incorporated into the CABY IRWMP.

5.3 WEST SLOPE STORMWATER RESOURCE PLAN IMPLEMENTATION

Successful implementation of the West Slope SWRP depends on clearly defined roles and responsibilities of the SWRP Partners, project-specific implementing entities, stakeholders, interested parties, elected officials, and the public. Responsibilities of key entities are described in this section.

5.3.1 SWRP Partners

The primary purpose of the SWRP Partners will be to provide oversight of the West Slope SWRP and make related decisions, resolve any issues presented by the participating entities, provide guidance and direction

on next steps and recommended actions (as appropriate), and engage with stakeholders and interested parties. The SWRP Partners will continue to consist of the following:

1. **Agency**, will be the lead agency responsible for administration, monitoring, and reporting of the West Slope SWRP. The Agency will also be responsible for the surface water and headwater components.

2. **County**, will be the responsible for administration, monitoring, and reporting of the stormwater management components (NPDES-related activities, planning, and engineering for flood control improvements; other related stormwater management and flood control capital components; etc.).

3. **Placerville**, will be the responsible for administration, monitoring, and reporting of the West Slope SWRP elements in its service boundaries to the Agency. This includes administration, monitoring, and reporting of the stormwater management (NPDES-related activities, planning, and engineering for flood control improvements; related stormwater management and flood control capital components; etc.).

SWRP Partner representatives will continue to be management-level officials with authority to commit their respective entities to a course of action.

The focus of each role listed above differs in order to best manage each of the three components (surface water storage, watershed management, and stormwater management). As discussed in Section 1, the West Slope SWRP is tailored to address the unique conditions of El Dorado County which is a mostly rural agricultural setting in the foothills where management of stormwater resources is very different from that of an urban area on flat land. To optimize managing stormwater as a resource, this West Slope SWRP covers three components in which each will be overseen by a different SWRP Partner. Although each SWRP Partner will oversee different components of the West Slope SWRP, close coordination will continue to occur to promote successful plan implementation.

5.3.2 Project-Specific Implementing Entities

The project-specific implementing entities are those responsible for project implementation and any associated activities. It could be one of three SWRP Partners, several of the SWRP Partners, or another entity. The SWRP Partners will continue to engage with these other entities on the West Slope. Participation will not be mandatory, and each entity will make its own decisions on project implementation and any associated activities. Partnerships may be formed to support funding and implementation. An example of a project requiring partnership is the Southeast Connector Project. The South East Connector Project proposes to build a 34 mile east-west roadway that will connect U.S. Highway 50 in El Dorado County to Interstate 5 in Sacramento County. The roadway segment that is to be constructed in El Dorado County will require the collaborative effort between several entities to assure that the project implements BMPs, establishes low impact development controls, and incorporates treatment measures.

5.3.3 Stakeholders, Interested Parties, Elected Officials, and Public

Stakeholders and interested parties will be actively engaged in updating and implementing the West Slope SWRP. They will continue to be provided with updates on West Slope SWRP progress and opportunities

to comment by the SWRP Partners. Elected officials (e.g., city council, board of supervisors) and the public will be informed of updates on West Slope SWRP progress. Some West Slope SWRP meetings will continue to be open for stakeholder and public involvement, and the Agency will continue to post information and materials on its website as well as email notifications as needed. Participation will continue to be voluntary and open to any entity or individual expressing interest.

5.4 ONGOING REVIEW, UPDATES, AND ADAPTIVE MANAGEMENT

The SWRP Partners expect that the West Slope SWRP implementation will involve regular monitoring and evaluation efforts to keep tabs on project implementation progress and to use available information to guide future changes in the West Slope SWRP. The SWRP Partners also expect that monitoring and evaluating activities would occur throughout each year of implementation, with the project list reviewed three times a year and project description forms updated as needed by project proponents. The evaluation of the need for a comprehensive update of the West Slope SWRP would occur every 5 years or sooner if significant changes occur with the projects and budget, or if regulatory compliance needs change. Initiation and completion of implementation and update activities will be contingent on the availability of sufficient funding.

5.4.1 Activities, Process, and Schedule

The anticipated activities, process, and schedule for implementing, monitoring, evaluating, and updating the West Slope SWRP are presented in Table 5-11 in the form of a RACI chart. The categories for this chart are as follows:

- **Responsible:** Entity who performs an activity or does the work.
- **Accountable:** Entity who is ultimately accountable and has Yes/No/Veto.
- **Consulted:** Entity that needs to provide feedback and contribute to the activity.
- **Informed:** Entity that needs to know of the decision or action.

Table 5-11. Anticipated West Slope Stormwater Resource Plan Implementation and Update Activities

Activity	Frequency	RACI Matrix[1]					
		El Dorado County Water Agency	County of El Dorado	City of Placerville	Project-Specific Implementing Entity	Stakeholders and Interested Parties	Elected Officials and Public
Tracking West Slope SWRP Progress. The SWRP Partners will review any changes/progress, determine the need for new/revised actions, and update the status of existing actions and add new actions. An accomplishment memo and update to Appendix E will be provided every December/January to track changes/progress.	Annually (or as needed)	R, A[2]	R,A[2]	A	I	C	I
Project Prioritization and Budgetary Considerations. The SWRP Partners will meet three times a year to: (1) discuss evolving needs in the region, any triggers (as described above), and issues to be addressed with the West Slope SWRP; (2) identify funding needs and sources for the following year's activities; and (3) develop a plan to pursue identified funds.	Three Times a Year	R,A[2]	R,A[2]	R,A	C	I	I
Project Development, Approval, and Implementation. Development and initiation of projects will be the responsibility of the project proponent(s), meaning the individual entity or group of entities**.**	As needed	C	C	C	R, A	C	I
West Slope SWRP Update Need Evaluation. Every 5 years, the SWRP Partners will assess the need for and prepare an updated West Slope SWRP.	Every 5 years (or as necessary)	R, A	A	A	C	C	I

Table 5-11. Anticipated West Slope Stormwater Resource Plan Implementation and Update Activities (contd.)

Activity	Frequency	RACI Matrix[1]					
		El Dorado County Water Agency	County of El Dorado	City of Placerville	Project-Specific Implementing Entity	Stakeholders and Interested Parties	Elected Officials and Public
Communication and Outreach. The SWRP Partners and project proponents will do the following:							
• ***West Slope SWRP.*** This effort will include website updates and email communications to keep interested stakeholders informed of meetings, new materials, and other information related to the West Slope SWRP and its implementation.	As needed	R, A	A	A	C	I	I
• ***Projects.*** Each individual agency will be responsible for apprising its ratepayers and the public of any actions initiated and related progress/results.	As needed	C	C	C	R, A	C	I
Coordination with Other Regional/Statewide Ongoing Efforts. Coordination and information sharing with other ongoing efforts will be beneficial to both the West Slope SWRP and the other efforts (Cosumnes, American, Bear, and Yuba Integrated Regional Water Management; American River Basin Integrated Regional Water Management Plan 2018 Update, Regional Water Management Plan, American River Basin Study, individual water agency, and other regional planning efforts, etc.). It is anticipated that this will occur on an as-needed basis.	As needed	R	A	A	I	I	I

Notes:
[1] RACI responsibility matrix. R = Responsible; A = Accountable; C = Consulted; I = Informed
[2] Agency will continue to be Responsible for the surface water storage and watershed management components. County will continue to be responsible for the stormwater component.
Key:
SWRP = Stormwater Resource Plan

5.4.2 Triggers to Reassess the West Slope Stormwater Resource Plan

Although the SWRP Partners intend to regularly revisit the West Slope SWRP and its performance and assess the need for an update every 5 years, there will likely be events or occurrences that have substantial effects on stormwater management and trigger an update of the West Slope SWRP (or a portion thereof) outside of that cycle. These triggers may include, but are not limited to:

- **State and Federal regulations or requirements** often change as well as new ones go into effect.
- **Unanticipated changes** resulting from natural disasters, infrastructure failures, or other events may require reassessment of projects.

5.5 PROCEDURE TO TRACK STATUS OF THE WEST SLOPE STORMWATER RESOURCE PLAN

All projects in the West Slope SWRP are currently in the planning phase of their project lifecycles. The stages of development are identified in the project planning sheet are identified below:

- Conceptual Development
- Planning
- Pre-Design
- Design

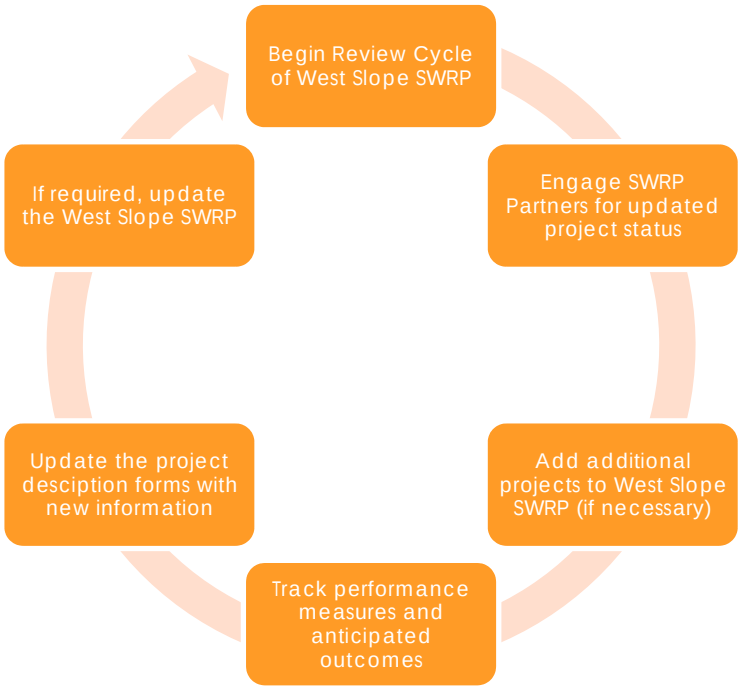
When a project is in the aforementioned stages, it is eligible for technical assistance. Once a project enters the next stages, the amount of funding for which it is eligible is limited:

- Construction
- Commissioning
- Operations and Maintenance

The project proponent should evaluate all sources, amounts, timing, and requirements. They are often different depending on the lifecycle stage of a project.

The West Slope SWRP identifies three components: Surface Water Storage, Watershed Management, and Stormwater Management. Stormwater Management was further separated into structural and non-structural projects to aid in comparison and prioritization, as described in Section 4. Implementing projects within each of these components has unique challenges. The West Slope SWRP encourages collaboration amongst entities to most efficiently and effectively implement projects and maximize benefits to the West Slope. It also encourages grouping of projects into larger projects or programs to meet more of the benefit categories, increase eligibility for funding, and increase efficiency of implementation.

Tracking the status of the West Slope SWRP will occur in a cyclic pattern three times a year. The cyclic revision patterns of the West Slope SWRP are presented in Figure 5-1 below.



Key:
SWRP= Stormwater Resource Plan

Figure 5-1. Iterative West Slope Stormwater Resource Plan Amendment Process

5.5.1 Timelines for All Active or Planned Project Components

Project proponents have provided preliminary implementation schedules the projects included in Appendix B. A master project schedule is presented in Figure 5-4. The intent of the master project schedule is to provide an opportunity for discussing the implementation schedule of projects during annual project implementation meetings. The implementation schedule will continue to be contingent upon receiving funding for the projects listed.

PLAN IMPLEMENTATION STRATEGY AND SCHEDULING OF PROJECTS

Project	Project Name	Start	End
	Start Year: 2015		
212	Cosumnes River Water Quality Monitoring Program	2015	2031
233	Fred's Noxious Weed Treatment-Vegetation Management	2015	2020
234	King Fire Pile Burning	2015	2019
	Start Year: 2017		
209	King Fire Watershed Restoration & Reforestation Project	2017	2020
210	Sand Fire Watershed Restoration & Reforestation Project	2017	2020
300	Urban Roadway Improvement Project - Western Placerville Interchange	2017	2019
301	Placerville Station II-Park and Ride Facility Improvements	2017	2019
303	Urban Roadway Improvement Poject - Mosquito Road Stabilization, Grind & Overlay Project	2017	2019
304	Mosquito Road Sewer Main Replacement	2017	2019
305	Urban Roadway Improvement Project - Woodridge Court, Grind & Overlay Project	2017	2019
306	Urban Roadway Improvement Project - Martin Lane, Grind & Overlay Project	2017	2019
323	Urban Roadway Improvement Project-Ray Lawyer Drive, Grind & Overlay Project	2017	2019
326	Sewer Relocation-Clay to Locust	2017	2019
	Start Year: 2018		
229	Cesar Fire Salvage Stewardship	2018	2021
230	2-Chaix Fire Thinning	2018	2021
231	Pompeii Fire Salvage Stewardship	2018	2021
232	Quidazoic Fire Salvage Stewardship	2018	2021
302	Canal Street LID Projects	2018	2020
309	Headington Yard Wash Rack	2018	2021
317	South East Connector-Expressway LID Projects	2018	2021
328	Our Water Our World - Outreach Program	2018	2031
329	Trash Amendments TMDL Implementation	2018	2031
333	Splash in the Class - Outreach Program	2018	2031
	Start Year: 2019		
216	Sand Ridge Road Paving	2019	2021
222	General Sherman Integrated Resource Timber Contract-Timber Sale	2019	2025
235	Tobacco Gulch Integrated Resource Timber Contract-Timber Sale & Thinning Project	2019	2025
236	John Don't Fuels Reduction	2019	2025
237	O'leary Cow Integrated Resource Service Contract/ Integrated Resource Timber Contract-Timber Sale & Thinning Project	2019	2025

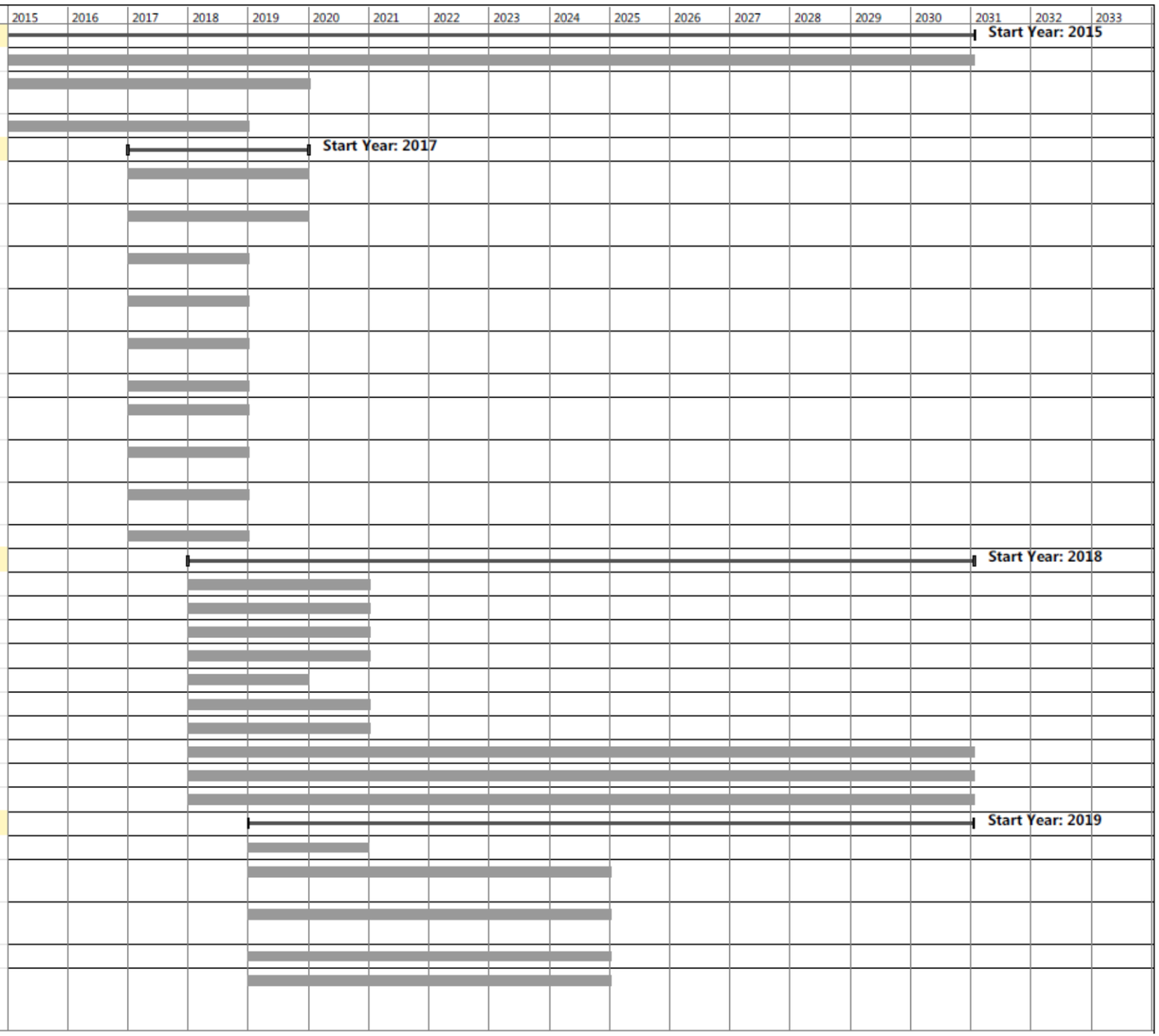


Figure 5-2. West Slope SWRP Project Implementation Schedule Pending Funding Availability

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PLAN IMPLEMENTATION STRATEGY AND SCHEDULING OF PROJECTS

Project	Project Name	Start	End
238	Trestle Integrated Resource Timber Contract-Timber Sale	2019	2025
239	Georgetown Insect Salvage Timber Sale	2019	2025
240	Middle Creek Integrated Resource Timber Contract-Timber Sale & Fuels Reduction Project	2019	2025
308	Town of El Dorado Green Street Project	2019	2022
310	Fairgrounds Water Quality Improvements	2019	2020
311	Maintenance Material Storage Buildings at Missouri Flat Rd and Somerset Sand Mine	2019	2020
312	Future Bass Lake Maintenance Station	2019	2020
313	Forni Road Slope Stabilization	2019	2021
314	Street Sweeping Program	2019	2020
315	Vactor Truck Program	2019	2020
316	Diamond Springs Parkway-Roadway and Drainage Improvement Project	2019	2023
318	Headington Yard to Weber Creek Conveyance	2019	2020
319	Countywide Park BMP Retrofit Improvements	2019	2031
327	El Dorado Hills Library Water Conservation Project	2019	2022
330	Countywide Water Quality Awareness Campaign	2019	2031
331	Countywide Stormwater Asset Management Program	2019	2021
334	County Water Quality Standards Improvement Project	2019	2021
335	West Slope Watershed and Pollutant Generation Study	2019	2030
336	West Slope BMP Manual	2019	2020
337	Outingdale Stormwater Management Study/Pre-Design	2019	2021
338	Stormwater Detention Basin- Hangtown Creek Flood Damage Reduction Project	2019	2020
339	Facility Upgrades for the El Dorado Disposal MRF	2019	2020
340	Union Mine Landfill Retention Pond	2019	2020
341	Best Management Practices for Agricultural Erosion and Sediment Control Manual	2019	2020
345	Cameron Park Drainage Improvements	2019	2022
346	Priority County Culvert Replacements	2019	2021
347	Sly Park Portal Subdivision Flood Management Project	2019	2021
348	Fish and Wildlife Routine Maintenance Agreement	2019	2021
	Start Year: 2020		
200	Biomass Plant-Union Mine	2020	2027
202	Slate Creek Monitoring Project	2020	2031
206	Carson Creek Restoration	2020	2022
207	New York Creek Restoration	2020	2022
208	Weber Creek Restoration	2020	2022
213	Anaerobic Digestion System at Union Mine WWTP	2020	2022

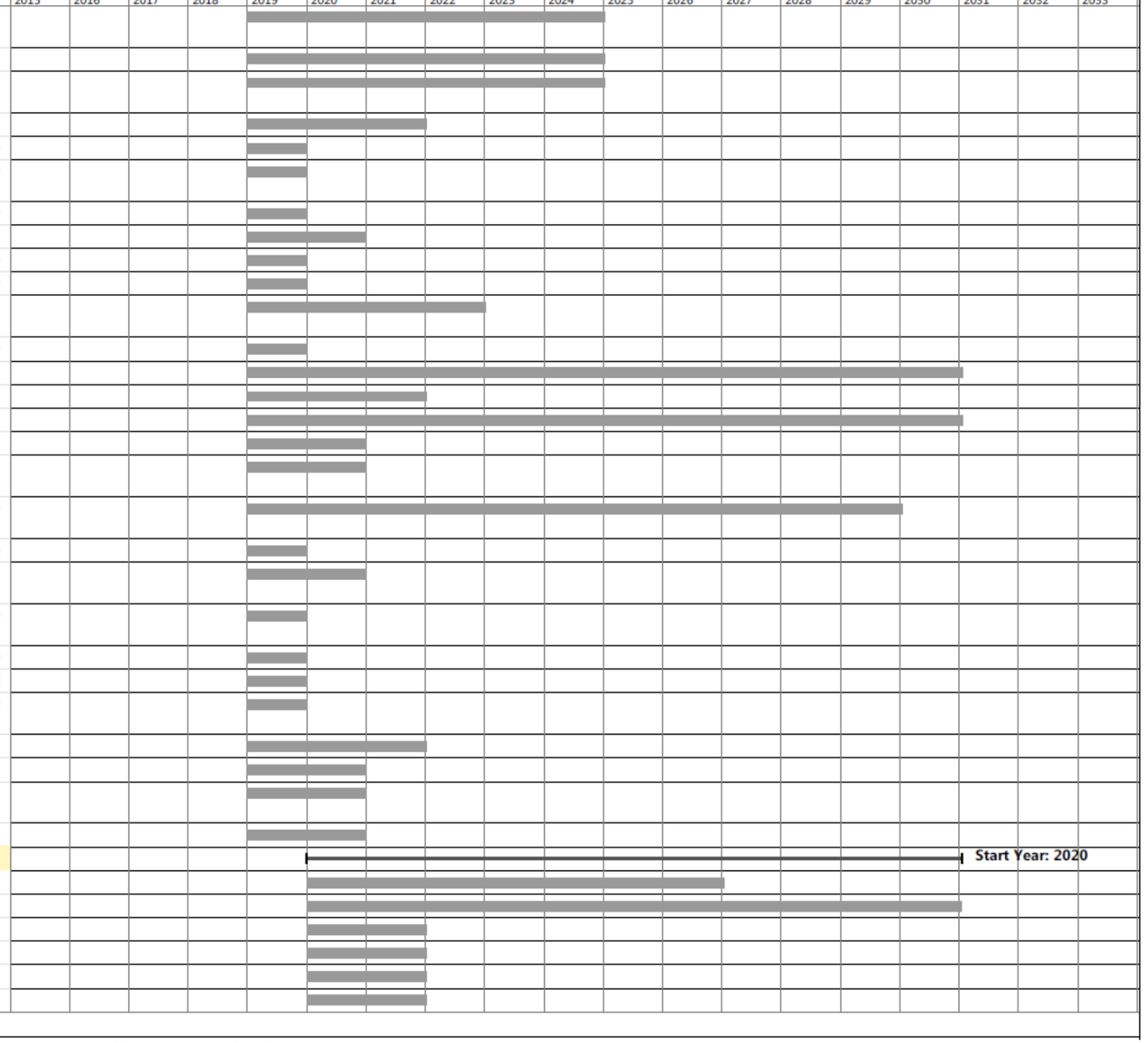

Figure 5-2. West Slope SWRP Project Implementation Schedule Pending Funding Availability (contd.)

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PLAN IMPLEMENTATION STRATEGY AND SCHEDULING OF PROJECTS

Project	Project Name	Start	End
214	In-Vessel Composting System at Union Mine Landfill or MRF	2020	2022
215	Compost Facility within El Dorado County	2020	2026
217	Residual Lime Remediation near El Dorado Trail	2020	2026
218	Countywide Water Quality Monitoring	2020	2031
219	Fire Adaptive along Highway 50-Fuels Reduction	2020	2026
221	Camino Bio Mass Facility	2020	2027
223	Two-fer Integrated Resource Timber Contract-Timber Sale	2020	2026
224	Reservoir Thinning Integrated Resource Timber Contract	2020	2026
225	Quintette Integrated Resource Timber Contract – Supplemental Information Report-Timber Sale	2020	2026
226	Western Georgetown Fuel Reduction Integrated Resource Timber Contract-Timber Sale	2020	2026
227	Georgetown Divide Fuelbreak	2020	2026
228	Jenkinson Lake Fuels Reduction	2020	2026
307	Town of El Dorado Drainage Improvements	2020	2022
320	BMP Countywide Demostration Projects	2020	2026
324	Airport Road/Broadway Culvert Storm Drain Improvement	2020	2021
350	Debby Lane/Green Valley Road Culvert Improvement	2020	2022
352	Lions Park Drainage Improvement	2020	2021
353	Pleasant Street Storm Drain Improvement	2020	2024
354	Wiltse Road Storm Drain Improvement	2020	2024
355	Pierroz Road at Hangtown Creek, Drainage Improvement	2020	2021
	Start Year: 2021		
343	Culvert Rehabilitation along Highway 50 near the City of Placerville	2021	2023
	Start Year: 2022		
342	Culvert Rehabilitation along Highway 50 near Cameron Park and Shingle Springs	2022	2024

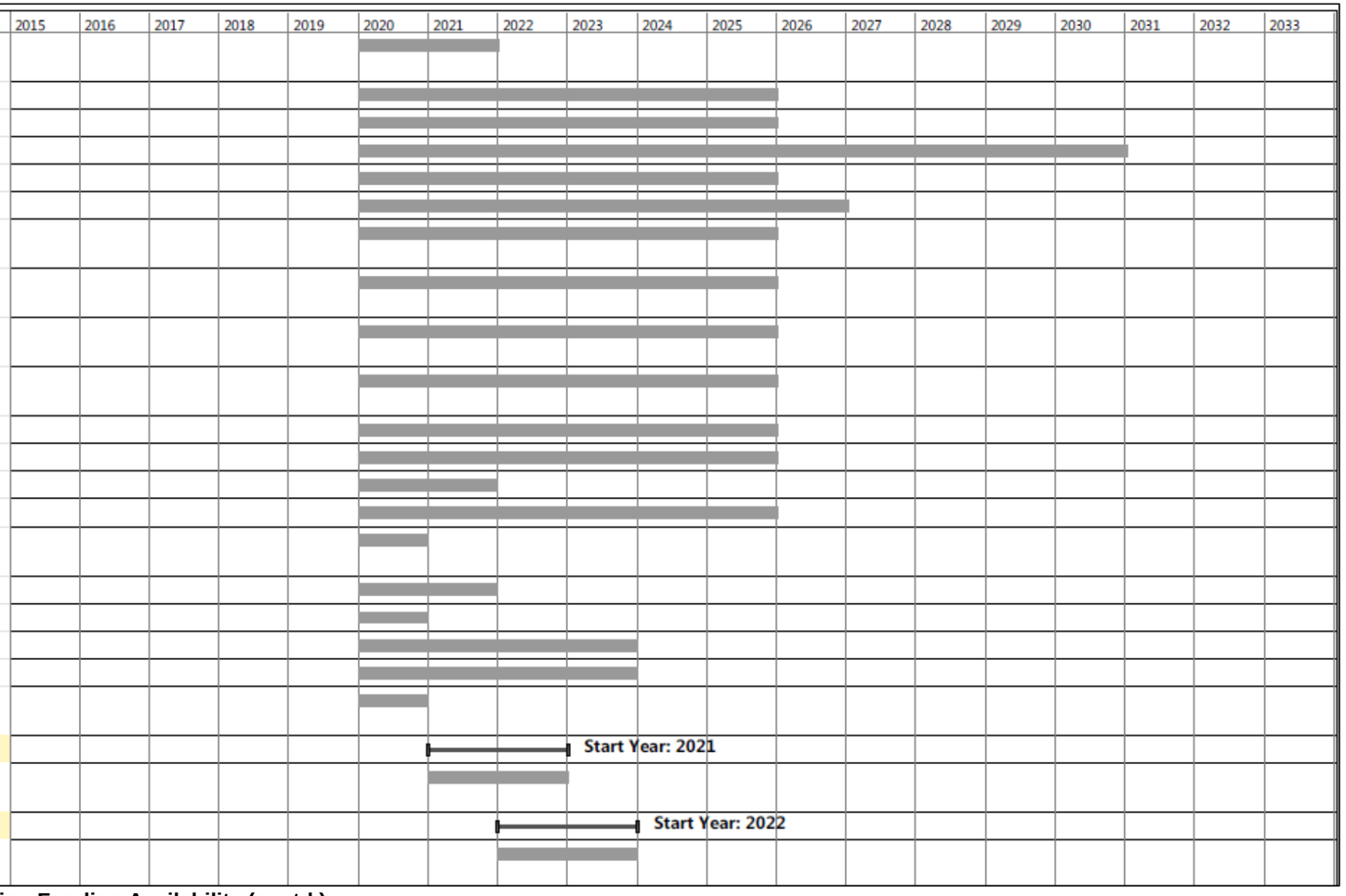

Figure 5-2. West Slope SWRP Project Implementation Schedule Pending Funding Availability (contd.)

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PLAN IMPLEMENTATION STRATEGY AND SCHEDULING OF PROJECTS

Project	Project Name	Start	End	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
	Start Year: 2025																				Start Year: 202	
220	Caples Watershed Improvement	2025	2031																			
349	Cedar Ravine Road Drainage Improvement	2025	2032																			
351	Full Capture Storm Drain Inlet Replacements in Placerville	2025	2029																			
	Start Year: 2028																					
100	Alder Creek Reservior	2028	2040																			

Key:
MRF = Material Recovery Facility
BMP = Best Management Practices
WWTP = Wastewater Treatment Plant
LID = Low Impact Development
TMDL = Total Maximum Daily Load

Figure 5-2. West Slope SWRP Project Implementation Schedule Pending Funding Availability (contd.)

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5.5.2 Strategy and Potential Timeline for Obtaining Necessary Permits

As funding becomes identified for projects, one of the first tasks will be identifying necessary permits as part of the design phase of the project. Depending on the type of project, the necessary permits will vary and sufficient time must be allocated to meet the overall project implementation schedules shown above. For project implementation, project proponents are responsible for being compliant with applicable laws, regulations, and permit conditions (e.g., transportation encroachment, utility, and building permits) as discussed in Section 1.5.

5.5.3 Information and Data Management

Managing water resources data at a watershed scale in a consistent manner and providing access to this information to the entities identified in Section 5.3 will be critical to successful implementation of the West Slope SWRP. Properly managed data will help the SWRP Partners, project proponents, stakeholders, interested parties, elected officials, and the public understand water quantity and quality issues, assess and develop additional potential projects as solutions, and implement projects efficiently.

The SWRP Partners intend to develop an online database with information on all current and future projects in the West Slope SWRP. The responsibility for providing project data is on the entity collecting it (i.e., project proponents). Any entity can contribute potential projects and updated project data to the Agency for consideration to incorporate in the database. This database will be managed by the Agency and updated on a regular basis, at least annually, by the SWRP Partners. While only the SWRP Partners will have access to the database, the information contained in the database will be published every December/January as part of the annual Appendix E update.

5.6 IMPLEMENTATION PERFORMANCE MEASURES

The West Slope SWRP utilizes an outcomes-based approach. This approach means that the SWRP Partners will measure the implementation of this plan against the overarching purpose rather than meeting specific numeric limits. Education and awareness about the direction of the West Slope SWRP in El Dorado County is required for successful implementation. Monitoring of performance measures will take place at two levels, the plan and individual implementation of projects. The West Slope SWRP will be measured against the following implementation performance measures:

- Make progress towards meeting West Slope SWRP objectives
- Provide additional funding for projects in the West Slope area
- Enhance the water quality and water availability in the West Slope area
- Educate the public about the how local water supplies are impacted by daily activities
- Create a dialogue with all entities implementing stormwater programs on the West Slope and collaborate to pursue funding opportunities

Implementation of projects will be measured against the following performance measures:

PLAN IMPLEMENTATION STRATEGY AND SCHEDULING OF PROJECTS

- Meet schedule, budget, and technical specifications identified in West Slope SWRP
- Realize multi-benefits in West Slope area
- Conduct active public outreach in project design and construction

The online database will serve as one method to track performance measures in combination with other monitoring efforts. These activities will provide ongoing analysis and information management as to the performance of West Slope SWRP implementation. The performance of the plan will be published every December/January as part of an annual accomplishment summary and Appendix E update. Future updates to the West Slope SWRP will also summarize the performance of the plan to date.

6.0 EDUCATION, OUTREACH, AND PUBLIC PARTICIPATION

This section describes the education, outreach, and public participation that were completed as part of the West Slope SWRP development, and outlines the plan for long-term continued participation.

6.1 PUBLIC EDUCATION, OUTREACH, AND PARTICIPATION DURING WEST SLOPE STORMWATER RESOURCE PLAN DEVELOPMENT

As part of West Slope SWRP development, the following public education and outreach activities were conducted to engage stakeholders and foster community participation, expand the mailing list of interested parties, and inform the public (Figure 6-1):

- **Webpage:** (https://www.edcgov.us/Water/Pages/Projects.aspx): The Agency posted West Slope SWRP information on its webpage and provided regular updates to alert the public of upcoming workshops, opportunities to comment, available reports and other materials, and related resources.
- **Workshops**: During development of the West Slope SWRP, two workshops were held that were open to the public, and announcements were posted on the webpage. The workshops provided opportunities for the public to develop a common understanding of the West Slope SWRP and contribute to plan development (draft content, technical information, project development and design, policies, etc.). These workshops were held October 25, 2017, and February 14, 2018.
- **Informational Briefings**: Informational briefings were made to local IRWM groups to engage larger audiences, inform the public, and provide opportunities for involvement. At each briefing, participants were informed of the West Slope SWRP and an invitation was extended to participate in plan development and review.
    - American River Basin IRWMP Planning Forum (October 23, 2017)
    - CABY Quarterly Planning Committee/Coordinating Committee Meeting (December 6, 2017)
    - American River Basin IRWMP Planning Forum (January 22, 2018)
- **Public Comment on West Slope SWRP**: The draft West Slope SWRP is undergoing a 30-day public comment period where notice of availability of the draft plan was widely disseminated through announcements on the webpage and notification to those on the mailing list described below. Information was provided regarding the structure and content of the draft plan, ways to provide comments, and a contact person for additional information and questions. All comments will be considered in finalizing the West Slope SWRP.
- **Mailing List**: A mailing list for the West Slope SWRP was developed. Please go to the webpage (https://www.edcgov.us/Water/Pages/Projects.aspx) to be added.

- **Distribution of West Slope SWRP**: Each of the SWRP Partners distributed the draft West Slope SWRP, as discussed below. The Agency maintains a list of elected officials, local entities and organizations. The Agency mailed a notification to this list, in addition to posting a notification on the webpage mentioned above. The County has developed a stakeholder database[1] that was used to solicit public comments from local residents, business owners, interested citizens, DAC and Economically Distressed Areas representatives, agricultural users, and other potential stakeholders. The draft plan was also advertised through the County's Facebook page. Placerville posted the draft plan on its webpage and Facebook page to notice its availability. The final West Slope SWRP will be made available on the webpage, distributed to the mailing list, and presented to the SWRP Partner's board and council members during their public meetings.

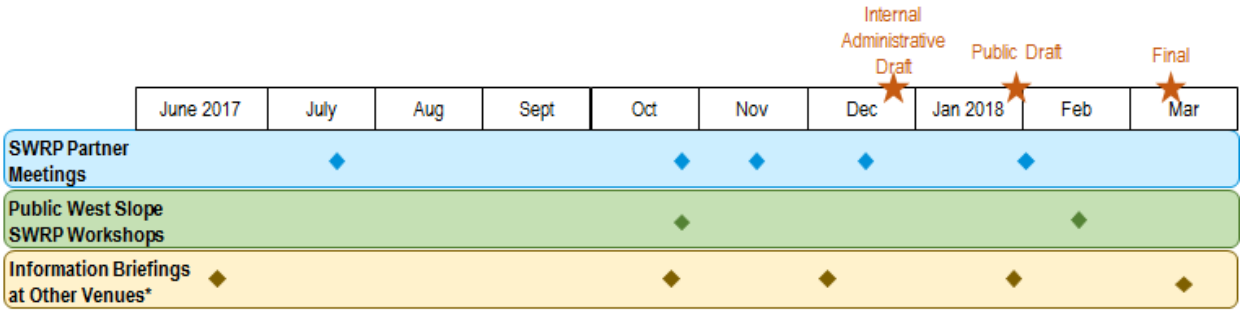

Figure 6-1. Outreach Activities During West Slope Stormwater Resource Plan Development

6.2 STRATEGY FOR LONG-TERM EDUCATION, OUTREACH, AND PUBLIC PARTICIPATION

The West Slope area is a sparsely populated foothill area and identifying a single location and time where all of the stakeholders, interested parties, and the public can easily and readily attend is unlikely. Thus, the SWRP Partners intend to provide opportunities for education, outreach, and public participation through several vehicles, including leveraging existing venues and forums whenever possible. Existing venues where the SWRP Partners are able to provide updates on the West Slope SWRP, include but are not limited to, the following:

- Regular meetings:
    - *Agency*
        - Board of Directors Meetings – Meetings are generally held the 2nd Wednesday of every month at 10:00 a.m. in the Agency's building and are open to the public. Meetings are

[1] To subscribe to the County's various e-mail lists, please go here: https://www.edcgov.us/landing/I%20Want%20To/Pages/email_subscription_service.aspx

live streamed and available on its webpage here: https://www.edcgov.us/Water/Pages/Meetings_and_Minutes.aspx.

- *County*
  - Board of Supervisors Meetings – Meetings are typically held three Tuesdays a month at 8:00 a.m. in the County's building and are open to the public. Special meetings and workshops are scheduled as needed. Meetings are live streamed and available on its webpage here/: https://www.edcgov.us/Government/BOS.
  - Planning Commission Meetings – The Planning Commission advises the Board of Supervisors on land use planning. Meetings are held on the 2nd and 4th Thursdays of every month at 8:30 a.m. in the County's building and are open to the public. More information can be found on their website here: http://edcapps.edcgov.us/bos/detail4.asp?BoardNumber=51.
- *Placerville*
  - City Council Meetings – Meetings are held on the second and fourth Tuesdays of each month. Special meetings and workshops are scheduled as needed. Meetings are held at 6:00 p.m. in Town Hall and are open to the public. More information can be found on their website here: https://www.cityofplacerville.org/mayor-and-city-council.
  - Planning Commission Meetings – The Planning Commission helps guide and monitor Placerville's long-term planning and development. Meetings are held on the 1st and 3rd Tuesdays of every month at 6:00 p.m. at Town Hall and are open to the public. More information can be found on their website here: https://www.cityofplacerville.org/pc-meetings.

- **Webpage:** The Agency will continue to periodically update its West Slope SWRP webpage to inform stakeholders, interested parties, and the public of upcoming activities and major implementation updates.
- Other Informational Briefings:
  - **CABY IRWM Effort:** As the West Slope SWRP and associated projects will be incorporated into the CABY IRWMP, the SWRP Partners intend to make use of the CABY IRWM venue to engage those with stormwater interest/expertise in the West Slope SWRP planning and implementation. The CABY IRWM planning commission is active and meets on a quarterly basis. Participation includes local government, Tribes, watershed groups, and interested partners in the foothills region of California. CABY Work Groups have also been formed as needed to address specific topics and stormwater could be a future focus.
  - **American River Basin IRWM Effort:** As a small portion of the West Slope SWRP is located in the American River Basin IRWM Planning Area, the SWRP Partners intend to provide updates as necessary during the American River Basin IRWMP's biannual meetings.

  - **Other Entities:** The SWRP Partners will also provide informational briefings to other entities as requested. Some active and existing groups in El Dorado County where updates on the West Slope SWRP implementation could be provided include Citizens for Water, SAGE (Surveyors, Architects, Geologists and Engineers), Apple Hill Growers Association, Farm Trails, and Gold Trail Grange

- **Mailing List:** The mailing list will continue to serve as the stakeholder database and be updated to provide updates on the West Slope SWRP implementation and future updates. The opportunity to be added to the mailing list will continue to be available on the webpage.

In addition to regular engagement and outreach related to the overall West Slope SWRP, proponents for each project will be responsible for engaging communities in project design and implementation.

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AUG 3 1 2017

Mr. Wendall Wall
Georgetown Divide Public Utility District
P.O. Box 4240
Georgetown, CA 95634

Dear Mr. Wall:

NOTICE OF APPLICABILITY; GEORGETOWN DIVIDE PUBLIC UTLITY DISTRICT WATER SYSTEM; STATEWIDE GENERAL PERMIT FOR DRINKING WATER SYSTEM DISCHARGES TO WATERS OF THE UNITED STATES

Thank you for submitting the August 27, 2015 application package for coverage under the Statewide Drinking Water Systems Discharge Permit,[1] adopted by the State Water Resources Control Board (State Water Board) in November 2014. The Statewide Drinking Water Systems Discharge Permit provides Clean Water Act regulatory coverage for: (1) discharges resulting from essential operations and maintenance activities of drinking water systems undertaken to comply with the federal Safe Drinking Water Act, California Health and Safety Code, and State Water Board's Division of Drinking Water permitting requirements; and (2) emergency discharges.

Notice of Applicability
The information submitted in the August 27, 2015 application package, including the Notice of Intent form and map for the system described below, satisfies the permit application requirements. Therefore, the application package is deemed complete. This Notice of Applicability implements regulatory coverage under the Statewide Drinking Water Systems Discharge Permit for the water system described below, effective as of July 1, 2017. A waste discharge identification number of 4DW0232 has been assigned to this coverage.

Discharge Description
The Georgetown Divide Public Utility District (District) Water System is a community drinking water system with 3,586 connections that serves a population of approximately 9,300 in the communities of Auburn Lake Trails, Cherry Acres, Cool, Garden Valley, Georgetown, Greenwood, Kelsey, Meadow View Acres, and Pilot Hill, in El Dorado County. The source of water for the system is water from the Sierra that flows into Stumpy Meadows Reservoir, which is then transported through a Gold-Rush era canal system and pipes into the Walton Lake and Auburn Trails Reservoir. The District treats its surface water at the Auburn Trails Water Treatment Plant and the Walton Lake Water Treatment Plant and any filter backwash water is reused for irrigation purposes. The system discharges to the North and South Fork of the

[1] Statewide General National Pollutant Discharge Elimination System (NPDES) Permit for Drinking Water System Discharges to Waters of the United States; State Water Board Order 2014-0194-DWQ (see http://www.waterboards.ca.gov/water_issues/programs/npdes/docs/drinkingwater/final_statewide_wqo2014_0194_dwq.pdf)

American River and tributaries including Big Sailor Creek, Black Rock Creek, Blue Tent Creek, Canyon Creek, Empire Creek, Irish Creek, Georgetown Creek, Johntown Creek, Knickerbocker Creek, Manhattan Creek, Penobscot Creek, Pilot Creek, Rock Creek, Slate Creek, Traverse Creek, and Whaler Creek. There are no applicable total maximum daily loads for these receiving waters.

General Requirements
To comply with the Statewide Drinking Water Systems Discharge Permit, the District shall:

a. Establish and implement appropriate best management practices.

b. Ensure that all planned discharges comply with the terms and requirements of the Statewide Drinking Water Systems Discharge Permit including applicable effluent limitations for chlorine residual and turbidity.

c. Take all necessary steps to review and update the effectiveness and adequacy of the control measures and best management practices.

d. Keep control measures and best management practices plan updated and available onsite for all system operators.

e. Conduct monitoring and reporting in compliance with the provisions and requirements in the Monitoring and Reporting Program, Attachment E of the Statewide Drinking Water Systems Discharge Permit.

f. Maintain self-monitoring reports including compliant and non-compliant discharge monitoring information at the system's main office and make them available upon request of State Water Board and Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff.

g. Submit an annual report and all reporting information required by the Monitoring and Reporting Program to the following address:

State Water Resources Control Board
Division of Water Quality
NPDES Wastewater Unit
1001 I Street, 15th Floor
Sacramento, CA 95814

Include the following certification in the annual monitoring report:

"I certify under penalty of law that this document and all enclosures were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

If you prefer to submit an electronic copy of the report you can do so by sending it to the following e-mail: DMR@waterboards.ca.gov and title the e-mail "DWS No. 0910013 Annual Report."

h. Notify the Central Valley Water Board per notification requirements in the Statewide Drinking Water Systems Discharge Permit's Monitoring and Reporting Program. The staff contact at the Central Valley Water Board Sacramento Office is Ms. Kari Holmes who may be contacted at (916) 464-4623 or Kari.Holmes@waterboards.ca.gov.

Previous Permitting Coverage
Based on your application package and staff review of the California Integrated Water Quality System database, the District's system does not have previous regulatory coverage for its discharges under any State Water Board or Central Valley Water Board order.

If you have any questions regarding this Notice of Applicability or the Statewide Drinking Water Systems Discharge Permit, please contact Mr. Renan Jauregui in the NPDES Wastewater Unit of the Division of Water Quality at (916) 341-5505 or renan.jauregui@waterboards.ca.gov.

Sincerely,

Karen Larsen, Deputy Director
Division of Water Quality

cc: Pascal Mues
NPDES Permits Office
U.S. EPA Region 9, WTR-5
75 Hawthorne Street
San Francisco, CA 94105

Pamela Creedon, Executive Officer
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114

Nichole Morgan, Supervising Water Resource Control Engineer
Central Valley Regional Water Quality Control Board
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SECOND REVISED DRAFT

STATE WATER RESOURCES CONTROL BOARD

1001 I Street, Sacramento, California 95814
http://www.waterboards.ca.gov/water_issues/programs/npdes

ORDER WQ 2014-XXXX-DWQ
GENERAL ORDER NO. CAGXXXXXX

STATEWIDE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR DRINKING WATER SYSTEM DISCHARGES TO WATERS OF THE UNITED STATES

Discharges from drinking water systems to surface waters in California are subject to waste discharge requirements as set forth in this Order, and as authorized by a Notice of Applicability issued by the Deputy Director of Water Quality (Deputy Director). Definitions for the purpose of this Order are included in Attachment A. Key definitions are as follows:

Table 1. Key Definitions for the Purpose of this Order

Drinking Water System[1]	A system with 1000[2] connections or greater that are regulated by the State Water Board Division of Drinking Water or a local county department of health, with the primary purpose of transmitting, treating and distributing safe drinking water. Drinking water systems include state owned/operated facilities such as parks, campgrounds, and rest areas [1] *This Order applies to community water systems as defined in Attachment A of this Order. This Order does not apply to non-community water systems or non-transient water systems as defined in Attachment A of this Order.* [2] *Systems with fewer than 1000 connections that discharge to waters of the United States have the option to enroll in this Order. Non-enrollment does not exempt dischargers from Clean Water Act requirements.*
Drinking Water System Discharge	Short-term or seasonal discharges from a drinking water system of water that has been dedicated for drinking water purposes
Water Purveyor	Any entity that discharges from a drinking water system, including water purveyors, wholesalers, distributors, districts, municipalities, private companies, and other entities that own or operate a community drinking water system
Discharger	A water purveyor that is authorized to discharge under this Order through an approved Notice of Applicability issued by the Deputy Director of Water Quality
Waters of the United States	Generally refers to surface waters, as defined for the purposes of the federal Clean Water Act. For the purpose of this Order, the terms “surface water”, and “receiving water” are interchangeably used to mean “waters of the United States,” unless noted otherwise.

Table 2. Administrative Information

This Order was adopted by the State Water Board on October 21, 2014:
This Order shall become effective on January 29, 2015 (100 days after the adoption date of this Order)
This Order shall expire on January 28, 2020

CERTIFICATION

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the State Water Board on October 21, 2014.

Jeanine Townsend
Clerk to the Board

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I. SCOPE OF STATEWIDE GENERAL ORDER AND REQUIRED REGULATORY COVERAGE

This Order is a National Pollutant Discharge Elimination System (NPDES) general permit that authorizes discharges from drinking water systems, as defined on Page 1 of this Order. This Order provides regulatory coverage for short-term or seasonal planned and emergency (unplanned) discharges resulting from a water purveyor's essential operations and maintenance activities undertaken to comply with the federal Safe Drinking Water Act, the California Health and Safety Code, and the State Water Board's Division of Drinking Water permitting requirements for providing reliable delivery of safe drinking water.

Planned discharges include regularly scheduled, automated, or non-regularly scheduled activities that must take place to comply with mandated regulations and that the water purveyor knows in advance will result in a discharge to surface water. Emergency discharges include unplanned discharges that occur due to facility leaks, system failures, operational errors, or catastrophic events for which the water purveyor is not aware of the discharge until after the discharge has commenced. Planned and emergency discharges may occur directly, through a constructed storm drain or through another conveyance system, to waters of the United States (U.S.).

The Federal Water Pollution Control Act (also referred to as the Clean Water Act) section 402 requires that a discharge of any pollutant or combination of pollutants to surface waters that are deemed waters of the U.S., with certain exceptions, be regulated by a NPDES permit. (For the purpose of this Order, the terms "waters of the United States [or U.S.]", "surface waters" and "receiving waters" are used interchangeably unless noted otherwise.) On September 22, 1989, the U.S. Environmental Protection Agency (U.S. EPA) granted the State of California, through the State Water Resources Control Board (State Water Board) and the Regional Water Quality Control Boards (Regional Water Boards), the authority to issue NPDES permits pursuant to title 40 Code of Federal Regulations parts 122 and 123.

Discharges of a pollutant from a drinking water system, regardless of the size of the system, are required to be regulated by an NPDES permit if the discharges flow into a water of the U.S. Title 40 Code of Federal Regulations part 122.28 provides for issuance of general permits to regulate a category of dischargers if they involve the same or substantially similar types of operations; discharge the same type of waste; require the same type of effluent limitations or operating conditions; require similar monitoring; and are more appropriately regulated under a general order rather than individual orders. Discharges from drinking water systems that result from mandated activities to protect public health are of substantially similar types of operations, discharging the same type of waste.

This Order requires all water purveyors in California with drinking water system discharges to waters of the U.S. as described in Section I.B of this Order, except those water purveyors that meet the exception criteria identified in section I.A of this Order, to obtain NPDES regulatory coverage through enrollment in this statewide NPDES General Order. The water purveyor shall submit an application package to the State Water Board in accordance with section II.C.1 *Application Package Requirements* by **January 29, 2015**.

A. Water Purveyors NOT Required to Enroll in This Order

Water purveyors that meet any of the following criteria, items 1 through 6, are NOT required to submit an application package to obtain coverage through enrollment in this particular statewide NPDES General Order; this Order is, however, available for water purveyors that meet the criteria of items 1 through 3 below and choose to enroll. (This Order does not exempt any water purveyor from federal Clean Water Act requirements to obtain NPDES regulatory coverage for its discharges to waters of the U.S.) By **February 1, 2015**, water purveyors that meet any one of the items 2 through 5 below shall submit to the State Water Board a Notice of Non-Applicability form (see Attachment B-2) that certifies NPDES regulatory coverage from this Order is not required. A water purveyor with multiple community water systems in California need only submit one Notice of Non-Applicability for its systems that meet the same criterion.

1. The drinking water system has fewer than 1000 connections that deliver drinking water to end users. (This does not include water wholesalers as defined in Attachment A that deliver water to other drinking water systems); or

2. The water purveyor discharges solely to a municipal separate storm sewer system(s) (MS4) and has an established local agreement with the MS4 permittee to discharge into its system(s),

   AND

   The corresponding Regional Water Board Executive Officer provides written confirmation to the State Water Board Deputy Director that the local agreement provides sufficient regulation of the subject drinking water system discharges through an existing MS4 NPDES permit; or

3. The water purveyor is an MS4 permittee, or co-permittee, named on a State Water Board or a Regional Water Board issued MS4 permit that also authorizes discharges from drinking water systems, and all drinking water system discharges solely discharge into its own MS4 system; or

4. The water purveyor's discharge is regulated under an existing individual site-specific NPDES permit issued by the Regional Water Board because: (1) the discharge from the system is outside of the scope of this low threat Order, and/or (2) a Total Maximum Daily Load (TMDL) was adopted and the Regional Water Board determined that TMDL-specific permit requirements for its drinking water system(s) discharges are appropriate because those discharges may contribute to the impairment of the water body; or

5. All discharges from the drinking water system do not discharge to a water of the U.S.; or

6. The discharge is exempt from the legal requirement to obtain an NPDES permit under federal law.

After review, a Notice of Non-Applicability Approval by the State Water Board's Deputy Director of Water Quality (Deputy Director) may be issued. If the Notice of Non-Applicability is not complete or the discharge is deemed ineligible, the Deputy Director will send a response letter to the applicant outlining: (1) the missing information that deems the Notice of Non-Applicability incomplete, or (2) why the described discharge is not eligible and thus the water purveyor must obtain coverage under this Order. The State Water Board will provide the water purveyor **60 days from the date of the response letter** to provide State Water Board staff the items necessary to complete the Notice of Non-Applicability or to submit a complete application package in accordance with section II.C of this Order.

B. Discharges Authorized Under This Order

This Order authorizes drinking water system discharges (as defined on Page 1) resulting from a water purveyor's essential operations and activities undertaken to comply with the federal Safe Drinking Water Act, the California Health and Safety Code, and the State Water Board's Division of Drinking Water permitting requirements. Discharges authorized by this Order are composed solely of water that is dedicated by drinking water facilities for the primary purpose of providing safe and reliable drinking water. Additionally, discharges authorized under this Order are determined to not adversely affect or impact beneficial uses of the receiving waters when properly managed through best management practices. Such discharges include, but are not limited to, discharges from supply wells, transmission systems, water treatment facilities, water distribution systems, and storage facilities.

This Order authorizes single discharges at one identified location and multiple simultaneous discharges at multiple locations. Authorized discharges to waters of the U.S. may include, but are not limited to, the following discharges:

1. Planned Discharges Due To:

a. Groundwater supply well flushing or pump-to-waste.
b. Groundwater well development, rehabilitation, and testing.
c. Groundwater monitoring for purpose of supply well development, rehabilitation and testing.
d. Trench dewatering of drinking water during planned repairs.
e. Transmission system installation, cleaning, and testing.
f. Water treatment plant operations.
g. Distribution system storage tank or reservoir releases.
h. Distribution system dewatering, flushing, and pressure testing.
i. Fire flow / fire hydrant testing.
j. Meter testing.
k. Automated water quality analyzers operations.
l. Pressure relief valves.

m. Unscheduled activities that must be undertaken to comply with mandates of the Federal Drinking Water Act and California Health and Safety Code.

2. Emergency (Unplanned) Discharges Due To:

a. Emergency drinking water system failures and repairs including transmission and distribution system failures and repairs.
b. Trench dewatering due to an emergency failure.
c. Operation errors.
d. Catastrophic events.

C. Discharges Not Authorized Under This Order

The State Water Board does not authorize any of the following discharges to waters of the U.S. under this Order:

1. Discharges that are not within the scope of this Order as described in section I and/or are not authorized by a Notice of Applicability issued by the Deputy Director of Water Quality (Deputy Director); or

2. Discharges to a water of the U.S. with a total maximum daily load (TMDL) that prescribes a waste load allocation to a water purveyor, where the Deputy Director determines that the requirements of this Order are not consistent with the assumptions and requirements of the TMDL and thus compliance with this Order is not sufficient for the water purveyor to comply with the imposed TMDL requirements; or

3. Discharges from new drinking water systems (not an expansion of an existing system) into a Clean Water Act section 303(d)-listed impaired water body that is impaired for a constituent that exists in the new discharge at a concentration greater than the criteria used to establish the impairment of the water body, and for which a regional water board has issued an individual permit that addresses the TMDL requirements; or

4. Direct discharges into areas designated by the State Water Board as Areas of Special Biological Significance (ASBS).

II. PERMIT COVERAGE AND APPLICATION REQUIREMENTS

A. Permit Coverage

This Order provides regulatory coverage to water purveyors with existing and potential authorized discharges as set forth in section I.B to waters of the U.S. from a community drinking water system that does not adversely affect or impact beneficial uses of the receiving water. Permit coverage may include discharges from work conducted by contractors on behalf of the water purveyor.

B. Permit Effective Date

This Order becomes effective **January 28, 2015**, 100 days after the adoption date of this Order. By **February 1, 2015**, all water purveyors that do not meet the criteria of section I.A. of this Order shall submit a complete application package in accordance with the following section II.C.

C. Application Package Requirements

To obtain regulatory coverage under this Order, a water purveyor must submit to the State Water Board a complete application package that includes all the following items. A water purveyor with multiple drinking water systems in California need only submit one complete application package (with individual Notice of Intent forms for each of its drinking water systems) and obtain one Notice of Applicability for regulatory coverage of all its systems that discharge to waters of the U.S.

1. **Notice of Intent.** A completed Notice of Intent form for each of its drinking water systems (shown as Attachment B1 of this Order), signed and certified in accordance with section V.B., *Signatory and Certification Requirements*, of Attachment D – Standard Provisions.

2. **Application Package Fee.** A fee payable to the State Water Board in accordance with California Code of Regulations, title 23, or subsequent fee regulations updates. The current fee schedule is available at the following website: http://www.waterboards.ca.gov/resources/fees

   Only one fee is required for an application package requesting coverage for multiple drinking water systems.

3. **Site Information.**
   a. A site schematic showing the following items:
      i. The general location of the community drinking water facilities and the boundaries of the water purveyor's service area(s); and
      ii. The general location of all groundwater supply wells and any discharge locations to surface waters; and
      iii. General identification of the portion of the community water system that discharges within a 300-foot conveyance distance from the receiving water(s) and/or within a 300-foot radius of the receiving water(s).
   b. Names of all named receiving water bodies and/or major downstream water bodies.
   c. A description of the multiple uses of the water prior to surface water discharge or beneficial reuse that the discharges will serve (i.e. ground water recharge, irrigation).
   d. Reason(s) that the discharge water cannot be utilized for multiple uses or beneficial reuse. (Refer to section VI. MULTIPLE USES OR BENEFICIAL REUSE, below)

4. **Total Maximum Daily Loads (TMDL) Constituent-specific Application Package Supplement** (applicable for discharges into waters of the U.S. identified in section III. K of the Fact Sheet). A supplement to the application requirements listed above shall include the following items:
    i. **Laboratory Analysis of TMDL-specific constituent(s).** (The laboratory analysis shall be conducted by a laboratory certified by the Environmental Laboratory Accreditation Program (ELAP).) The application package supplement shall include a laboratory analysis sheet(s) indicating the concentration of the applicable TMDL specific constituent(s) in the drinking water system discharge at the point of discharge. The monitoring and analysis shall be conducted in accordance with title 40 Code of Federal Regulations part 136. The water purveyor shall submit the following items for the application supplement to be deemed complete:
        a) A minimum of two samples representative of the drinking water system discharge that contains or has the potential to contain the greatest concentration or level of constituent/parameter associated with the TMDL constituent/parameter. The samples shall be taken at a location after the appropriate treatment or controls are implemented for the constituent associated with the TMDL; and
        b) The estimated minimum and maximum discharge volume per discharge event; and
        c) The estimated average discharge volume from the system per year. The estimated volumes may be based on historical data.
    ii. **TMDL-specific Best Management Practices.** Description of site-specific best management practices that properly treat and/or control corresponding TMDL constituents in the discharge to a concentration or level less than the water purveyor's applicable TMDL-specific permit requirement (s) as set forth in Attachment G, if any.

    The supplemental analytical information will be used to confirm that the discharge does not contribute to the specific impairment of the TMDL-related waterbody(ies) and that the requirements in this Order are sufficient to ensure compliance with the specific TMDLs.

D. State Water Board Notice of Applicability

After the water purveyor's application package is deemed complete, the Deputy Director will issue a Notice of Applicability. Regulatory coverage for the planned and emergency discharges that occur within the areas identified in the application package commences with the date of issuance of a Notice of Applicability to the water purveyor. If the submitted application package is not complete in accordance with previous section II.C., or the discharge is deemed ineligible for coverage under this Order, the Deputy Director will send a response letter to the applicant outlining: (1) the missing information that renders the application package incomplete, or (2) why the described discharge is not eligible for coverage under this Order. The water purveyor will have **60 days from the**

date of the response letter to provide State Water Board staff the items necessary to complete the application package.

E. Permit Coverage Termination

1. **Termination of Existing Regional Water Board Permit Coverage.** Upon the issuance of the NOA in accordance with this Order, the State Water Board expects the applicable Regional Water Board to terminate regulatory coverage under an existing non-MS4 Regional Water Board NPDES permit for discharges within the scope of this Order.

2. **Termination of Statewide Permit Coverage or Revocation of Notice of Non-Applicability.** The Deputy Director may terminate coverage or revoke a Notice of Non-Applicability Approval (NONAA) under this Order for any of the specified causes, and require application for coverage under an individual or other NPDES permit as set forth in title 40 Code of Federal Regulations part 122.28(b)(3). Causes for permit coverage termination or NONAA revocation include, but are not limited to, the following:
   a. Violation of any term or condition of this Order; or
   b. Misrepresentation or failure to disclose all relevant facts in obtaining permit coverage or non-applicability status under this Order, or
   c. Written request from a Discharger to terminate enrollment because discharge has ceased or that the permit is no longer needed.

   Annual permit fees will be assessed by the State Water Board up to the date of written termination notification from the State Water Board to the Discharger, or the date of a termination request letter from the Discharger to the State Water Board, whichever is applicable.

3. **Qualified Biologist Certification Following Project Completion.** Upon completion of the project, the Discharger shall provide certification by a qualified biologist that beneficial uses of the receiving waters have been restored. For drinking water system discharges, completion of the project is when the water purveyor ceases discharges from its drinking water system under this Order or subsequently reissued Order, or when the State and/or Regional Water board terminates NPDES permit coverage for the discharge(s), whichever is sooner.

F. Permit Transfer

A change in ownership of the facilities authorized to discharge through coverage under this Order requires the current owner to provide written notice to the State Water Board at least 30 days in advance of transfer of ownership. The Deputy Director may determine that the new owner must submit an application package to seek coverage under this Order if the nature or location(s) of the discharge(s) have changed from the application package on file.

III. FINDINGS

The State Water Board finds the following:

A. Legal Authorities. This Order serves as statewide Waste Discharge Requirements (WDRs) pursuant to California Water Code article 4, chapter 4, division 7 (commencing with § 13260). This Order is also issued pursuant to federal Clean Water Act (CWA) section 402 and implementing regulations adopted by the U.S. EPA, and the California Water Code, chapter 5.5, division 7 (commencing with § 13370). This Order shall serve as a statewide general NPDES permit for point source discharges from single or multiple discharge points to surface waters, storm drains, and other storm water conveyances leading to waters of the U.S.

B. Background and Rationale for Requirements. The Fact Sheet (Attachment F) contains background information and rationale for the requirements in this Order, and is hereby incorporated into and constitutes findings for this Order. Attachments A through E, G, and H are also incorporated into this Order.

C. Termination of Existing Coverage Under Similar Regional Water Board Orders. The State Water Board's intention in the issuance of this statewide NPDES Permit is to provide consistent and efficient regulation of discharges from drinking water systems statewide. To provide such consistency, the State Water Board intends that existing regulatory coverage under an existing non-MS4 Regional Water Board NPDES permit for discharges regulated under this Order will be terminated by the applicable regional water board upon issuance of the Notice of Applicability to a water purveyor per the terms of this Order.

D. Threat and Complexity of Discharge.
When mitigated through implementation of appropriate management practices, treatment and/or controls, discharges from community water systems, as defined under this Order, pose no adverse effects or impacts to beneficial uses of the receiving waters. In accordance with the State Water Board fee regulations, the discharges that are regulated under this general NPDES Permit require minimal or no additional treatment systems to meet limits and pose no significant threat to water quality and therefore are of low threat and low complexity.

E. State Implementation Policy. As adopted in March 2000, and amended in February 2005, the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP) establishes implementation provisions for priority pollutant criteria, and objectives and provisions for chronic toxicity control. Section 5.3 of the SIP allows for the granting of a categorical exception for drinking water system activities conducted to fulfill statutory requirements mandated by federal and state regulations.

F. California Ocean Plan. In 1972, the State Water Board adopted the Water Quality Control Plan for Ocean Waters of California (hereinafter Ocean Plan), as amended. The latest Ocean Plan amendment became effective on August 19, 2013. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean waters of the State. To protect the beneficial uses of ocean water, the Ocean Plan establishes water

quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan and are applicable to those discharges directly into the Ocean or indirectly via a storm water system that drains into the Ocean near the location of discharge. This Order does not authorize direct discharges into Areas of Special Biological Significance (ASBS).

Section III.J of the Ocean Plan allows the State Water Board to grant an exception where the State Water Board determines that the exception will not compromise protection of the ocean waters or beneficial uses and the public interest will be served.

G. Exception Resolution. On October 21, 2014, the State Water Board adopted a Resolution approving an exception to the State Implementation Policy and the Ocean Plan to water purveyors statewide for discharges from drinking water systems from complying with specified priority pollutant criteria and ocean plan objectives. As provided in Resolution 2014-XXXX, the State Water Board granted an exception per section 5.3 of the State Implementation Policy to water purveyors statewide, for planned and emergency discharges to inland surface waters, enclosed bays and estuaries. Similarly, as provided in Resolution 2014-XXXX, the State Water Board granted water purveyors with drinking water system discharges to the ocean, other than direct discharges into ASBS, an Ocean Plan exception for compliance with specified Ocean Plan objectives. As further discussed in the Fact Sheet (Attachment F), the State Water Board finds that in accordance with the requirements of the SIP and Ocean Plan, discharges from drinking water systems qualify for an exception of the State Implementation Policy and Ocean Plan per Resolution 2014-XXXX.

H. California Environmental Quality Act. Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA), (commencing with section 21100) of Division 13 of the Public Resources Code.

Additionally, pursuant to CEQA, Public Resources Code section 21100 et seq., on October 21, 2014 the State Water Board adopted Resolution 2014-XXXX approving a Mitigated Negative Declaration for excepting the type of discharges as covered under this Order from specified requirements of the State Implementation Policy and the California Ocean Plan.

I. Total Maximum Daily Load (TMDL) Implementation. A review of Regional Water Board TMDLs found that, as of the adoption date of this Order, only the Los Angeles Regional Water Board and the San Diego Regional Water Board have TMDLs that either directly apply waste load allocations to, or may indirectly imply that waste load allocations are applicable to, the discharges from drinking water systems regulated under this General Order. None of these TMDLs established waste load allocations that apply exclusively to discharges from drinking water systems. These TMDLs are applicable to the discharges from drinking water systems authorized under this Order and are therefore implemented by this Order.

This Order requires TMDL-related sampling of discharges from drinking water systems identified in a TMDL. If a Regional Water Board determines that any of these TMDLs, or any newly approved TMDLs, establish requirements that should be implemented

through TMDL-specific permit requirements for the discharges from drinking water systems that are authorized under this Order, the Regional Water Board may issue permit(s) for those discharges, with coverage under this Order subsequently terminated. Alternatively, if further TMDLs are adopted that address pollutants that are likely to be in discharges from drinking water systems, and allocate waste loads specifically to water purveyors regulated under this Order, the State Water Board may consider adding additional TMDL-specific permit requirements to Attachment G of this Order in a subsequent permit amendment or renewal.

J. Notification of Interested Parties. State and Regional Water Board staffs have conducted eight stakeholder meetings statewide, and numerous other informal communications, and have notified prospective water purveyors and interested agencies and persons of the intent to issue this statewide NPDES permit and prescribe these statewide waste discharge requirements. The State Water Board provided an opportunity for all interested parties to submit written comments and testimony.

K. Consideration of Public Comment. The State Water Board, in an August 5, 2014 public hearing, heard and considered public comments pertaining to the draft Order. The State Water Board also considered all written public comments submitted by the public comment due date of August 19, 2014, prior to adopting this Order. The Fact Sheet (Attachment F) provides details regarding the public notice and public hearing.

THEREFORE, IT IS HEREBY ORDERED that, in order to meet the provisions contained in California Water Code, Division 7 (commencing with section 13000) and regulations adopted thereunder, and the provisions contained in the Clean Water Act and regulations and guidelines adopted thereunder, a water purveyor shall comply with the requirements of this Order. Water purveyors that have obtained coverage under this Order shall comply with the requirements in sections IV. through VII. (Discharge Specifications and Effluent Limitations, Receiving Water Limitations, Multiple Uses or Beneficial Uses Provisions, and Compliance Determination), Attachments D and E (Standard Provisions and Monitoring and Reporting Program) of this Order, and Attachment G (TMDL-related requirements) as applicable.

IV. DISCHARGE SPECIFICATIONS AND EFFLUENT LIMITATIONS

For purposes of this Order, references to “discharge(s)” mean discharge(s) that may occur directly, through a constructed storm drain, or through other conveyance system, to waters of U.S. The Discharger shall comply with the following discharge specifications and effluent limitations.

A. Specification for Implementation of Best Management Practices

1. The Discharger shall implement best management practices (BMPs) that treat or control pollutants from its discharges to maintain compliance with this Order. The Discharger shall properly manage <u>all</u> planned discharges and implement proven BMPs provided by professional associations or institutes such as the American Water Works

Association, to assure that beneficial uses of the receiving water body(ies) are not adversely affected or impacted. For emergency discharges, the Discharger shall implement BMP procedures as soon as feasible while concurrently protecting public health and safety. Attachment C of this Order provides example BMPs.

At minimum, the Discharger shall implement BMPs for all planned discharges to achieve the following performance measures:

i. Prevent aquatic toxicity by using dechlorination chemical additions, implementing equivalent proven dechlorination methods, or assuring that the chlorine in the discharge dissipates naturally prior to discharge;

ii. Prevent riparian erosion and hydromodification by implementing flow dissipation, erosion control, and hydromodification-prevention measures; and

iii. Minimize sediment discharge, turbidity and color impacts by implementing sediment, turbidity, erosion and color control measures.

2. For Groundwater Supply Well Operations, the Discharger shall implement treatment systems or BMPs for all groundwater well development, rehabilitation, or operation discharges to waters of the U.S. to maintain compliance with
   (1) Receiving water limitation V.G. Turbidity of this Order, and
   (2) A turbidity level of 100 Nephelometric Turbidity Units (NTUs) or less in the discharge. The Discharger shall modify, change or enhance BMPs when the turbidity level is greater than 100 NTU, until the turbidity level is 100 NTU or less.

3. The Discharger shall implement quality assurance and quality control protocol to assure best management practices, monitoring, and reporting are effective, valid, and in compliance with this Order. The Discharger shall train all personnel operating the drinking water system and responding to emergency discharges to assure the quality assurance and quality control protocol is properly implemented.
4. For planned discharges, BMPs shall be implemented prior to and during any discharge. For planned but unscheduled or automated discharges from pressure relief valves and unchlorinated pump-to waste wells, BMPs shall be implemented unless infeasible (e.g., inaccessible, inadequate space). For emergency discharges, BMPs shall be implemented as soon as feasible following assurance that public safety, property, and infrastructure are protected.
5. In fulfilling the requirements of this section, the Discharger may implement the example BMPs contained in Attachment C, or proven BMPs per updated approved guidance established by industry experts, professional associations, or entities (e.g. *2014 Edition of the BMP Manual for Drinking Water System Releases* published by the California-Nevada Section of the American Water Works Association).
6. The Discharger shall maintain a documented log of all BMPs implemented for its discharges and make it available to State and Regional Water Board staff upon request.

7. The Discharger shall modify BMPs as necessary to maintain compliance with the requirements of this Order. If monitoring results or other available information demonstrate that the discharge is not in compliance, the Discharger shall determine the source of non-compliance, and develop and implement new or revised BMPs as necessary. As part of this process, the Discharger shall validate the effectiveness of any new or revised BMPs to achieve the requirements of this Order. All non-compliance and corresponding corrective actions to address non-compliance shall be reported to the State Water Board in the annual report, as required in the Monitoring and Reporting Program (Attachment E) of this Order. A log documenting the additional or revised BMPs shall be made available upon request by staff of the State and/or Regional Water Board.

B. Effluent Limitations

1. All Discharges of Superchlorinated Water:

a. The total chlorine residual concentration in the discharge shall not exceed 0.019 mg/L.

b. A field monitoring result with a total residual chlorine concentration greater than or equal to 0.1 mg/L shall be deemed out of compliance with a chlorine effluent limitation.

2. All Planned Discharges directly into, or within 300 feet of, Inland Surface Waters, Enclosed Bays, and Estuaries

a. The total chlorine residual concentration in the discharge shall not exceed 0.019 mg/L.
b. A field monitoring result with a total residual chlorine concentration greater than or equal to 0.1 mg/L shall be deemed out of compliance with a chlorine effluent limitation.

3. All Planned Discharges directly into, or within 300 feet of, Ocean Waters

a. The total chlorine residual concentration in the discharge shall not exceed 0.008 mg/L.
b. A field monitoring result with a total residual chlorine concentration greater than or equal to 0.1 mg/L shall be deemed out of compliance with a chlorine effluent limitation.

c. The turbidity concentration in the discharge shall not exceed 225 NTU at any time.

V. RECEIVING WATER LIMITATIONS

Receiving water limitations are based on water quality objectives contained in Regional Water Quality Control Board Basin Plans and State Water Board water quality control plans, including the Ocean Plan, and policies, and are a required part of this Order. Drinking water system discharges to the receiving water that are authorized to discharge under this Order shall not violate any applicable basin plan or water quality control plan, and at minimum shall not cause or contribute to an occurrence of the following in the receiving water:

A. pH. The pH level to be outside the range of the pH receiving water objective in a corresponding Regional Water Board basin plan.

B. Chemical Constituents. Chemical constituents to be present in concentrations that adversely affect beneficial uses.

C. Floating Material and Trash. Floating material, debris or trash to be present that cause nuisance or adversely affect beneficial uses.

D. Sediment and Total Suspended Solids. The sediment load and total suspended solids discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

E. Toxicity. Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.

F. Hydromodification. Velocity and/or volume of discharge to modify the existing physical characteristics of a water body.

G. Turbidity. Turbidity concentrations to exceed corresponding Regional Water Board basin plan water quality objectives for turbidity.

VI. MULTIPLE USES OR BENEFICIAL REUSE

The discharge to surface waters may be considered wasteful when it is feasible for the water to be used prior to discharge. The State Water Board strongly encourages all water purveyors to put all or part of the discharge water to multiple uses or a beneficial reuse prior to discharge into surface water. Because of the high quality of the discharge water addressed in this Order, discharges authorized under this Order that are put to multiple use or beneficial reuse are not required to be monitored or to obtain any other waste discharge requirements if the water that would otherwise be discharged is instead collected and reused for landscape irrigation, agricultural irrigation or other uses in a manner that augments the existing water supply, or if the discharge is directly or indirectly discharged to: (1) storm water capture basin(s), (2) low impact development features, or (3) other groundwater-recharge system(s).

VII. PROVISIONS

A. Standard Provisions

The Discharger shall comply with all Standard Provisions in Attachment D.

B. Monitoring and Reporting Program Requirements

The Discharger shall comply with the Monitoring and Reporting Program requirements in Attachment E.

C. Special Provisions

1. Reopener Provisions

The State Water Board may modify or reopen this Order prior to its expiration date in any of the following circumstances:

a. If present or future investigations demonstrate that the discharges governed by, and in compliance with, this Order cause adverse impacts on water quality or beneficial uses of the receiving waters;

b. If State Water Board precedential decisions, new policies, new laws, or new regulations are adopted;

c. If an administrative or judicial decision on a separate NPDES permit or Waste Discharge Requirements addresses requirements applicable to discharges authorized in this Order; and/or

d. As otherwise authorized by law.

D. Noncompliance

Noncompliance with any requirement of this Order may be subject to enforcement action by the State Water Board and/or Regional Water Board as authorized under the Porter Cologne Water Quality Control Act (Water Code Section 13000), consistent with the State Water Board's enforcement policy.

VIII. COMPLIANCE DETERMINATION

Compliance with the final effluent limitations contained in Section IV.B of this Order will be determined as specified below:

A. Permit Compliance

Compliance with applicable effluent limitations, BMP implementation requirements, receiving water limitations, monitoring, notification, and reporting requirements of the permit constitutes compliance with this Order. Due to the infeasibility of a Discharger to self-monitor compliance with receiving water limits in distant receiving water bodies (for discharges into drainage conveyance systems), non-compliance with receiving water limitations for indirect discharges will be determined based on additional site-specific information made available to the Water Boards indicating that drinking water system discharges caused or contributed to the exceedance of the receiving water limitations and adversely impacted beneficial uses.

B. General

Compliance with effluent limitations shall be determined using monitoring and reporting protocols defined in the Monitoring and Reporting Program of this Order. For purposes of reporting and administrative enforcement by the State and/or Regional Water Boards, the

Discharger shall be deemed out of compliance with the effluent limitations if the constituent concentration or level is greater than the effluent limitation and greater than or equal to the minimum level (ML, also known as the Reporting Level (RL)) of properly calibrated in-field monitoring equipment.

C. Total Residual Chlorine

Handheld chlorine measuring devices that are U.S. EPA-approved are appropriate to measure residual chlorine in the field for compliance determination. The minimum level of a hand-held chlorine meter used to determine compliance with the total chlorine residual effluent limitations is 0.1 mg/L or lower. A discharge monitoring result with a total residual chlorine concentration greater than or equal to 0.1 mg/L shall be deemed out of compliance with a chlorine effluent limitation. Due to other possible interferences of these handheld devices, if readings are false positives, these will not be evaluated for compliance if explanation of cause of false positive is provided.

ATTACHMENT A – DEFINITIONS

Adverse Effect or Adverse Impact to Beneficial Uses of a Receiving Water Body
A detrimental effect upon water quality or beneficial uses of a receiving water body caused by a discharge or loading of a pollutant or pollutants.

Authorized Discharge
Any discharge that is authorized pursuant to this National Pollutant Discharge Elimination System (NPDES) permit and meets the requirements and conditions set forth in this Order.

Basin Plan
The Water Quality Control Plan(s) adopted by a Regional Water Quality Control Board. A Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve water quality objectives for all waters of the Basin.

Beneficial Uses
The existing or potential uses of receiving waters in the permit area as designated by a Regional Water Board basin plan or other water quality control plan.

Best Management Practices (BMPs)
Methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint source discharges. BMPs include structural and nonstructural controls, and operation and maintenance procedures, which can be applied before, during, and/or after pollution producing activities.

Community Water System
A public water system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year.

Drinking Water System
A system regulated by the State Water Resources Control Board Division of Drinking Water or a local county department of health, with the primary purpose of conveying, treating, storing and distributing safe drinking water to at least 15 service connections used by yearlong residents or regularly serves at least 25 year around residents of the area served by the system.

Deputy Director
The Deputy Director of Water Quality for the State Water Resources Control Board or any person(s) delegated by the Deputy Director to serve as acting Deputy Director.

Direct Discharge
Any discharge that enters a Water of the U.S. without first traveling via a storm drain or any other constructed conveyance system.

Discharger
Any water purveyor named in this Order as being responsible for permit requirements within its jurisdiction. A discharger to this Order includes a public or private water purveyor, wholesaler, or district, or a contractor working on behalf of the water purveyor, wholesaler or district.

Drinking Water System Discharges
Release of flows from drinking water intakes, transmission, storage, pumping, treatment and distribution systems including flows due to: (1) system failures and pressure releases, (2) system development, testing and maintenance that is performed to comply with the federal Safe Drinking Water Act, the California Health and Safety Code, and State Water Board Division of Drinking Water permit requirements.

Emergency Discharge
A discharge due to a sudden unexpected occurrence involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services, including the provision of drinking water supplies in accordance with applicable drinking water statutes and regulations.

Estuaries
Surface waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater.

Enclosed Bays
Enclosed bays are hydrological indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay.

Impaired Water Body
A water body that is currently listed on the Clean Water Act section 303(d) list.

Indirect Discharge
Any discharge that enters a Water of the U.S. by first traveling via a storm drain or any other constructed conveyance system.

Inland Surface Waters
All surface waters of the state that do not include the ocean, enclosed bays, or estuaries.

Low Impact Development (LID)
A storm water management and land development strategy that emphasizes water conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect pre-development hydrologic functions.

Method Detection Limit (MDL)
Minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in in 40 C.F.R. part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML) and Reporting Level (RL)
The minimum level (ML) means the concentration at which a properly calibrated monitoring system gives a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific monitoring procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed. A reporting level (RL) is the ML for reporting and compliance determination included in this Order.

MS4 Operator
The MS4 Operator is the entity responsible for the operation of its local municipal separate storm sewer system subject to an MS4 NPDES Permit.

Monitoring Well
Specialized wells in which the depth to groundwater can be measured and samples of ground water can be collected for analysis for the purpose of managing drinking water aquifers and/or to fulfill requirements mandated by the federal Safe Drinking Water Act and the California Health and Safety Code.

Non-community Water System
A water system that is not a community water system, as defined in this attachment. A non-community water system is a water system that generally serves less than 15 service connections used by yearlong residents or does not regularly serve at least 25 year around residents with the water system's service area.

Not Detected (ND)
Sample results less than the properly calibrated monitoring equipment's MDL.

Non-transient Water System
A water system that is not a community water system, as defined in this attachment, and that regularly serves at least 25 of the same persons over six months per year. Non-transient water systems are regulated by the State Water Board Division of Drinking Water.

National Pollutant Discharge Elimination System (NPDES)
The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Clean Water Act sections 307, 402, 318, and 405.

Pollutants
Substances defined in Clean Water Act section 502(6) (33 U.S.C. § 1362(6)), and incorporated by reference into Water Code section 13373.

Pollution Prevention
Any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in discharge water from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State Water Board or Regional Water Board.

Receiving Water
The term receiving water is used interchangeably with the term waters of the U.S.

Superchlorinated Water
Water that is dosed with chlorine in order to adequately sanitize and disinfect drinking water system facilities

Supply Well
A groundwater well that is installed, operated, maintained and/or rehabilitated in accordance with the federal Safe Drinking Water Act and the California Health and Safety Code to pump ground water for the primary purpose of delivering drinking water to a municipality or community.

Transmission Systems
Transmission systems include pipes, pumps, canals, pump houses, and other components used to move water from the point of origin to storage reservoirs, treatment facilities, and distribution systems. Transmission systems do not have connections to serve end users.

Water Purveyor
Any entity that discharges from a drinking water system, including water purveyors, wholesalers, distributors, districts, municipalities, private companies, and other entities that own or operate a community drinking water system.

Water Wholesaler
An entity that provides potable water to a person, political subdivision, or municipality that is not the ultimate consumer of the service.

Waters of the State
Any surface water or groundwater, including saline waters, within boundaries of the state.

Waters of the United States (U.S.)
Generally refers to surface waters, as defined for the purposes of the federal Clean Water Act.

ATTACHMENT B1 – NOTICE OF INTENT

STATE WATER RESOURCES CONTROL BOARD TO APPLY FOR REGULATORY COVERAGE UNDER ORDER WQ 2014-XXXX-DWQ, NPDES NO. CAGXXXXXX FOR DRINKING WATER SYSTEM DISCHARGES TO WATERS OF THE U.S.

1. DRINKING WATER SYSTEM OWNER[1]

Name			Number of Connections:_____
State Water Board Division of Drinking Water Drinking Water System No.:_____ (If Applicable - Conceptual Letter Approval – System No.:_____)			
Mailing Address			
City	State	ZIP	Phone
Contact Person			
Signature:[2]			Date:

2. APPLICANT (IF DIFFERENT FROM SYSTEM OWNER)

Name			
Mailing Address			
City	State	ZIP	Phone
Contact Person			
Signature:[2]			Date:

3. WATER SUPPLIERS (IF APPLICABLE)

Name			
Mailing Address			
City	State	ZIP	Phone
Contact Person			
Signature:[2]			Date:

4. BILLING ADDRESS

Name			
Mailing Address			
City	State	ZIP	Phone
Contact Person			

[1] If additional property owners are involved, provide the information in a supplementary letter.

[2] By signing this notice of intent, you are certifying under penalty of perjury that the information provided in this application and in any attachments is true and accurate to the best of your knowledge. By signing this Notice of Intent, you agree to closely monitor and stop the discharge if there is any violation of Order WQ 2014-XXXX-DWQ or impact to receiving water beneficial uses.

5. PLANNED DISCHARGE INFORMATION

Identify the type of facilities that will have drinking water system discharge (all that apply)

☐	Intake and/or Transmission Facilities	☐	Distribution Systems
☐	Storage Tanks and/or Reservoirs	☐	Supply Wells
☐	Water Treatment Facilities	☐	Other (explain below)

List and description of other discharges.

Are the discharges existing discharges as of the adoption date of this Order)? _____

If not, identify the new discharges that are proposed to take place prior to the expiration date of this Order?

List any additives to the drinking water not affiliated with drinking water treatment, their purpose, and quantity: (For example, algaecides, anticorrosion agents, etc.)

6. MULTIPLE WATER USE OR BENEFICIAL USE OPTIONS

Is using a portion of the discharge for irrigation, groundwater infiltration/recharge or other use a viable option?	☐ Yes	☐ No
Is land disposal of a portion of your discharge a viable option?	☐ Yes	☐ No

Provide a brief description of the discharge (or portion thereof), that is collected and applied for irrigation or other beneficial reuse. If no multiple water use options of any portion of your discharge are viable, explain why (attach additional sheet as necessary).

7. RECEIVING WATER INFORMATION (provide on separate sheet if necessary)

Name of all named receiving water bodies and/or major downstream water bodies:

Circle the Regional Water Quality Control Board(s) where receiving water body (ies) is/are located:

REGION 1, 2, 3, 4, 5, 6, 7, 8, or 9

(See Attachment H for identification of the various regions)

Are any of the receiving water bodies receiving drinking water system discharges listed on the current 303d list[1] for a constituent in your discharge?[1]	☐ Yes	☐ No
If Yes, then list the water bodies on the 303d list, the constituent causing the impairment:		
Does/Do the receiving water body(ies) have applicable waste load allocations identified in Section K of the Fact Sheet or TMDL-related requirements in Attachment G? If yes, the following items must be attached to this form for the application package to be deemed complete: a. Laboratory Analysis and estimated volume of your discharge per section II.C.1.d.i. of this Order b. If applicable, a description of the additional best management practices, including applicable treatment or controls that will be implemented to comply with TMDL-related requirements per section II.C.1.d.ii. of this Order	☐ Yes	☐ No

8. BEST MANAGEMENT PRACTICES (CHECK ALL THAT APPLY)

☐ Best Management Practices (BMPs) are being implemented by trained personnel of the subject drinking water system(s) and an instruction copy of the BMPs are available to all personnel and available at the water purveyor's main office(s) upon State or Regional Water Board staff request.

If not, provide date BMPs will be implemented and available. (Date must be within 6 months of the effective date of this Order.) _____

Date that implementation of BMPs commenced for the above identified Drinking Water System:
_____

9. APPLICATION FEE

☐ Provide the appropriate applicable fees. Information on applicable fees can be found at http://www.waterboards.ca.gov/resources/fees/ Checks shall be made payable to the State Water Resources Control Board.

[1] See http://www.waterboards.ca.gov/water_issues/programs/tmdl/ for current Clean Water Act section 303(d) listing.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____ _____

Signature Date

ATTACHMENT B2 – NOTICE OF NON-APPLICABILITY

STATE WATER RESOURCES CONTROL BOARD

CERTIFYING NON-APPLICABILITY OF REGULATORY COVERAGE UNDER ORDER WQ 2014-XXXX-DWQ, NPDES NO. CAGXXXXXX

1. DRINKING WATER SYSTEM OWNER

Name			State Board Division of Drinking Water Drinking Water System Permit No.:
Mailing Address			
City	State	ZIP	Phone
Contact Person			
Signature:			Date:

2. WATER PURVEYOR (IF DIFFERENT FROM ABOVE)

Name			
Mailing Address			
City	State	ZIP	Phone
Contact Person			
Signature:			Date:

3. REASON FOR NON-APPLICABILITY: (check one that applies and complete information)

Discharges from the above system(s):

☐ Are regulated by a separate individual NPDES Permit issued by a Regional Water Board to address site-specific discharges outside the scope of this Order or a Total Maximum Daily Load (TMDL) –related water quality impairments:

Regional Water Board Order No. _____NPDES Permit No._____

☐ Are covered under a local agreement with an municipal sewer storm system (MS4) permittee (Attach a copy of agreement and acknowledgement by the corresponding Regional Water Board)

☐ Are from a drinking water system owned/operated by an (MS4) permittee or co-permittee named on an existing Water Board NPDES Permit and <u>all</u> discharges flow into the same regulated storm drain system.

Provide Order No. _____NPDES Permit No._____

☐ Do not discharge to a water of the U.S. or a conveyance that drains to a water of the U.S.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____ _____

Signature Date

ATTACHMENT C – EXAMPLE BEST MANAGEMENT PRACTICES (BMPs)

The Discharger shall implement BMPs to comply with the requirements of this Order, to protect the beneficial uses of the receiving waters and to prevent erosion or hydromodification caused by drinking water system discharges. Required BMPs include but are not limited to the proven practices established by the American Water Works Association, or other professional associations or institutes, in accordance with updated available technology. Dischargers shall implement BMPs comparable to the following example procedures and measures to achieve compliance.

I. Example BMP Procedures

A. Chlorinated Water Discharges

All chlorinated water shall be dechlorinated. Filter bags, filter rolls and fabric filters, shall be used to remove any sand, silt or debris from entering the surface water or storm drain system.

B. Superchlorinated Water Discharges

All superchlorinated water shall be dechlorinated at the point of discharge directly into a surface water or the point of discharge into any storm water conveyance system. Filter bags or rolls, or equivalent, shall be used to remove any sand, silt or debris from entering the surface water or storm drain system.

C. Facility Drainage Discharges

All discharges from transmission, treatment, storage and distribution facility draining for cleaning and maintenance shall be dechlorinated. Filter bags, filter rolls and fabric filters shall be used to remove sediment prior to discharging to surface waters or storm drains.

D. Groundwater Supply Well Discharges

During flushing, rehabilitation, or development of water supply wells, multi-baffled settling tanks, or equivalent, shall be used if necessary to remove large particles and to reduce turbidity. If further management is needed to reduce solids after settling, the Discharger shall filter the water implementing a filter-bag filtration system, or equivalent practice, before discharging to achieve a turbidity threshold that is in compliance with this Order.

II. Example BMP Measures

A. Sediment and Erosion Control

Sediment and erosion control BMPs that assess and prevent potential impacts to receiving waters, at discharge points and downstream reaches.

1. **Receiving Waters.** The Discharger shall identify methods for locating discharge points and receiving waters to determine appropriate sediment and erosion control measures.

2. **Sediment Control.** Sediment control practices shall be used to filter and trap sediment particles, and prevent them from reaching storm drains or receiving waters. Sediment control practices to control sedimentation discharge and buildup in receiving waters include:

   (a) Straw wattles and gravel bags may be placed in a flow pathway and around storm drain inlets;

   (b) Plastic sheets may be used to line a trench and flow pathway to prevent water contact with soil;

   (c) Check dams may be constructed to dissipate flow energy and minimize the potential for discharges to dislodge soil; and

   (d) A storm water swale, if available nearby to the point of discharge that has sufficient capacity for the discharge.

   (e) Discharge to an open field or turf to remove sand and/or silt or larger particles prior to surface water discharge.

3. **Erosion Controls.** Erosion control practices shall be used to protect soil surfaces at discharge points and receiving waters. Erosion control practices shall be used to prevent re-suspension of ambient sediment within a receiving water, and shoreline erosion and streambed scour. Such controls shall minimize the energy of discharges by managing flow velocities and volumes, and shall be appropriately designed so that the discharge does not exceed the hydraulic capacity of the receiving water at the point of discharge and areas downstream of the discharge point. The following measures may be used to control erosion in receiving waters:

   (a) Construct check dams to slow down the flow;

   (b) Install flow diffusers at discharge point;

   (c) Fashion discharge flow path with as little slope as possible; and

   (d) Decrease discharge flow rates and duration.

B. Dechlorination

The following types of dechlorination methods, or equivalent, to remove chlorine:

1. Dechlorinating Diffuser – The dechlorinating diffuser connects directly to a discharge nozzle (e.g., to a fire hydrant or fire hose) and contains a chamber that houses dechlorination agent. Some diffusers feature a siphon for dechlorinating agent tablets or a solution to dechlorinate the water.

2. Dechlorination Mats – These mats are used to facilitate effective contact between the flow and dechlorinating agent during dechlorination. For dechlorination of discharges from trenches during main breaks, the tablets are placed inside synthetic mesh fabric pockets sewn together in a grid or line. The dechlorinating mats are laid across the flow path or over the storm water conveyance system.

As the discharged water contacts the tablets, dechlorinating agent is released and chlorine is inactivated.

3. Broadcast Dechlorination – Dechlorination granules are spread over an area, such as pavement, where chlorinated water is flowing toward a storm water conveyance system inlet. As the discharged water contacts the tablets, dechlorinating agent is released and chlorine is inactivated.

4. Chemical Injection Metering Pump – Occasionally, a dechlorination agent is injected into a discharge pipe, such as a tank drain, to dechlorinate the water before entering the storm water system.

Addition of dechlorination chemicals shall be managed to ensure the dechlorination agent does not adversely affect or impact beneficial uses of the receiving waters.

C. Copper and Zinc Management

A Discharger that applies copper-based herbicides or zinc-based corrosion inhibitors to its water shall implement BMP measures to eliminate or reduce copper and zinc concentrations in its discharges to the extent feasible, including but not limited to the following:

1. Record keeping of where, when and how much zinc or copper is used to treat water that has the potential to be discharged to a surface water.

2. Implementation of BMPs that eliminate planned discharges and minimize emergency discharges to surface water bodies from occurring within 48 hours of applying copper-based herbicides or zinc-based corrosion inhibitors.

3. Implementation of BMPs to eliminate or reduce to the extent feasible the use of copper-based herbicides or zinc-based corrosion inhibitors by using less toxic agents or other methods in place of copper-based herbicides or zinc-based corrosion inhibitors.

D. Training

All personnel using, operating and maintaining all facilities and equipment shall be properly trained to implement BMPs to discharges when conducting mandated operational and maintenance activities. The Discharger's staff and/or contractors shall be properly trained to understand permit compliance needs and perform the required monitoring, notification and reporting.

E. Equipment and Supplies

Equipment and sampling meters shall be inspected, maintained and calibrated per manufacturer instructions and specifications.

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ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger shall comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (Water Code) and is grounds for a potential enforcement action, permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 C.F.R. § 122.41(a).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Water Purveyor to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision includes the operation of backup or auxiliary facilities or similar systems that are installed by a Water Purveyor only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

F. Inspection and Entry

The Water Purveyor shall allow State and/or Regional Water Board staff, United States Environmental Protection Agency (U.S. EPA), and/or their authorized representatives

(including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 C.F.R. § 122.41(i); Water Code section 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 C.F.R. § 122.41(i)(1));

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 C.F.R. § 122.41(i)(2));

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 C.F.R. § 122.41(i)(3)); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 C.F.R. § 122.41(i)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

B. Duty to Reapply

If the Discharger chooses to continue a discharge regulated by this Order after the expiration date of this Order and after the State Water Board has reissued this Order, the Discharger shall apply for and obtain new permit coverage as required by the new Order. (40 C.F.R. § 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the State Water Board. The State Water Board may require modification or revocation and reissuance of the Order or Notice of Applicability to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. § 122.41(l)(3) and 122.61.)

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)

B. If applicable, monitoring results shall be conducted according to test procedures under 40 Code of Federal Regulations part 136. (40 C.F.R. § 122.41(j)(4) and 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. Records Retention

The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the State Water Board's Division of Water Quality Deputy Director at any time. (40 C.F.R. § 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));

3. The date(s) sampling and monitoring were performed (40 C.F.R. § 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv)); and

5. The results of such monitoring. (40 C.F.R. § 122.41(j)(3)(vi).)

C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and

2. Permit applications and attachments, permits and monitoring data. (40 C.F.R. § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the State Water Board or the United States Environmental Protection Agency (U.S. EPA) within a reasonable time, any information which the State Water Board or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the State Water Board, a Regional Water Board or U.S. EPA copies of records required to be maintained by this Order. (40 C.F.R. § 122.41(h) and Wat. Code, §§ 13267, 13383.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting sections V.B.2 through V.B.7, below. (40 C.F.R. § 122.41(k).)

2. For a corporation, a responsible corporate officer shall sign all permit applications. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)

3. For a partnership or sole proprietorship, a general partner or the proprietor shall sign all permit applications, respectively. (40 C.F.R. § 122.22(a)(2).)

4. For a municipality, State, federal, or other public agency, all permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA). (40 C.F.R. § 122.22(a)(3).).

5. All reports required by this Order and other information requested by the State Water Board, a Regional Water Board or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

c. The written authorization is submitted to the State Water Board. (40 C.F.R. § 122.22(b)(3).)

6. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above shall be submitted to the State and Regional Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

7. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above is making the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 C.F.R. § 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program in Attachment E of this Order.

2. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 Code of Federal Regulations part 136, the results of this monitoring shall be included in the calculation and reporting of the data to the State Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)

D. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment to the Regional Water Board. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances.

A written submission shall also be provided to the applicable regional water quality control board within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)

2. The State Water Board or a Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

E. Anticipated Noncompliance

The Discharger shall give advance notice to the appropriate Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 C.F.R. § 122.41(l)(2).)

F. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C and V.D above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.D above. (40 C.F.R. § 122.41(l)(7).)

G. Other Information

When the Water Purveyor becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or U.S. EPA, the Water Purveyor shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

VI. Standard Provisions – Enforcement

The State and Regional Water Board are authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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List of Tables

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Discharges from drinking water systems, as authorized by this Order, shall be properly managed to not adversely affect or impact beneficial uses of a receiving water body. The purpose of the monitoring and reporting requirements contained in the following Monitoring and Reporting Program is to provide information demonstrating that management practices are properly implemented to protect surface water quality. The objective of the monitoring is to validate that the management practices are performing properly to maintain compliance with this Order and protect receiving waters from adverse impacts to beneficial uses.

Title 40 Code of Federal Regulations part 122.48 requires that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. California Water Code sections 13267 and 13383 also authorize the State Water Resources Control Board (State Water Board) and a Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This Monitoring and Reporting Program establishes monitoring and reporting requirements, which implement the federal and State of California regulations.

Dischargers authorized under this Order shall comply with all Standard Provisions in Attachment D related to monitoring, reporting and recordkeeping.

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken as required herein shall be representative of the nature of the monitored discharge after implementation of best management practices (BMPs). All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the discharge flow joins or is diluted by any other waste stream or body of water.

B. Chemical analyses that require laboratory testing are not required in this Order (with the exception of application requirements for discharge into a water body with already established TMDL requirements identified in Section K of the Fact Sheet and/or TMDL-related requirements prescribed to the water purveyors listed in Attachment G). The Discharger shall conduct onsite field measurements for pH, turbidity, and total chlorine residual per quality assurance and quality control (QA/QC) protocol that conform to U.S. EPA guidelines, or procedures approved by the American Water Works Association or other professional drinking water industry association.

C. The Discharger shall maintain sufficient resources, including trained personnel and properly calibrated and maintained field instruments to adequately perform all field measurements required in this Order. Onsite field measurements shall be performed using handheld devices by trained personnel acting on the Discharger's behalf. A manual containing the proper operating procedures for all onsite field monitoring equipment, shall be maintained onsite or at the water purveyor's office, and shall be available for inspection by State or Regional Water Board staff.

D. Appropriate field meter devices shall be selected consistent with accepted scientific practices and used to ensure the accuracy and reliability of measurements of monitored discharges. All devices shall be properly maintained and calibrated per manufacturer instructions and as necessary to ensure their continued accuracy.

II. MONITORING REQUIREMENTS FOR PLANNED DISCHARGES

A. Event Monitoring Requirements for Superchlorinated, Well development and/or rehabilitation, and Large Volume Discharges.

The Discharger shall monitor all superchlorinated discharges, all discharges from well development and/or rehabilitation activities, and individual discharges greater than 325,850 gallons (one acre-foot) for the constituents specified in Table E-1 and per the frequency specified in Table E-2.

Table E-1. Event Monitoring of Superchlorinated Discharges, Well Development and/or Rehabilitation, and Individual Discharge Events Greater than 325,850 Gallons

Parameter [1]	Units	Sampling [2]	Sample Type [1]
Chlorine, Total Residual [3,4]	mg/L	1/Event	Grab
Volume	Gallons	1/Event	Estimate [5]
pH [6]	Standard Units	1/Event	Grab
Turbidity	NTU	1/Event	Visual Estimate

[1] A handheld field meter shall be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. The Discharger shall maintain a calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program.
[2] Sampling shall take place downstream of management practices, as feasible.
[3] Total chlorine residual shall be monitored with a method sensitive to and accurate at a minimum level of 0.1 mg/L. False positives are acceptable if explanation of the cause is included.
[4] Total Chlorine Residual monitoring is not required of non-chlorinated discharges.
[5.] Calculated estimate using available meter reading information or visual estimate.
[6] pH monitoring is required for superchlorinated discharges only.

Table E-2. Event Frequency Requirements for Superchlorinated Discharges, Well Development and/or Rehabilitation Direct Discharges to a Water of the U.S., and Discharges Greater than 325,850 Gallons

Duration of Discharge	Sampling Requirements
Less than 20 minutes	One sample is required during the first 10 minutes of the discharge.
20 minutes to 60 minutes	One sample is required during the first 10 minutes of the discharge, plus a second sample is required within the last 10 minutes of the discharge.
Greater than 60 minutes	One sample is required within the first 10 minutes, a second sample is required within the next 50 minutes, and a third sample is required approximately within the last 10 minutes of the discharge or as close to the end of the discharge as is feasible.

B. Annual Representative Monitoring Requirements

This Order allows discharges of similar nature to be monitored on a representative basis. Representative monitoring is the use of monitoring results of one water quality monitoring sample to represent other discharges expected to have the same water quality. A representative monitoring measurement must represent discharges of similar nature, meaning discharges that have all the following items in common:

(a) The same general water source (ground water or surface water of similar water quality), and

(b) The same water treatment, and

(c) The same type of implemented BMPs.

The Discharger shall monitor all planned discharges not listed in Section II.A above, using representative monitoring, as previously defined in this section, for the constituents specified in Table E-3 and per the frequency specified in Table E-4.

Table E-3. Annual Representative Monitoring Requirements

Parameter[1]	Units	Sampling[2]	Sample Type [1,2]
Chlorine, Total Residual [3,4]	mg/L	1/Year	Grab
Volume	Gallons	1/Year	Estimate [5]
Turbidity	NTU	1/Year	Visual Estimate

[1] A handheld field meter shall be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. The Discharger shall maintain a calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program.
[2] Sampling shall take place downstream of management practices, as feasible.
[3] Total chlorine residual shall be monitored with a method sensitive to and accurate at a minimum level of 0.1 mg/L. False positives are acceptable if explanation of the cause is included.
[4] Total Chlorine Residual monitoring is not required of non-chlorinated discharges.
[5] Calculated estimate using available meter reading information or visual estimate.

Table E-4. Annual Representative Monitoring Frequency Requirements

Duration of Discharge	Sampling Requirements
Less than 20 minutes	One sample is required during the first 10 minutes of the discharge.
20 minutes to 60 minutes	One sample is required during the first 10 minutes of the discharge, plus a second sample is required within the last 10 minutes of the discharge.
Greater than 60 minutes	One sample is required within the first 10 minutes, a second sample is required within the next 50 minutes, and a third sample is required approximately within the last 10 minutes of the discharge or as close to the end of the discharge as is feasible.

In its annual report, the Discharger shall:

(a) Submit a copy of its site schematic submitted in its application for enrollment with labeled representative monitoring locations, and

(b) Identify the portions of its system that the representative monitoring results represent, and
(c) Identify all changes in its representative monitoring locations that have occurred during the monitoring-year.

C. Annual Discharge Volume Monitoring Requirements

The Discharger shall keep:
(a) A record of the number of direct discharges to a water of the U.S. that is greater than 50,000 gallons, during each calendar year,
(b) An estimate of the total volume discharged to surface water during each calendar year, and
(c) An estimate of the total volume of discharge water directed to a reuse or beneficial use in accordance with section VI. of this Order.

D. Monitoring Not Required

Monitoring is not required for any discharges that:
(a) Do not ultimately reach a water of the U.S., and
(b) Are put to multiple uses or beneficial reuse, in accordance with section VI. of the Order, prior to surface water discharge.

E. Increase in Monitoring Requirements

The Deputy Director may increase the monitoring or frequency at any time to ensure the protection of beneficial uses of the receiving water. Any requirement for increased monitoring will be based on site-specific data or information that indicates a site-specific discharge threatens to cause or contribute to an exceedance of a receiving water quality criteria or objective.

III. RECEIVING WATER MONITORING REQUIREMENTS DURING NON-COMPLIANCE WITH THIS ORDER

The receiving water must be monitored for all direct planned discharges that do not comply with the requirements contained in sections IV. and V. of the Order and the discharge potentially causes or contributes to an adverse effect or impact to beneficial uses. Receiving water monitoring shall be conducted during or immediately after the Discharger became aware of a non-compliant discharge that adversely effects or impacts beneficial uses of the receiving water. The Discharger shall monitor the point of confluence of the discharge and the receiving water. If the receiving water presents hazards to the monitoring personnel, visual monitoring shall be conducted using telephoto lenses and binoculars. If further hazards exist beyond such measures, monitoring is not required, and the hazards shall be documented in the corresponding monitoring report.

Receiving water monitoring shall consist of digital photographs and documentation of observed effects and impacts the discharge has on the receiving water body including the presence or absence of:

a. Erosion;

b. Floating or suspended matter;

c. Discoloration;

d. Impact on aquatic life;

e. Visible films, sheens, or coatings; and

f. Potential nuisance conditions.

Photographs and documented observations of the receiving water conditions shall be included in the annual monitoring report, and made available to State and Regional Water Board staff upon request.

IV. POST-NOTIFICATION OF EMERGENCY OR NON-COMPLIANT DISCHARGES THAT ADVERSELY EFFECT OR IMPACT BENEFICIAL USES

Within 24 hours of the Discharger becoming aware of an adverse effect(s) or impact on beneficial uses of the receiving water body due to non-compliance with this Order, or within 24 hours of the Discharger becoming aware of a system failure or emergency involving a discharge from its drinking water system that may adversely affect or impact beneficial uses of a receiving water, the Discharger shall notify the corresponding Regional Water Board and the MS4 operator if applicable, and shall confirm this notification in writing within five days.

The notification shall include all of the following:

a. The location and extent of non-compliance or emergency discharge;

b. The cause of the non-compliance or emergency discharge;

c. The date, time and expected duration of the non-compliance or emergency discharge;

d. The estimated volume of discharge;

e. The applicable receiving water body; and

f. The corrective actions taken (or being taken) to prevent future non-compliance or repair the system failure.

V. PRE-NOTIFICATION OF LARGE PLANNED DISCHARGES GREATER THAN ONE ACRE-FOOT (325,850 GALLONS)

Three (3) days prior to initiation of a planned discharge (or retroactively within 24-hours after the Discharger is informed to conduct an urgent planned discharge) of a volume equal to or greater than one acre-foot (325,850 gallons), the Discharger shall notify the MS4 operator if applicable, and the appropriate Regional Water Board and provide:

a. The start date of discharge

b. The location of discharge and the applicable receiving water

c. The estimated volume of discharge, and

d. The reasons for discharge

VI. REPORTING AND RECORDKEEPING REQUIREMENTS

A. Self-Monitoring Report Requirements

1. Self-monitoring reports including compliant and non-compliant discharge monitoring information shall be maintained in the Discharger's main office and made available upon request of State and Regional Water Board staff.

2. Monitoring periods and reporting for all required monitoring shall be completed according to the schedule in Table E-5 below. Each discharge event that meets the conditions in section II and Table E-1 of this MRP shall be monitored.

Table E-5. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period	Record Keeping Due Date
1/Event or Year	January 1 thru December 31	1 March

3. The Discharger shall arrange and summarize any reported numerical data in a tabular format. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

4. If no discharge occurred during the reporting period, the monitoring report shall report that there was no discharge.

5. Authorized Dischargers shall maintain the results for all monitoring specified in this Monitoring and Reporting Program and as specified in this Order. If a Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the self-monitoring report.

B. REPORTING REQUIREMENTS TO STATE WATER BOARD

1. Dischargers shall report to the State Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act" of 1986.

2. By March 1 of every year, all non-compliant discharge monitoring information contained in the Discharger's self-monitoring report for the past calendar year shall be submitted to the State Water Board annually and shall include all non-compliant monitoring results required in this Monitoring and Reporting Program. All non-compliant discharge monitoring information shall be accompanied by the corrective actions the Discharger has taken to return the discharge to compliance. Dischargers shall also submit the annual discharge volume monitoring requirements specified in section II.C of this Attachment.

3. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify discharge events of non-compliance with the permit; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified non-compliance shall include a description of the requirement that was violated and a description of the violation.

4. Monitoring reports shall be submitted to the State Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

   State Water Resources Control Board
   Division of Water Quality
   NPDES Permitting Unit
   1001 I Street, 15th Floor
   Sacramento, CA 95814

5. At any time during the term of this permit, the Deputy Director may notify authorized Dischargers to electronically submit monitoring reports using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, each Discharger shall submit a hard copy of its monitoring reports. Subsequent guidance will be provided to the Discharger upon the Deputy Director's notification for electronic submittal of reports. (Direction and guidance for electronic SMR submittals is currently available on the CIWQS Web site at http://www.waterboards.ca.gov/water_issues/programs/ciwqs/chc_npdes.shtml

ATTACHMENT F – FACT SHEET

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This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order. As described in section III.B of the Order, the State Water Board incorporates this Fact Sheet as its findings supporting the issuance of the Order.

I. PERMIT INFORMATION

A. Background

Water wholesalers and purveyors are responsible for developing water supplies and providing drinking water to their communities and customers in accordance with statutory requirements of the federal Safe Drinking Water Act and the California Health and Safety Code. Mandatory system-development and system-maintenance activities often result in surface water discharges, either via storm drain systems or other conveyance systems, or directly to a surface water body.

The Federal Water Pollution Control Act (also referred to as the Clean Water Act) section 402 requires that a discharge of any pollutant or combination of pollutants to surface waters that are waters of the United States, with certain exceptions, be regulated by a National Pollutant Discharge Elimination System (NPDES) permit. (For the purpose of this Order, the terms “waters of the United States”, “surface waters” and “receiving waters” are used interchangeably unless noted otherwise.) On September 22, 1989, the U.S. Environmental Protection Agency (U.S. EPA) granted the State of California, through the State Water Resources Control Board (State Water Board) and the Regional Water Quality Control Boards (Regional Water Boards), the authority to issue general NPDES permits pursuant to title 40 Code of Federal Regulations parts 122 and 123.

Discharges to waters of the U.S. required to be regulated with an NPDES permit, in accordance with the Clean Water Act, include discharges of pollutants from drinking water systems. The Clean Water Act does not include an exemption from federal regulation based on volume or flow of discharge; therefore, all sizes of drinking water systems, including very small systems with small volumes of surface water discharges, are required to be regulated with an NPDES permit. Many drinking water system discharges in California that enter waters of the U.S. (either directly or via a storm water conveyance system) are unregulated. The systems that are regulated are permitted with Regional Water Quality Control Board (Regional Water Board) permits.

The State Water Board recognizes that although the quality of the discharges from different locations within a system (raw water, potable water, chlorinated water, etc.) varies, the set of discharges from the different systems throughout the state are fairly uniform. The discharges are of water that must be discarded as water purveyors conduct similar mandatory activities to assure the water that is ultimately delivered is safe for drinking and other potable uses.

Although the discharges are similar in nature, they are regulated differently throughout the state. Some are not regulated at all. Others are regulated by various Regional Water Boards permits, depending on the region the system is located. Some Regional

Water Boards regulate the raw and potable drinking water discharges using region-wide low threat-type general NPDES permits that regulate a broad range of constituents through differing regulatory approaches. Other Regional Water Board general permits do not address the constituents of concern from these types of discharges, and/or contain requirements that are not feasible for water purveyors to comply without creating obstacles to the proper operation of drinking water systems. The following table illustrates more detail on part of the Regional Water Boards' differing regulatory approaches for discharges from drinking water systems:

Table F-1. Differences in Existing Regional Water Boards' Permit Requirements

Region	Effluent Limitations[0]										
	Chlorine Residual (mg/L)	Settleable Solids (ml/L)	pH (standard units.)	TDS (mg/L)	BOD_5 (mg/L)	Ammonia	Turbidity (Nep Turbidity Units)	O&G (mg/L)	Temp (˚F)	Priority Pollutant	Acute Toxicity
1	0.11[1] and 0.019[2]	0.1	6.5[3] and 8.5[4]	BPO[17]	--	--	--	--	--	--	--
2[5]	--	--	--	--	--	--	--	--	--	--	--
3	0.02	--	--	BPO[17]	--	--	--	--	--	MCLs	--
4	0.1[6]	0.3[6] and 0.1[7]	6.5[3] and 8.5[4]	150[6] and 50[7]	30[6] and 20[7]	--	150[6] and 50[7]	15[6] and 10[7]	86 ˚F	--	90% Survival
5	0.11[1] and 0.019[2]	0.1[6]	[8]6.5 - 8.5 [9]7.5 – 9.5 [10]6.5 – 8.3	--	[11]30[6], 15[12], and 10[7]	--	--	--	--	MCLs	--
6[14]	0.003[4] and 0.002[13]	--	BPO[17]	--	--	BPO[17]	--	--	--	--	--
7	0.11[1] and 0.019[2]	0.2	6.0[3] and 9.0[4]	--	55 and 95	--	75	25	--	--	--
8	0.1[6]	--	6.5[3] and 8.5[4]	BPO[17]	75[6, 15]	--	--	15	--	--	--
9	0.1[16]	--	6.0[3] and 9.0[4]	--	--	--	--	--	--	--	--

0. TDS=Total Dissolved Solids, BOD5=5-day Biochemical Oxygen Demand, O&G=Oil and Grease, Temp=Temperature
1. 4-day Average
2. 1-hour Average
3. minimum value
4. maximum value
5. Region 2 recently issued a tentative individual NPDES Permit for public review and comment
6. Daily Maximum
7. Monthly Average
8. 6.5 minimum and 8.5 maximum for discharges to Sacramento/San Joaquin River Basins
9. 7.5 minimum and 9.5 maximum for discharges to Goose Creek
10. 6.5 minimum and 8.3 maximum for discharges to Tulare Lake Basin
11. Same effluent limits for Total Suspended Solids (TSS)
12. Weekly Average

13. Median value of daily measurements
14. Also has effluent limits for bacteria and dissolved oxygen based on the basin plan objective
15. TSS only
16. 90 percentile of all samples during discharge
17. Basin Plan Objective
18. Region 1 - North Coast Region, 2 - San Francisco Bay Region, 3 - Central Coast Region, 4 - Los Angeles Region, 5 - Central Valley Region, 6 - Lahontan Region, 7 - Colorado River Region, 8 - Santa Ana Region, 9 - San Diego Region

Additionally, most large and small municipalities have Municipal Separate Storm Sewer System (MS4) NPDES permits for discharge of storm water to waters of the United States (U.S.). Some MS4 permit holders (permittees) allow drinking water system discharges to enter their storm water systems as authorized non-storm water discharges, typically through established local agreements. Other MS4 permittees do not allow such discharges to enter their storm water systems unless the State Water Board or Regional Water Board separately regulates those discharges prior to entering the system.

Title 40 Code of Federal Regulations part 122.28 provides for issuance of general permits to regulate a category of point sources if the sources: (1) involve the same or substantially similar types of operations; (2) discharge the same type of waste; (3) require the same type of effluent limitations or operating conditions; (4) require similar monitoring; and (5) are more appropriately regulated under a general order rather than individual orders. Thus:

1. This Order issues NPDES Permit No. CAGXXXXXX with the intent to provide consistent and efficient regulatory coverage and requirements for drinking water system discharges statewide that have a low threat to water quality when properly mitigated through implementation of best management practices.
2. This Order authorizes drinking water system discharges of water that is dedicated to drinking water facilities for the primary purpose of providing safe and reliable drinking water including, but not limited to treatment facilities, storage and distribution systems, transmission systems, and water supply and monitoring wells in drinking water aquifers. Owners or operators of drinking water systems that apply for coverage under this Order and that are issued a Notice of Applicability are hereinafter referred to as “dischargers”. For the purposes of this Order, references to “discharger” or “permittee” in applicable federal and State laws, regulations, plans, and policy are considered equivalent to references to the Dischargers herein.

   Regulatory coverage under this Order serves as authorization for the Discharger to discharge water from its drinking water system(s) to waters of the United States (U.S.) either directly into waters of the U.S. or via other conveyance, including through a municipal storm sewer system. Coverage under this Order does not authorize discharges into a municipal storm water system. The municipal storm water system owner/operator has authority to allow these non-storm water discharges into the system. A municipal storm water system owner/operator retains authority to impose further conditions, restrictions or limitations, above and beyond the requirements of this Order, on water purveyors, as a condition for discharging into the system.

B. Water Purveyors NOT Required to Enroll in This Order

All water purveyors that have discharges to waters of the U.S. as described in this Order require an NPDES permit to discharge. The State Water Board is not mandating that small systems of less than 1,000 service connections enroll in this Order. However, the State Water Board strongly encourages water purveyors with small systems to obtain the regulatory coverage under this Order to comply with the Clean Water Act. The State Water Board recognizes that some water purveyors have obtained regulatory coverage through MS4 permits, or, due to their discharge contributing to an impairment managed by a previously-adopted Total Maximum Daily Load, the discharge must be regulated by a separate individual NPDES permit.

The State Water Board issues statewide NPDES permits for the regulation of storm water discharges from small communities and non-traditional entities. Regional Water Quality Control Boards issue NPDES permits for the regulation of storm water from large (non-small) municipalities. These storm water orders may authorize non-storm water discharges from fire hydrant flushing, operation, maintenance, or testing of potable water systems, and groundwater dewatering systems, similar to discharges covered under this Order. The State Water Board will not require a water purveyor that holds a local agreement with a municipal storm water permittee to obtain regulatory coverage under this Order provided the corresponding Regional Water Board acknowledges in writing that the local agreement demonstrates coverage under the municipal storm water permit.

This Order requires that, **by February 1, 2015**, water purveyors that meet the criteria **below** submit a Notice of Non-Applicability form (Attachment B2) certifying, in accordance with section V.B., *Signatory and Certification Requirements*, of Attachment D – Standard Provisions, that regulatory coverage from this Order is not required.

- The water purveyor discharges solely to a municipal separate storm sewer system(s) (MS4) and has an established local agreement with the MS4 permittee to discharge into its system(s), **AND** the corresponding Regional Water Board Executive Officer provides written confirmation to the State Water Board Deputy Director of Water Quality that the local agreement provides sufficient regulation of the subject drinking water system discharges through an existing MS4 NPDES permit; or
- The water purveyor is an MS4 permittee, or co-permittee, named on a State Water Board or a Regional Water Board issued MS4 permit that also authorizes discharges from drinking water systems, and all drinking water system discharges solely discharge into its own MS4 system.

Also by **February 1, 2015**, this Order requires water purveyors that meet the criteria **below** to submit a Notice of Non-Applicability form (Attachment B2) certifying, in accordance with section V.B., *Signatory and Certification Requirements*, of Attachment D – Standard Provisions, that regulatory coverage from this Order is not required.

- The water purveyor is regulated under an existing NPDES permit issued by the Regional Water Board because a Total Maximum Daily Load (TMDL) was adopted and the Regional Water Board determined that TMDL-specific permit requirements for its drinking water system(s) discharges are appropriate because those discharges may contribute to the impairment of the water body.

Also by **February 1, 2015**, this Order allows water purveyors that meet the criteria **below** the option of submitting a Notice of Non-Applicability form (Attachment B2) certifying, in accordance with section V.B., *Signatory and Certification Requirements*, of Attachment D – Standard Provisions, that regulatory coverage from this Order is not required.

- All discharges from the drinking water system do not discharge to a water of the U.S.

A water purveyor with multiple drinking water systems in California need only submit one Notice of Non-Applicability for its systems that meet the same criterion.

After review of each submitted Notice of Non-Applicability, the State Water Board's Deputy Director of Water Quality (Deputy Director) will either issue 1) a Notice of Non-Applicability Approval or 2) a response letter to the applicant outlining: (a) the missing information that deems the Notice of Non-Applicability incomplete, or (b) why the described discharge is not eligible and thus the water purveyor must obtain coverage under this Order. The water purveyor will have **60 days from the date of the response letter** to submit the items necessary to complete the Notice of Non-Applicability or to submit a complete application package in accordance with section II.C of this Order. A notice may be issued to a water purveyor that holds a drinking water system permit through the State Water Board Division of Drinking Water, and that has not submitted a Notice of Non-Applicability (or an application package for enrollment, as explained later in this Fact Sheet) by February 1, 2015, if that purveyor discharges from its drinking water system to a water of the U.S.

Drinking water systems that serve less than 1,000 connections that serve end users (this does not include water wholesalers), maintain the option to enroll in this Order and are not required to submit the Notice of Non-Applicability form.

C. Facilities and Discharges Covered Under this Order

This Order covers discharges from drinking water systems that qualify as a "community water system" as defined in the California Health and Safety Code, and wholesalers of water to community water systems. Community water systems provide daily drinking water for at least 15 service connections and at least 25 individuals at least 60 days each year. Community water systems must comply with the California Health and Safety Code per the California Code of Regulations titles 17 and 22. Title 17 ensures that water delivered by community water systems is wholesome and potable. Title 22 contains potable water standards, including the primary and secondary maximum contaminant levels (MCLs), and requires monitoring and reporting on surface water and groundwater drinking water sources.

Community water systems authorized to discharge under this Order include the following facilities:

1. **Transmission Systems.** Transmission systems are the pipes, pumps, canals, pump houses, and other components used to move water from the point of origin to storage reservoirs, treatment facilities, and distribution systems. Transmission systems do not have connections to serve end users. Above ground and underground pipes generally range in diameter from 24 inches to 90 inches. Some facilities are open channels. The water in transmission systems may or may not meet standards for human consumption.

2. **Distribution and Storage Systems.** Distribution systems are the pipes and associated pumps, valves, hydrants, storage facilities and other structures that distribute and store potable water from treatment plants, wells, reservoirs, and transmission systems to end users. Distribution pipes generally range in diameter from 2 inches to 24 inches.

3. **Wells in Drinking Water Aquifers.** Drinking water supply wells are installed in borings advanced into the ground to extract groundwater for use as drinking water. These types of wells are typically 12 inches to 36 inches in diameter. Monitoring wells are also in borings advanced into the ground to gage the depth to groundwater for drinking water aquifer management purposes such as groundwater overdraft protection. In addition monitoring wells serve as access points to sample the aquifer to characterize the water quality and to detect contaminants such as bacteria before the contaminant reaches the water supply. Monitoring wells are typically 12 inches or less in diameter. Discharges from water supply and monitoring wells occur during well development, maintenance (including flushing), rehabilitation, and sampling. This Order covers discharges from wells in unpolluted drinking water aquifers, and discharges from polluted drinking water aquifers that are properly treated to not cause or contribute to an adverse effect or impact to beneficial uses of the receiving waters.

4. **Water Treatment Plant or Facility.** Water treatment facilities treat water to the quality that is suitable for potable drinking water in accordance with the federal Safe Drinking Water Act, California Health and Safety Code and the State Water Board Division of Drinking Water permitting requirements. Water treatment systems range from large treatment plants to small treatment facilities including well head treatment apparatuses.

D. Discharge Description

This Order provides regulatory coverage for planned and emergency discharges. Planned discharges are part of a water purveyor's essential activities to comply with the federal Safe Drinking Water Act, the California Health and Safety Code, and State Water Board Division of Drinking Water permitting requirements for providing reliable and safe drinking water. Planned discharges include scheduled and unscheduled discharges that take place under the control of the Discharger to comply with regulatory mandates. Emergency discharges occur due to system failures and emergencies. This Order serves as a general

NPDES permit for the discharge to waters of the U.S. of surface water or groundwater that may be altered by chlorine, corrosion inhibiting agents, algaecides, or addition of other chemicals, but that does not adversely affect or impact beneficial uses of the receiving waters.

E. Discharger's Activities

This Order covers discharges that are essential to comply with the federal Safe Drinking Water Act, the California Health and Safety Code, and State Water Board Division of Drinking Water permitting requirements for providing reliable and safe drinking water. Discharges from these activities described in detail below are intermittent, short-term or seasonal in nature.

1. **Maintenance and Repair.** Facility maintenance and repairs occur frequently (e.g., multiple times a day) at different locations within a system. Discharges may be necessary when dewatering the repair or maintenance site. Underground facilities require excavation for access, and dewatering is necessary to prevent flooding. The resulting "trench dewatering" discharges are usually turbid because the discharge velocity may be high enough to dislodge and transport sediment from trenches and pits. Discharges may also be necessary to maintain positive water pressure within the drinking water system. Positive pressure may be necessary during repair and replacement of pipes, valves, and other components to prevent sediment, debris, and microorganisms from entering the system.
2. **System Flushing.** Flushing portions of a system may be necessary to replace stagnant water when demand is low, or to remove poor quality drinking water. Flushing may also be needed to respond to consumer complaints. Fire hydrants serve as access portals for flushing water distribution systems. Flushing can also occur from other valves or standpipe connections. Flushing may be part of routine operations, and can occur daily, weekly, monthly, or annually based on seasonal water use or known water quality trends. New system facilities or facilities that are periodically taken out of service for maintenance or in response to low water demands may necessitate flushing with super-chlorinated water prior to full operation.
3. **Pipeline, Tunnel, and Reservoir Drainage.** Occasionally, pipelines, tunnels, and reservoirs must be taken out of service for maintenance, such as inspections, repairs, and upgrades. Planned discharges may occur as often as once per year or as infrequently as once every 20 years. These facilities may also be drained in emergency circumstances due to unanticipated drinking water quality concerns.
4. **Groundwater Pumping.** The most common type of discharge from a supply well is well "blow-off" or purging water from the well. Well blow-off is required to reactivate a well after it has been out of service, to purge the system to collect a monitoring sample, or to purge the system when monitoring indicates that the water supply does not meet drinking water quality requirements. Discharges from water supply wells also occur as a result of well maintenance, such as unclogging a filter screen from sediment and mineral build-up.

F. Types of Discharges from Discharger's Activities

This Order covers planned and emergency discharges that occur daily throughout the State. Planned discharges are a part of the Discharger's essential activities, described in part in the previous section of this Fact Sheet. Emergency discharges occur when pipelines or other infrastructure break or leak, valves malfunction, or other unanticipated events occur, such as noncompliance with drinking water standards or hydraulic releases necessary to prevent pipeline rupture. Planned and emergency discharges may include, but are not limited to the following:

1. **Planned Discharges include discharges from:**
    a. Water treatment plants
    b. Distribution system storage tanks
    c. Distribution system dewatering, flushing, and pressure testing
    d. Fire flow/fire hydrant testing
    e. Meter testing
    f. Automated water quality analyzers
    g. Pressure relief valves
    h. Groundwater supply well flushing
    i. Groundwater well development, rehabilitation, and testing.
    j. Groundwater monitoring for purpose of supply well development, rehabilitation, and testing.
    k. Transmission system installation, cleaning, and testing.
2. **Emergency Discharges include discharges from:**
    a. Emergency system repairs, including transmission system failure or leaks, and distribution system pipe breaks.
    b. Trench dewatering.
    c. Catastrophic events.

G. Water Treatment Methods and Additives

This Order covers discharges to waters of the U.S. of surface water or groundwater that may be altered by chlorine, corrosion-inhibiting or algaecides agents containing metals such as zinc and copper, or other chemicals but that do not adversely affect or impact beneficial uses of the receiving water when properly managed. For disinfection, water purveyors treat their water with chlorine to comply with California Code of Regulations title 22 or to control microbial growth that can lead to corrosion. Chlorine removal, (also referred to as dechlorination) and its effectiveness depends in part on chemical dose and contact time. Discharger's disinfection and dechlorination processes may include, but are not limited to the following:

1. **Disinfection Treatment Methods.**

a. **Chlorination.** Most dischargers use chlorine to disinfect their drinking water in accordance with California Code of Regulations, title 22, or to control microbial growth that can lead to corrosion. Chlorine reacts with organic matter and pipe materials (such as iron). As a result, the total chlorine residual decreases following chlorine treatment as water flows throughout the distribution system, making a system vulnerable to bacterial regrowth. Dischargers manage the lack of adequate chlorine concentrations in the distribution system by occasionally flushing water from dead end areas or other parts of their system with new water that has a sufficient chlorine residual concentration. Dischargers may also use booster stations to inject additional chlorine.

b. **Chloramination.** Some Dischargers prefer chloramine over chlorine. Chloramine forms when chlorine and ammonia combine. Chloramine's disinfection power is one-hundredth that of free chlorine, but chloramine is also more stable and less reactive. Chloramine is also more persistent when released into the environment. Chloramine provides longer-lasting, more reliable protection against bacterial regrowth.

c. **Super-chlorination.** Some treatment processes require superchlorinated treatment of the drinking water. Superchlorination is necessary when disinfecting new facilities, when returning facilities to service after taking them offline, and when contamination is detected. Superchlorinated water typically has a total chlorine residual concentration greater than 4.0 mg/L.

2. **Dechlorination Treatment Methods.** During planned discharges, flows may be connected to devices that add dechlorinating chemicals prior to discharge. During emergency discharges, dissolving pellets or mesh bags containing the dechlorinating chemicals may be placed in the path of the flow.

H. Example Drinking Water Discharge Characteristics

The following table illustrates the typical characteristics of the types of discharges covered by this Order. This table is not inclusive of all potential discharges:

Table F-1. Typical Characteristics of Drinking Water System Discharges

Facility and Discharge Category [1]	Planned or Emergency	Flow Rate (gpm) [2]	Duration [2]	Frequency [2]	Total Residual Chlorine (mg/L) Or Turbidity (NTU) [2]
Transmission Systems					
Dewatering for new construction, maintenance, or inspection [3]	Planned	200 to 3,500	2 hours to 21 days	Once per year to 20 years	0.8 to 2.5 mg/L
Disinfecting of new construction	Planned	200 to 1,350	2 hours to 14 days	Upon start-up	10 to 50 mg/L
Maintenance or construction	Planned	50 to 200	2 to 10 minutes	Once per year to 20 years	0.8 to 2.5 mg/L
Aqueduct dewatering	Planned	250 to 50,000	1 to 2 days	Once per 2 to 10 years	0.8 to 2.5 mg/L
Disinfecting (new pipeline or storage facility after repair) [4]	Both	Up to 3,500	1 hour to 21 days	Upon initial use	25 to 200 mg/L
Water pipeline breaks, pipeline diameter > 24 inches (includes trench dewatering)	Emergency	5 to 3,500	30 minutes to 2 day		0.8 to 2.5 mg/L
Storage Facilities					
Drain valve testing	Planned	5 to 300	60 to 120 minutes	Once per 5 to 10 years	0.8 to 2.5 mg/L
Reservoir rehabilitation pipe flushing	Planned	Varies	Varies		0.8 to 2.5 mg/L
Tank and reservoir draining for maintenance	Planned	200 to 1,350	1 to 14 days	2 per year to 1 per 5 years	0.8 to 2.5 mg/L
Reservoir overflow	Emergency	Varies	Varies	Varies	0.8 to 2.5 mg/L
Distribution Systems					
Standpipe cleaning	Planned	500 to 2,000	1 to 2 days		0.8 to 2.5 mg/L
Water meter field testing	Planned	50 to 1,000	30 to 60 minutes		0.8 to 2.5 mg/L
Dead-end pumping	Both	200 to 2,000	30 minutes to 1 hour	4 to 12 per year	0.8 to 2.5 mg/L
Line flushing through a hydrant	Both	700 to 1,600	≤10 to 60 minutes	1 to 3 per year per hydrant	0.8 to 2.5 mg/L
Distribution system maintenance or pipe breaks, pipeline diameter < 24 inches (includes trench dewatering)	Both	5 to 1,350	10 to 60 minutes		0.8 to 2.5 mg/L

Facility and Discharge Category [1]	Planned or Emergency	Flow Rate (gpm) [2]	Duration [2]	Frequency [2]	Total Residual Chlorine (mg/L) Or Turbidity (NTU) [2]
Water quality management and water quality sampling (e.g., for bacteria; metals; taste; odor; etc.)	Both	100 to 15,000	5 minutes to several hours	1 to 50 (for management); up to 5,000+ events per year (for sampling)	0.8 to 2.5 mg/L
Unauthorized hydrant opening	Emergency	500 to 1,000	60 minutes to 8 hours		0.8 to 2.5 mg/L
Groundwater Well Operations					
Water supply well development	Planned	500 to 5,000	15 to 40 hours	Upon start-up	500 to 25,000 NTU
Water supply well rehabilitations	Planned	500 to 3,500	7 days	As-needed; up to 4 per year	500 to 20,000 NTU
Monitoring well sampling	Planned	15-60	20 minutes to 3 hours per well	Semi-annual or as needed	500 to 5000 NTU
Water supply well disinfection		500 to 3,500	30 minutes to 24 hours	As needed	$\leq$ 200 mg/L
Monitoring well development	Planned	15-60	3-8 hours	Semi-annual or as needed	500 to 25,000 NTU
Discharge by water supply well ("blow-off") for reactivation or monitoring	Both	500 to 3,500	30 minutes to 24 hours	Up to 4 per year (planned); or more frequently for emergency circumstances	500 to 20,000 NTU

Unit Abbreviations:

gpm = gallons per minute

mg/L = milligrams per liter

Footnotes:

[1] Source: Tikkanen, Maria, John Schroeter, Lawrence Y.C. Leong, and Rajagopalon Ganesh, 2001. Guidance Manual for the Disposal of Chlorinated Water. Denver, CO. AWWA Research Foundation and American Water Works Association; with modifications by the Alameda County Water District, Alameda County and San Jose Water Company, Santa Clara County, 2013.

[2] Milligrams per liter or Nephelometric Turbidity Units prior to implementation of best management practice. The data presented are typical ranges; actual conditions may vary outside of these ranges.

[3] This information does not apply to raw unaltered water.

[4] The processes to disinfect water pipelines and storage facilities use different chlorination methods, which have different chlorine contact times. Chlorinated water is dechlorinated before discharge under planned operations.

I. Example Discharges, Potential Threat to Receiving Water and Corresponding Permit Requirements.

As shown above, discharges to waters of the U.S. from the discharger's essential activities may have the potential to impact the receiving water. The threat to water

quality is from toxicity of chlorination or metal-containing agents, loading of solids, large volume discharges, and discharges having high velocities. This Order contains permit requirements specifically targeted to protect the beneficial uses of the receiving water from impacts due to these threats, as shown in the following examples:

1. Direct discharge to inland surface waters, enclosed bays and estuaries
Threat: Toxicity to aquatic life; Potential adverse impact on beneficial uses due to:
(1) concentrations of chemical constituents, (2) sediment and turbidity loading from discharge water and erosion, and (3) hydromodification.

Applicable Permit Requirements:
section IV.A Best Management Practices specifications,
section IV.C.1. Total chlorine effluent limitation,
section VI. Receiving water limitations,
Attachment E., section II. Monitoring requirements,
Attachment E., section VII. Reporting and record-keeping requirements.

2. Discharge to a municipal storm water system where the discharge travels less than 300 feet from the point of discharge into the storm drain system to the receiving water body; if the length of the storm drain conveyance is unknown, the distance shall be a direct 300 feet to a water of the U.S.

Threat: Toxicity to aquatic life; Potential adverse impact on beneficial uses due to:
(1) concentrations of chemical constituents, (2) sediment, debris, trash and turbidity loading from discharge water and street scouring, and (3) hydromodification.

Applicable Permit Requirements:
section IV.A Best Management Practices specifications,
section IV.C.1. Total chlorine effluent limitation,
section VI. Receiving water limitations,
Attachment E., section II. Monitoring requirements,
Attachment E., section VII. Reporting and record-keeping requirements.

3. Discharge to a municipal storm water system where: (1) the discharge travels more than 300 feet, or (2) the receiving water body outside of a 300-foot radius of the location of discharge into the storm drain.

Threat: Potential adverse impact on beneficial uses due to: (1) sediment, debris, trash and turbidity loading from discharge water and street scouring, and (2) hydromodification.

Applicable Permit Requirements:
section IV.A Best Management Practices specifications,
section VI. Receiving water limitations,
Attachment E., section II. Monitoring requirements,
Attachment E., section VII. Reporting and record-keeping requirements.

4. Discharges of superchlorinated, supply well water due to development and rehabilitation, and large volume discharge, either directly or via a storm water system, to waters of the U.S.

Threat: Toxicity to aquatic life. Potential adverse impact on beneficial uses due to:

(1) concentrations of chemical constituents, (2) sediment, debris, trash and turbidity loading from discharge water and street scouring, and

(3) hydromodification.

Applicable Permit Requirements:

section IV.A Best Management Practices specifications,
section IV.B.1. Final total chlorine effluent limitation,
Attachment E., section II. Event Monitoring Requirements for Superchlorinated,
Attachment E., section VII. Reporting Requirements.

5. Discharges from portions of the drinking water system that:

(1) Directly discharge into or discharge to a storm water conveyance system that conveys the discharge into:

i. Storm water capture basin(s),

ii. Low impact development features, or

iii. Other groundwater-recharge system(s); and

(2) Are collected and used for landscape irrigation and/or other beneficial reuse.

Threat: No threat to water of the U.S. or water of the state.

Applicable Permit Requirements: Reporting only. No effluent limits or monitoring requirements. No further waste discharge requirements necessary.

J. Discharge Points and Receiving Waters

Although drinking water system discharges potentially occur along any point of the system alignment, and may occur concurrently, the discharges are considered “point source discharges” – discharges of a pollutant from a distinct point source, as defined more fully in title 40 Code of Federal Regulations part 122.2, to a water of the U.S. Discharges flow directly into receiving waters or indirectly to receiving waters via storm drains and other conveyance systems. Discharges into creeks, rivers, lakes, enclosed bays, estuaries, and the ocean occur throughout the State. The application package for coverage under this Order requires the water purveyor to identify the receiving waters for its discharges. If the system discharges into numerous small tributaries prior to discharging into a major water body, the application only requires a general description of the immediate receiving water bodies and the name of the major downstream water body(ies).

II. NOTIFICATION REQUIREMENTS

A. General Order Application

Dischargers enrolling for coverage under this General Order are required to submit a complete application package, including a Notice of Intent (NOI), Attachment B1 of this Order. A water purveyor with multiple community water systems need only submit one complete application package, containing individual NOIs for each of its water systems and obtain one Notice of Applicability for regulatory coverage of all its systems that discharge to waters of the U.S. The application package must include all of the following items to be deemed complete:

1. A Notice of Intent for each community water system, including general information about the water purveyor and the existing or proposed discharge(s).

2. A site map that identifies:
   a. The boundaries of the water purveyor's service areas,
   b. The general location of the drinking water system,
   c. The general location of all groundwater supply wells, and
   d. The general identification of the portion of the community water system that discharges within a 300-foot conveyance distance from the receiving water(s) and/or within a 300-foot radius of the receiving water(s).

3. An application fee payable to the State Water Board that shall be in accordance with California Code of Regulations, title 23, or subsequent fee regulations updates. The current fee schedule is available at http://www.waterboards.ca.gov/resources/fees.

4. Evaluation of multiple water use or beneficial reuse options, or the reason(s) that the discharge water cannot be placed for multiple uses or beneficial uses, as encouraged by the State Water Board in accordance with Article X, section 2 of the California Constitution, and Water Code section 100 (prohibition of the waste or unreasonable use of water). Pursuant to these state policies, the State Water Board strongly encourages discharges of water from drinking water systems to be captured for multiple uses prior to surface water discharge, or to be routed to groundwater infiltration facilities. Therefore, to obtain coverage under this Order, a water purveyor is required to evaluate its water reuse options. These options include:

   a. Discharging into a storm water system that employs low impact development practices or flows into storm water capture basins to recharge groundwater.

   b. Collecting and using the water for landscape or agricultural irrigation or other appropriate uses in lieu of potable drinking water supply.

   Discharges to land from drinking water systems that do not drain to waters of the U.S. do not need authorization to discharge under an NPDES permit. Discharges to groundwater may require waste discharge requirements issued by the State and/or Regional Water Boards. As an incentive to promote multiple uses of drinking water system discharges, the State Water Board will not require separate waste discharge

requirements or monitoring for discharges otherwise regulated under this Order that are beneficially reused because they are intermittent and of relatively-good quality (not including waste that threatens ground water quality). A water purveyor must estimate the quantity of water discharged from its system that is beneficially reused, and report it in the annual report. If the entire drinking water system does not discharge to waters of the U.S., NPDES permit coverage is not needed.

5. Receiving water information, including names of receiving water bodies and major downstream water bodies.

6. For applicable discharges into waters of the U.S. identified in section III.K of this Fact Sheet, a TMDL constituent-specific supplement to the application package that includes: a) laboratory analysis of TMDL-specific constituents listed in section III.K, and b) TMDL-specific Best Management Practices to address the constituents.

B. State Water Board Notice of Applicability or Ineligibility for Coverage Under this Order

After the water purveyor's application package is deemed complete, the State Water Board's Deputy Director of Water Quality (Deputy Director) will issue a Notice of Applicability (NOA). Regulatory coverage for the planned and emergency discharges that occur within the areas identified in the application package commences with the date of issuance of a Notice of Applicability to the water purveyor. If the submitted application package is not complete in accordance with this Order, or the discharge is deemed ineligible for coverage under this Order, the Deputy Director will send a response letter to the applicant outlining: (1) the missing information that renders the application package incomplete, or (2) why the described discharge is not eligible for coverage under this Order. The water purveyor has **60 days from the date of the response letter** to provide State Water Board staff the items necessary to complete the application package.

C. Permit Coverage Termination

1. **Termination of Existing Regional Water Board Permit Coverage.** Upon the issuance of the NOA in accordance with this Order, the State Water Board expects the applicable Regional Water Board to terminate regulatory coverage under an existing non-MS4 Regional Water Board NPDES permit for discharges newly regulated under this Order. The State Water Board expects all Regional Water Board permit coverage of drinking water systems that are not separately regulated due to site-specific TMDL requirements to be terminated within one year of the Adoption Date of this Order.

2. **Termination of Statewide Permit Coverage or Revocation of Notice of Non-Applicability.** The Deputy Director may terminate coverage or revoke a Notice of Non-Applicability Approval (NONAA) under this Order for any of the specified

causes, and require application for coverage under an individual or other NPDES permit as set forth in title 40 Code of Federal Regulations part 122.28(b)(3). Causes for permit coverage termination or NONAA revocation include, but are not limited to, the following:

a. Violation of any term or condition of this Order; or
b. Misrepresentation or failure to disclose all relevant facts in obtaining permit coverage or non-applicability status under this Order; or
c. Written request from a Discharger to terminate enrollment because discharge has ceased or that the permit is no longer needed.

Annual permit fees will be assessed by the State Water Board up to the date of written termination notification from the State Water Board to the Discharger, or the date of a termination request letter from the Discharger to the State Water Board, whichever is applicable.

D. Permit Transfer

A change in ownership of the facilities authorized to discharge through coverage under this Order requires the current owner to provide written notice to the State Water Board at least 30 days in advance of transfer of ownership. The Deputy Director may determine that the new owner must submit an application package to seek coverage under this Order if the nature or location(s) of the discharge(s) have changed from the application package on file.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the applicable plans, policies, and regulations identified in the Findings in section III of this Order. This section provides supplemental information, where appropriate, for the plans, policies, and regulations relevant to the discharge.

A. Legal Authorities

This Order serves as Waste Discharge Requirements pursuant to California Water Code article 4, chapter 4, division 7 (commencing with § 13260). This Order is also issued pursuant to federal Clean Water Act (CWA) section 402 and implementing regulations adopted by U.S. EPA, and California Water Code chapter 5.5, division 7 (commencing with § 13370). It shall serve as an NPDES permit for point source discharges from multiple discharge points to surface waters, storm drains, and other conveyances leading to surface waters.

B. State Implementation Policy

The *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP) establishes implementation provisions for priority pollutant criteria, and objectives and provisions for

chronic toxicity control. However, section 5.3 of the SIP allows the State Water Board to grant categorical exceptions from meeting priority pollutant criteria/objectives for discharges from drinking water systems conducted by the owners or operators to fulfill statutory requirements mandated by the federal Safe Drinking Water Act and the California Health and Safety Code. The California Toxics Rule contains criteria for 126 priority pollutants that may be present in these drinking water systems discharges. In many cases, discharges from drinking water systems do not comply with all of the applicable priority pollutant criteria (such as for the protection of aquatic life) since potable and treated drinking water are only required to comply with maximum contaminant levels (MCLs) for the protection of public health. A review of the 126 priority pollutants found that there are priority pollutant criteria that are more stringent than the established MCLs.

The planned and emergency drinking water systems discharges covered under this Order are in accordance with the exception granted by the State Water Board through Resolution 2014-XXXX, allowing water purveyors an exception to comply with priority pollutant criteria for the priority pollutants that have an applicable California Toxic Rule (CTR) criterion more stringent than its corresponding MCL, or do not have an adopted pollutant-specific MCL. The exception was granted in accordance with the requirements set forth in Section 5.3 of the State Implementation Policy.

C. California Ocean Plan

In 1972, the State Water Board adopted the Water Quality Control Plan for Ocean Waters of California (hereinafter Ocean Plan), as amended. The latest Ocean Plan amendment became effective on August 19, 2013. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean waters of the State. To protect the beneficial uses of ocean water, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan and are applicable for those discharges entering directly into the Ocean or indirectly via a storm water system that drains into the Ocean near the location of discharge. This Order does not authorize direct discharges into Areas of Special Biological Significance (ASBS).

Section III.J of the Ocean Plan allows the State Water Board to grant an exception to specified Ocean Plan requirements where the State Water Board determines that the exception will not compromise protection of beneficial uses of ocean waters and the public interest will be served. In many cases, discharges from drinking water systems due to mandated activities do not comply with all of the established Ocean Plan objectives (such as for protection of aquatic life or human health based on more stringent carcinogenic objectives) since these discharges are only required to comply with MCLs for the purpose of public health and safety. A review of the Ocean Plan pollutant water quality objectives shows that there are a number of pollutants that may occur in mandated drinking water system discharges, with Ocean Plan objectives that are more stringent than the MCLs. State Water Board Resolution 2014-XXXX granted an Ocean Plan exception to water purveyors for the pollutants that have an Ocean Plan objective more stringent than its

corresponding MCL or do not have an adopted pollutant-specific MCL. The exception was granted in accordance with the Ocean Plan exception requirements.

D. California Environmental Quality Act (CEQA).

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA, (commencing with section 21100) of Division 13 of the Public Resources Code.

Pursuant to CEQA, Public Resources Code section 21100 et seq., on October 21, 2014 the State Water Board adopted Resolution 2014-XXXX approving a Mitigated Negative Declaration (MND) for exceptions from specified requirements of the State Implementation Policy and California Ocean Plan for statewide discharges resulting from mandated activities required by the federal Safe Drinking Water Act and California Health and Safety Code. The MND concludes that discharges from drinking water systems have less than significant impact to the environment with appropriate mitigation incorporated. This Order implements Resolution 2014-XXXX and establishes appropriate mitigation requirements for discharges authorized under this Order.

E. Regional Water Boards' Water Quality Control Plans

The Regional Water Boards have adopted Water Quality Control Plans (hereinafter Basin Plans) that designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives. In addition, the Basin Plans implement State Water Board Resolution No. 88- 63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. The Basin Plans identify typical beneficial uses as follows: municipal and domestic supply, agricultural irrigation, stock watering, process supply, service supply, hydropower supply, water contact recreation, canoeing and rafting recreation, other non-contact water recreation, warm freshwater aquatic habitat, cold freshwater habitat, warm fish migration habitat, cold fish migration habitat, warm and cold spawning habitat, wildlife habitat, navigation, rare, threatened, or endangered species habitat, groundwater recharge, and freshwater replenishment. Requirements of this Order implement provisions contained in the applicable Basin Plans.

F. Antidegradation Policy

Section 131.12 of 40 C.F.R. requires that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16. Resolution 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing high water quality be maintained unless degradation is justified based on specific findings. The State Water Board and Regional Water Board's Water Quality Control Plans implement,

and incorporate by reference, both the state and federal antidegradation policies. The permitted discharges must be consistent with the antidegradation provision of section 131.12 and State Water Board Resolution 68-16.

Given the nature of a general permit and the broad range of beneficial uses to be protected across the state, it is not feasible to analyze each surface water body in the state to determine which water bodies are of high quality for the constituents in the discharges authorized by this Order. The State Water Board finds that, due to the intermittent, seasonal and temporary characteristics of these discharges, the impact on existing surface water quality from these discharges will be insignificant, as further explained in the MND approved by the State Water Board in Resolution 2014-XXXX. While surface waters may be temporarily degraded and there may be temporary excursions above water quality objectives in the immediate vicinity of these discharges, any such impacts to surface water quality that may occur are consistent with the maximum social and economic benefit of the people of the state, provided that the discharges comply with this Order. The discharges are a necessary consequence of providing safe, clean, affordable, and accessible drinking water to the people of the state in accordance with the state policy declared in Water Code section 106.3, subdivision (a), and the discharges are mandated by drinking water laws and regulations. The BMPs required under this Order constitute best practical treatment and control of these discharges. Therefore the discharges permitted under this Order are consistent with the antidegradation provision of section 131.12 and the State Water Board Resolution 68-16.

G. Anti-Backsliding Requirements

Sections 402(o)(2) and 303(d)(4) of the CWA and title 40 Code of Federal Regulations part 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. This Order is a new statewide NPDES permit that regulates discharges from community drinking water systems statewide. Some of these same discharges are currently regulated under existing Regional Water Board NPDES permits. Some of these same discharges are not regulated at all. This Order, when implemented, will provide consistent regulatory requirements that apply to discharges from drinking water systems statewide. The following existing Regional Water Board NPDES permits regulate discharges from community drinking water systems, among other types of discharges, and were used to guide the development of this Order. Existing NPDES permits' effluent limitations and requirements in these Regional Water Board permits were analyzed for the purpose of analyzing backsliding.

The San Francisco Bay Regional Water Board Permit (Order R2-2009-0033) is a general permit applicable only to surface water treatment facilities for potable supply discharges for either long term or short term. The short term discharges include limits for TSS, settleable matter, pH, total chlorine residual, total trihalomethanes (TTHMs), zinc, and acute toxicity. As previously discussed, a surface water treatment facility

operating per DPH's regulations, would remove TSS and settleable matter. For the other effluent limits of TTHMs and zinc, the discharges would be in compliance with MCLs for TTHMs as required by DPH. In addition, pursuant to the SIP and Ocean Plan exceptions, the discharges covered under this Order are not required to comply with zinc objectives. Therefore, there is no need to establish TTHMs and zinc effluent limitations, nor an effluent limitation for pH, as previously discussed.

The Los Angeles Regional Water Board Permit (Order R4-2003-0108) is a general permit for discharges of groundwater from potable water supply wells to surface waters and it includes limits of TSS, turbidity, BOD, settleable solids, chlorine residual, pH, TTHMs, Methyl tertiary butyl ether (MTBE) and a list of 15 volatile organic compounds (VOCs) that are also considered priority pollutants, PCBs, and various limits for TDS, Sulfate, Chloride, Boron and Nitrogen applicable per watershed/stream reach. As previously discussed, there is no need to impose limits for BOD, TSS, settleable solids, pH, and TTHMs. In the case of PCBs and the 15 VOCs, as these are priority pollutants that are granted exceptions, it is not necessary to establish limits for these pollutants. With regards to the limits for TDS, Sulfate, and chloride, compliance with the MCLs, which is required of these discharges, should result in compliance with the TDS, sulfate, and chloride limits, so there is no need to impose the same limitations in this Order. With regards to nitrogen, compliance with the nitrate MCL should ensure compliance with the nitrogen limitations. During the effective period of R4-2003-0108 there were no issues of non-compliance with the boron limitations. This is new information to justify that there is no reasonable potential to exceed the boron limits. Therefore, there is no need to impose a boron limitation.

The Central Valley Regional Water Board Permit (Order R5-2013-0074) is a general permit applicable to dewatering activities and other types of low threat discharges to surface waters including discharges from drinking water systems. It includes limitations for Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), settleable solids, pH, and total chlorine residual. Since this Permit applies to a large set of what the Central Valley Water Board considered low threat discharges, it established a wide range of effluent limitations to ensure protection of beneficial uses.

This statewide Order and its requirements are specifically applicable to drinking water systems that discharge either groundwater and/or surface water that have/has received treatment per state regulations or otherwise complies with primary and secondary MCLs. The treatment of any surface waters to make them suitable for drinking includes filtration and disinfection. This treatment is expected to remove any BOD, TSS or settleable solids present in the surface water. Similarly, groundwater that is suitable for drinking water purposes receives natural or well-head treatment so it is not expected to have BOD, TSS, or settleable solids. In addition, sedimentation and erosion control BMPs are required to be implemented to prevent the discharges authorized by this Order from carrying sediment and causing soil erosion that would add TSS and settleable solids in their discharge prior to entering a storm drain or receiving water directly. It is therefore unnecessary to establish effluent limits for BOD, TSS, or settleable solids in this Order.

Community drinking water systems are required to maintain a pH of 7.0 in their distribution systems as part of their corrosion control treatment plans (40 C.F.R. section 141.82(f)). For all other community systems that do not need to maintain a corrosion control plan, it is expected that they will have no issues with pH levels because they have no issues with corrosion of their systems. Including an effluent limitation for pH in this Order would unnecessarily regulate those systems that are already required to comply with a 7.0 pH level and force other community drinking water systems to add additional chemicals prior to discharging, which in turn may add salts and other pollutants that may cause water quality impacts. Therefore, it is unnecessary to include an effluent limitation for pH in this Order.

The San Diego Regional Water Board Permit (Order R9-2010-0003) is a general permit for discharges of hydrostatic test water and potable water to surface waters and storm drains or other conveyance systems. It establishes limits for total chlorine residual and pH. As previously discussed there is no need to include an effluent limit for pH.

This Order requires that discharges meet primary and secondary MCLs and mandates the use of multiple BMPs, and also contains effluent limitations for chlorine residual and turbidity and receiving water limitations for pH, chemical constituents, sediment and total suspended solids, and toxicity, among other requirements. This Order does not include specific effluent limitations for BOD, TSS, settleable solids or settleable matter, pH, TTHMs, zinc, acute toxicity, MTBE, 15 priority pollutants VOCs, PCBs, TDS, sulfate, chloride, boron and nitrogen, which are included in some of the comparable Regional Water Board permits, as described above. To the extent that this Order may impose less stringent limitations than those contained in the existing Regional Water Board permits, applicable exceptions to the anti-backsliding prohibition that are supported by the analysis above include: waters in attainment, where permit requirements are consistent with antidegradation (§ 303(d)(4)(B)); new information available (§ 402(o)(2)(B)(i)); and events beyond dischargers' control (§ 402(o)(2)(C)), due to the mandatory or emergency nature of the discharges. All requirements under this Order, when implemented, will increase the regulatory requirements over drinking water system discharges on a statewide basis. The effluent limitations for chlorine residual and numerical threshold for turbidity in this Order are as stringent as the Regional Water Board permits.

H. Monitoring and Reporting Requirements

Title 40 Code of Federal Regulations part 122.48, requires that all NPDES permits specify requirements for recording and reporting monitoring results. Section 13267 and section 13383 of the Water Code authorize the regional boards to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) in this Order establishes monitoring, recordkeeping, notification, and reporting requirements to implement State and federal requirements. This MRP is provided in Attachment E.

To address the cost of compliance to dischargers and the cost of implementation to the Water Boards, the monitoring and reporting requirements in this Order are designed to

provide necessary information for the discharger to make informed decisions regarding implementation of best management practices, and for the reporting of information that has pertinent value to the protection of water quality. This Order implements representative monitoring requirements, allowing one monitoring sample to represent the quality of other repetitive discharges that are similar in nature. Discharges that are considered to be similar in nature include those that have the following elements in common: (1) the same general water supply, (2) undergo the same water treatment, and (3) are managed through the same series of best management practices. This Order additionally requires annual monitoring and reporting of non-compliant discharges, mandatory recordkeeping, Regional Water Board notification of high volume discharges, reporting of estimated annual volumes discharged to surface water and reporting of the estimated volume of water put to multiple uses prior to surface water discharge or routed to ground water infiltration.

I. Endangered Species Act

This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code § 2050 et. seq) or the Federal Endangered Species Act (16 U.S.C.A. § 1531 et. seq). This Order requires compliance with effluent limitations, receiving water limitations, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

J. Impaired Water Bodies on CWA 303(d) List

Under section 303(d) of the 1972 CWA, states, territories, and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after discharges of point sources of pollution have installed the minimum required levels of pollution control technology. On October 11, 2011, U.S. EPA gave final approval to California's 2010 section 303(d) List of Water Quality Limited Segments. The Basin Plans reference this list of Water Quality Limited Segments (WQLSs), which are defined as "…*those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources* (40 C.F.R. part 130.2(j))." The Basin Plans also state, "*Additional treatment beyond minimum federal standards will be imposed on dischargers to [WQLSs]. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment*." Impaired waters are those waters not meeting quality standards pursuant to section 303(d) of the CWA, thus do not support beneficial uses. States must also prioritize the water bodies on the list and develop action plans, called total maximum daily loads (TMDLs) to improve the water quality. California impaired waters, as approved by the State Water Board, are listed on

http://www.waterboards.ca.gov/water_issues/programs/tmdl/2010state_ir_reports/2010_combo303d.xls.

This Order does not authorize discharges from new drinking water systems (not an expansion of an existing system) into an impaired water body that is impaired for a constituent that exists in the new discharge at a concentration greater than the criteria used to establish the impairment of the water body.

K. Applicable Total Maximum Daily Loads (TMDLs) with Waste Load Allocations (WLAs) to Water Purveyors

TMDLs in California are developed either by the Regional Water Boards or by U.S. EPA. TMDLs developed by Regional Water Boards are designed as Basin Plan amendments and include implementation provisions. TMDLs developed by U.S. EPA typically contain the total load and load allocations required by section 303(d), but do not contain comprehensive implementation provisions. This stems from the fact that U.S. EPA authorities related to implementation of nonpoint source pollution control measures are generally limited to education and outreach as provided by CWA section 319. TMDLs are currently required for all waters and pollutants on the 303(d) list. TMDLs must consider and include allocations to both point sources and nonpoint sources of listed pollutants. Although the abbreviation stands for "Total Maximum Daily Load," the limitations contained in a TMDL may be other than "daily load" limits. There also can be multiple TMDLs on a particular water body, or there can be one TMDL that addresses numerous pollutants. The basis for grouping pollutants into one TMDL is typically whether or not there can be a common analytical approach to the assessment or a common management response to the impairment.

A review of Regional Water Board TMDLs found that, as of the adoption date of this Order, only the Los Angeles Regional Water Board and the San Diego Regional Water Board have existing (previously adopted) TMDLs in their basin plans that may indirectly imply that waste load allocations are applicable to the discharges from drinking water systems regulated under this General Order. In many of the existing TMDLs, waste load allocations apply to general categories of discharges (such as “other NPDES discharges”, “general NPDES discharges” or “minor NPDES discharges”) that indirectly include discharges from drinking water systems.

The State Water Board is required to ensure that the effluent limits in this Order are “consistent with the assumptions and requirements of any available waste load allocation for the discharge.” (40 C.F.R. § 122.44(d)(1)(vii)(B).) Although these TMDLs apply to the discharges that are authorized under this Order, none of the TMDLs or supporting staff reports indicate that the discharges from drinking water systems authorized under this Order are significant sources of the relevant pollutants. Based on the data that is currently available, and due to the high quality and intermittent and short-term nature of the discharges from drinking water systems authorized under this Order, it is unlikely that these discharges contribute to the impairment of the TMDL-related water bodies. The State Water Board has determined that the intermittent,

short-term and seasonal discharges regulated under this Order do not contribute to the impairment, and requirements more stringent than those included in this Order will not contribute to the actions needed to address the impairment. Therefore, it is consistent with the assumptions and requirements of the waste load allocation in these TMDLs for this Order to not include any TMDL-specific effluent limitations. However, due to the existing language in the TMDLs identified in this section, the State Water Board is requiring laboratory sampling to be included in the application process of this Order, to confirm that pollutants in the subject drinking water system discharges are not at levels that are contributing to the existing impairment. The State Water Board is also requiring that applicants describe and implement applicable TMDL pollutant-specific management practices to reduce the subject pollutant concentration to the maximum extent possible.

If the Deputy Director determines that any of these TMDLs, or any newly approved TMDLs, establish waste load allocations that should be implemented through TMDL-specific permit requirements for the discharges from drinking water systems that are authorized under this Order, the water purveyor will be required to enroll in this Order and maintain enrollment until the Regional Water Board issues an individual permit for those discharges contributing to the impairment. Alternatively, if further TMDLs are adopted that address pollutants that are likely to be in discharges from drinking water systems, and allocate waste loads specifically to water purveyors regulated under this Order, the State Water Board may consider adding additional TMDL-specific permit requirements to Attachment G of this Order in a subsequent permit amendment or renewal.

To facilitate a water purveyor's identification of an applicable TMDL in the Los Angeles and San Diego regions, the following table has been provided to identify the receiving water bodies and corresponding pollutants for which an applicant must provide an application supplement, in accordance with Section XXXXXX of this Order. The table below includes only the TMDL-specific constituents that may pertain to drinking water discharges and/or additional pollutants the discharges assimilate as they flow into receiving waters. A summary providing general information regarding each TMDL adopted by U.S. EPA or the Regional Water Boards for the Los Angeles and San Diego regions that are applicable to the discharges from drinking water systems authorized under this Order, is provided following the table.

Table F-2. Los Angeles Regional Water Boards' 303(d) list Waterbodies and applicable TMDL-specific constituents

TMDL WATERBODY	TMDL CONSTITUENT
Ballona Creek	Copper Lead Zinc
Ballona Creek Estuary	Cadmium Copper Lead Silver Zinc TSS Chlordane DDTs DDD Total PCBs
Ballona Creek, Ballona Estuary and Sepulveda Channel	Total Coliform E. coli
Calleguas Creek	Boron Total Dissolved Solids Sulfate Chloride Chronic Toxicity Unit (TU_c) Chlorpyrifos Diazinon Chlorodane 4,4-DDD 4,4,-DDE 4,4,-DDT Dieldrin PCBs Toxaphene
Calleguas Creek, Reach 1, 2, 3, 4, 5, 9, 10, 11, 12, and 13	Copper Nickel
Calleguas Creek, Reach 4 and 5	Selenium

Colorado Lagoon	Chlordane Dieldrin Lead Zinc PAHs PCBs DDT
Dominguez Channel	Toxicity
Dominguez Channel and Torrance Lateral	Copper Lead Zinc
Dominguez Channel Estuary	PAHs Chlordane Dieldrin
Dominguez Channel Estuary and Greater Harbor Waters	Copper Lead Zinc 4-4-DDT Total PCBs
Compton Creek	Copper Lead
Echo Lake	Total Nitrogen Total Phosphorus
El Dorado Park Lake	Total Nitrogen Total Phosphorus Mercury
Lake Calabasas	Total Nitrogen Total Phosphorus
Lincoln Lake	Total Nitrogen Total Phosphorus
Long Beach City Beaches and the Los Angeles River Estuary	Total Coliform
Los Angeles Harbor	Total Coliform

Los Angeles River	Nitrate-nitrogen Nitrite-nitrogen Nitrate-nitrogen + nitrite-nitrogen Cadmium Copper Lead Zinc E. coli
Los Angeles River above LA-Glendale WRP	Ammonia
Los Angeles River below LA-Glendale WRP	Ammonia
Los Angeles River Reach 1	Copper Lead
Los Angeles River Reach 2 and Arroyo Seco	Copper Lead
Los Angeles River Reach 3 above LA- Glendale WRP and Verdugo	Copper Lead
Los Angeles River Reach 3 below LA- Glendale WRP	Copper Lead
Los Angeles River Reach 4	Copper Lead
Los Angeles River Reach 5,6 and Bell Creek	Copper Lead Selenium
Los Angeles River Burbank Western Channel, above WRP	Copper Lead
Los Angeles River Burbank Western Channel, below WRP	Copper Lead
Los Angeles River tributaries	Ammonia
Los Cerritos Channel	Copper Lead Zinc
Macado Lake	Total PCB DDD (all congeners) DDE (all congeners) DDT (all congeners) Total DDT Chlordane Dieldrin

Malibu Creek	E. coli
Malibu Creek Lagoon	Total Coliform
Marina Del Rey Mothers Beach and Back Basins	Total Coliform
Park Lake, Peck Rd	Total Nitrogen Total Phosphorus
Rainbow Creek	Total Nitrogen Total Phosphorus
Rio Hondo Reach 1	Copper Lead Zinc
San Gabriel River Estuary	Copper
San Gabriel River, Reach 1	Copper
San Gabriel River, Reach 2	Lead
San Gabriel River, Coyote Creek	Copper Lead Zinc
San Gabriel River, San Jose Creek, Reach 1 and 2	Selenium
Santa Clara River	Total Coliform E. coli
Santa Clara River, Reach 7	Ammonia as Nitrogen Nitrate plus Nitrite as Nitrogen
Santa Clara River, Reach 3	Ammonia as Nitrogen Nitrate plus Nitrite as Nitrogen
Santa Fe Dam Park Lake	Total Nitrogen Total Phosphorus
Santa Monica Bay	Total Coliform
Upper Santa Clara River, Reach 3	Chloride
Upper Santa Clara River, Reaches 4B, 5 and 6	Chloride
Ventura Coastal (Miscellaneous)	Total Coliform
Ventura River	Total Nitrogen Total Phosphorus

Table F-3. San Diego Regional Water Boards' 303(d) list Waterbodies and applicable TMDL-specific constituents

TMDL WATERBODY	POLLUTANT
Alisa Hydrologic Subarea	Total Coliform
Chollas Creek	Copper Lead Zinc
Chollas Hydrologic Subarea	Total Coliform
Dana Point Hydrologic Subarea	Total Coliform
Lower San Juan Hydrologic Subarea	Total Coliform
Miramar Reservoir Hydrologic Subarea	Total Coliform
Mission San Diego Hydrologic Subarea & Santee Hydrological Subarea	Total Coliform
Rainbow Creek	Total Nitrogen Total Phosphorus
San Clemente Hydrologic Subarea	Total Coliform
San Dieguuito Hydrologic Subarea	Total Coliform
San Joaquin Hills Hydrologic Subarea & Laguna Hills Hydrologic Subarea	Total Coliform
San Marcos Hydrologic Subarea	Total Coliform
San Luis Rey Hydrologic Subarea	Total Coliform
Scripps Hydrologic Subarea	Total Coliform
Tecolote Hydrologic Subarea	Total Coliform

Summary of Los Angeles Region Water Quality Control Board TMDLs

The following is a summary of TMDLs in the Los Angeles region that have waste load allocations for general NPDES discharge categories, followed by a general description. Table F-2 in this section lists the 303(d) list water bodies and TMDL-specific constituents. These TMDLs have been adopted by the Regional Water Board, and approved by the State Water Board and/or the U.S. EPA under Clean Water Act section 303(c), prior to the adoption date of this Order. This Order solely implements the requirements of existing TMDLs; this Order does not modify an existing TMDL or basin plan language. Further detailed information on the summary of listed TMDLs below, as adopted by the Regional Water Quality Control Boards or U.S. EPA, can be found at the following websites:

http://www.waterboards.ca.gov/losangeles/water_issues/programs/tmdl/
or
http://epa.gov/region09/water/tmdl/final.html

1. Total Maximum Daily Load for Nitrogen, Phosphorus, Mercury, Trash, Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs) in the Los Angeles Area Lakes

U.S. EPA established TMDLs in the following nine lakes in the Los Angeles region, for the following pollutants:

- Peck Road Park Lake: nitrogen, phosphorus, chlordane, DDT, dieldrin, PCBs, trash
- Lincoln Park Lake: nitrogen, phosphorus, trash
- Echo Park Lake: nitrogen, phosphorus, chlordane, dieldrin, PCBs, trash
- Lake Calabasas: nitrogen, phosphorus
- El Dorado Park Lakes: nitrogen, phosphorus, mercury
- Legg Lakes (North, Center and Legg): nitrogen, phosphorus
- Puddingstone Reservoir: nitrogen, phosphorus, chlordane, DDT, PCBs, mercury, dieldrin
- Santa Fe Dam Park: nitrogen, phosphorus
- Lake Sherwood: mercury

The NPDES permits in the watersheds draining to the impaired lakes include municipal separate storm sewer system (MS4) permits, a California Department of Transportation (Caltrans) storm water permit, general construction storm water permits, general industrial storm water permits, and a general NPDES permit. Other than the MS4 and Caltrans storm water permits, there are no major individual NPDES permits in the watersheds draining to the impaired lakes. Sources of pollutants include discharges of potable water used to maintain lake levels.

2. Total Maximum Daily Load for Chloride in the Upper Santa Clara River

Chloride levels in Reach 3 of the Santa Clara River exceed the water quality objective (WQO) of 80 mg/L for chloride in Reach 3 established in the Water Quality Control Plan, Los Angeles Region (Basin Plan). U.S. EPA established a TMDL for Reach 3. There are two major point sources that discharge into Reach 3, the Santa Paula and Fillmore Water Reclamation Plants. Minor point source discharges to Reach 3 include:

- storm water regulated under the NPDES municipal stormwater permit
- runoff from construction sites regulated under the statewide construction general NPDES permit,
- storm water regulated under the CalTrans statewide NPDES permit,
- runoff from industrial sites regulated under the statewide industrial facility general NPDES permit, and
- dewatering operations regulated under NPDES permits

In addition, elevated chloride concentrations are causing impairments of the water quality objective of 100 mg/L in Reach 5 (EPA 303(d) list Reach 7) and Reach 6 (EPA 303(d) list Reach 8) of the Santa Clara River (SCR). These reaches were on the 1998 and 2002 Clean Water Act (CWA) 303(d) lists of impaired water bodies as impaired due to chloride. The objectives for these reaches were set to protect all beneficial uses; agricultural beneficial uses have been determined to be most sensitive, and not currently attained at the downstream end of Reach 5 (EPA 303(d) list Reach 7) and Reach 6 (EPA 303(d) list Reach 8) in the Upper Santa Clara River (USCR). Irrigation of salt sensitive crops such as avocados, strawberries, and nursery crops with water containing elevated levels of chloride results in reduced crop yields. Chloride levels in groundwater in Piru Basin underlying the reach downstream of Reach 5 are also rising.

3. Total Maximum Daily Load for Bacteria in the Santa Monica Bay

Many of the beaches along Santa Monica Bay (SMB) were listed on the California's 1998 section 303(d) List, due to impairments for coliform or for beach closures associated with bacteria generally. The Los Angeles Regional Board adopted TMDLs to address bacteriological water quality impairments for 44 beaches along Santa Monica Bay located in Los Angeles County, California. WLA(s) are expressed as the number of sample days at a shoreline monitoring site that may exceed the following single sample numeric targets:

- Total coliform density shall not exceed 10,000/100ml.
- Fecal coliform density shall not exceed 400/100ml
- Enterococcus density shall not exceed 104/100ml
- Total coliform density shall not exceed 1000/100 ml if the ratio of fecal-to-total coliform exceeds 0.1.

With the exception of isolated sewage spills, storm water runoff conveyed by storm drains and creeks is the primary source of elevated bacterial indicator densities to the SMB beaches during wet weather. Waste load allocations are expressed as allowable exceedance days because the bacterial density and frequency of single sample exceedances are the most relevant to public health protection. All responsible jurisdictions and responsible agencies (local agencies that are responsible for discharges from a publicly owned treatment works to the SMB watershed or directly to the Bay, permittees or co-permittees on a municipal storm water permit, the California Department of Transportation, and other agencies that have jurisdiction over a beach adjacent to SMB) within a subwatershed are jointly responsible for complying with established allowable number of exceedance days.

4. Total Maximum Daily Load for Nutrients in the Los Angeles River

Reaches of the Los Angeles River and its tributaries were listed as impaired for nitrogen compounds (ammonia, nitrate, and nitrate) and related effects such as

algae, pH, odor, and scum on the 2002 303(d) list. These reaches were listed because numeric and narrative water quality objectives for nitrogen compounds and related effects were exceeded, thereby impairing warm, freshwater, and wildlife habitats, and recreation beneficial uses.

The principal source of nitrogen compounds to the Los Angeles River is discharges from the Donald C. Tillman Water Reclamation Plant (WRP), the Los Angeles-Glendale WRP, and the Burbank WRP. During dry weather period, the major POTWs contribute 84.1% of the total dry weather nitrogen load. Urban runoff, storm water, and groundwater discharge may also contribute nitrate loads. Further evaluation of these sources is set forth in the Implementation Plan

Concentration based WLAs for nitrogen compounds are allocated to minor point sources enrolled under NPDES or WDR permits including but not limited to Tapia Water Reclamation Plant (WRP), Whittier Narrows WRP, Los Angeles Zoo WRP, industrial and construction storm water, and municipal storm water and urban runoff from municipal separate storm sewer systems (MS4s). The WLA(s) are listed by receiving water and established as the applicable one-hour and thirty-day average effluent limitations at the point of discharge.

5. Total Maximum Daily Load for Nutrients in the Santa Clara River

Discharge of wastes containing nitrite, nitrate and ammonia to the Santa Clara River causes exceedances of water quality objectives for ammonia, nitrate and nitrite established in the Basin Plan. The Santa Clara River is listed as impaired by ammonia in Reach 3 and by nitrate plus nitrite in Reach 7 on the 2002 303(d) list of impaired water bodies. Reach 8 of the Santa Clara River is included on the State Monitoring List for organic enrichment/dissolved oxygen, which may be caused by excessive nitrogen. Nitrate and nitrate are biostimulatory substances that can cause eutrophic effects such as low dissolved oxygen and algae growth. Excessive ammonia can cause aquatic life toxicity.

The principal source of ammonia, nitrite, and nitrate to the Santa Clara River is discharges from the Saugus and Valencia Water Reclamation Plants (WRPs) and the Fillmore and Santa Paula Publicly Owned Treatment Works (POTWs). Agricultural runoff, storm water discharge and groundwater discharge may also contribute nitrate loads. Further evaluation of these sources is set forth in the Implementation Plan.

Concentration-based waste loads are allocated to major point sources of ammonia and nitrate+nitrite in Reach 3, which include the Fillmore and Santa Paula POTWs; concentration-based waste loads are allocated to major point sources of ammonia and nitrite+nitrate in Reaches 7 and 8, which include the Valencia and Saugus WRPs. Concentration-based waste loads are also allocated to municipal, industrial and construction storm water sources regulated under NPDES permits and minor discharges enrolled under NPDES or WDR permits. The allocations for minor point sources are based on the water quality

objectives for ammonia, nitrite, nitrate and nitrite plus nitrate. The WLAs are established as one-hour and thirty day average concentrations.

6. Total Maximum Daily Load for Bacteria in the Marina del Rey Mothers Beach and Back Basins

Elevated bacterial indicator densities are causing impairment of the water contact recreation (REC-1) beneficial use at Marina del Rey Harbor (MdRH) Mothers' Beach and back basins. Dry-weather urban runoff and storm water conveyed by storm drains are the primary sources of elevated bacterial indicator densities to MdRH Mothers' Beach and back basins during dry and wet-weather. As of December 2002, there were seven dischargers located within the Marina del Rey watershed. These dischargers were issued general NPDES permits, general industrial and/or general construction storm water permits. The bacteria loads associated with these discharges are largely unknown, since most do not monitor for bacteria. However, these discharges are not expected to be a significant source of bacteria.

The Los Angeles County MS4 and CalTrans storm water permittees and co-permittees are assigned waste load allocations (WLAs) expressed as the number of daily or weekly sample days that may exceed the single sample targets identified under "Numeric Target" at a monitoring site. Waste load allocations are expressed as allowable exceedance days because the bacterial density and frequency of single sample exceedances are the most relevant to public health protection.

According to the TMDL, discharges from general NPDES permits, general industrial storm water permits and general construction storm water permits are not expected to be a significant source of bacteria.

7. Total Maximum Daily Load for Bacteria in the Los Angeles Harbor

Elevated bacterial indicator densities are causing impairment of the water contact recreation (REC-1) beneficial use of Inner Cabrillo Beach and the potential REC-1 uses of the Main Ship Channel in the Los Angeles Harbor.

Dry-weather urban runoff and storm water conveyed by storm drains are major sources of elevated bacterial indicator densities to Inner Cabrillo Beach and the Main Ship Channel during dry and wet-weather. As of March 2004, there are 15 active individual and 15 active general, NPDES permits for discharges to the Inner or Outer Los Angeles Harbor including the Terminal Island Treatment Plant. While the fecal coliform counts in the wastewater field indicate a contribution of bacteria to the Harbor by the Terminal Treatment Plant, the wastewater field is sufficiently diluted and the bacterial densities are so much lower in the Harbor than the high bacterial densities and exceedences at the sites at Cabrillo Beach and in the Main Ship Channel that it appears that the

Treatment Plant is not a significant source of bacteria to the Beach or to the Ship Channel.

Waste load allocations are expressed as allowable exceedance days because the bacterial density and frequency of single sample exceedances are the most relevant to public health protection. According to the TMDL, discharges from general NPDES permits, general industrial storm water permits and general construction storm water permits are not expected to be a significant source of bacteria.

8. Total Maximum Daily Load for Bacteria in Malibu Creek and Lagoon

Elevated bacterial indicator densities are causing impairment of the water contact recreation (REC-1) beneficial use at Malibu Creek, Lagoon, and adjacent beach. Fecal coliform bacteria may be introduced from a variety of sources including storm water runoff, dry-weather runoff, onsite wastewater treatment systems, and animal wastes. Waste Load Allocations (WLAs) are expressed as the number of daily sample days that may exceed the single sample limits as identified under "Numeric Target." WLAs are expressed as allowable exceedance days because the bacterial density and frequency of single sample exceedances are the most relevant to public health protection.

The responsible jurisdictions and responsible agencies are the County of Los Angeles, County of Ventura, the cities of Malibu, Calabasas, Agoura Hills, Hidden Hills, Simi Valley, Westlake Village, and Thousand Oaks; Caltrans, and the California Department of Parks and Recreation. The responsible jurisdictions and responsible agencies include the permittees and co-permittees of the municipal storm water (MS4) permits for Los Angeles County and Ventura County, and Caltrans. In addition, according to the TMDL, discharges from Tapia WWRF and effluent irrigation, and general construction storm water permits are not expected to be a significant source of bacteria.

9. Total Maximum Daily Load for Metals in the Los Angeles River

Segments of the Los Angeles River and its tributaries are on the Clean Water Act section 303(d) list of impaired waterbodies for copper, cadmium, lead, zinc, aluminum and selenium. The metals subject to this TMDL are toxic pollutants, and the existing water quality objectives for the metals reflect national policy that the discharge of toxic pollutants in toxic amounts be prohibited. When one of the metals subject to this TMDL is present at levels exceeding the existing numeric objectives, then the receiving water is toxic. The beneficial uses impaired by metals in the Los Angeles River and its tributaries are those associated with aquatic life and water supply, including wildlife habitat, rare, threatened or endangered species, warm freshwater habitat, wetlands, and groundwater recharge.

There are significant differences in the sources of metals loadings during dry weather and wet weather. During dry weather, most of the metals loadings are in the dissolved form. The three major publicly owned treatment works (POTWs) that discharge to the river (Tillman WRP, LA-Glendale WRP, and Burbank WRP) constitute the majority of the flow and metals loadings during dry weather. The storm drains also contribute a large percentage of the loadings during dry weather because although their flows are typically low, concentrations of metals in urban runoff may be quite high. The remaining portion of the dry weather flow and metals loadings represents a combination of tributary flows, groundwater discharge, and flows from other permitted NPDES discharges within the watershed.

TMDLs are developed for reaches on the 303(d) list and for reaches where recent data indicate additional impairments. Addressing the impairing metals throughout the Los Angeles River watershed will ensure that the metals do not contribute to an impairment elsewhere in the watershed. Metals allocations are therefore developed for upstream reaches and tributaries that drain to impaired reaches. These TMDLs address wet- and dry-weather discharges of copper, lead, zinc and selenium and wet-weather discharges of cadmium.

Impairments related to cadmium only occur during wet weather. Impairments related to selenium are confined to Reach 6 and its tributaries. Dry-weather impairments related to zinc only occur in Rio Hondo Reach 1. The aluminum listing was based on water quality objectives set to support the municipal water supply beneficial use (MUN). MUN is a conditional use in the Los Angeles River watershed. The United States Environmental Protection Agency (U.S. EPA) has determined that TMDLs are not required for impairments of conditional uses.

10. Total Maximum Daily Load for Metals in Ballona Creek

Ballona Creek is on Clean Water Act Section 303(d) list of impaired waterbodies for dissolved copper, dissolved lead, total selenium, and dissolved zinc and Sepulveda Canyon Channel is 303(d) listed for lead. TMDLs are developed for reaches on the 303(d) list and metal allocations are developed for tributaries that drain to impaired reaches. This TMDL address dry- and wet-weather discharges of copper, lead, selenium and zinc in Ballona Creek and Sepulveda Canyon Channel.

There are significant differences in the sources of copper, lead, selenium and zinc loadings during dry weather and wet weather. During dry weather, most of the metals loadings are in the dissolved form. Storm drains convey a large percentage of the metals loadings during dry weather because although their flows are typically low, concentrations of metals in urban runoff may be quite high. During dry years, dry weather loadings account for 25-35 percent of the annual metals loadings. Additional sources of dry weather flow and metals loading include groundwater discharge and flows from other permitted NPDES discharges within the watershed. During wet weather, most of the metals

loadings in Ballona Creek are in the particulate form and are associated with wet-weather storm water flows.

Concentration-based dry- and wet-weather waste load allocations are assigned to the minor NPDES permits and general non-storm water NPDES permits that discharge to Ballona Creek or its tributaries.

11. Total Maximum Daily Load for Toxic Pollutants in the Ballona Creek Estuary

Ballona Creek Estuary (Estuary) is on the Clean Water Act Section 303(d) list of impaired water bodies for cadmium, copper, lead, silver, zinc, chlordane, DDT, PCBs, PAHs and toxicity in sediments. Urban storm water has been recognized as a substantial source of metals. Numerous researchers have documented that the most prevalent metals in urban storm water (i.e., copper, lead, zinc, and to a lesser degree cadmium) are consistently associated with suspended solids. Because metals are typically associated with fine particles in storm water runoff, they have the potential to accumulate in estuarine sediments where they may pose a risk of toxicity.

TMDLs are developed for cadmium, copper, lead, silver, zinc, chlordane, DDT, and PCBs within the sediments of the Ballona Creek Estuary. WLAs are assigned to point sources for the Ballona Creek watershed. A grouped mass-based waste load allocation is developed for the storm water permittees (Los Angeles County MS4, Caltrans, General Construction and General Industrial permittees) by subtracting the load allocations from the total loading capacity.

Sediment based waste load allocations are assigned to minor NPDES permits and general non-storm water NPDES permits that discharge to Ballona Creek or its tributaries. The Los Angeles Water Board implements an approach for compliance for these waste load allocations by establishing a total suspended solids (TSS) effluent limitation together with a concentration-based limit for the each specific TMDL pollutant.

12. Total Maximum Daily Load for Toxicity in Calleguas Creek

Discharge of wastes containing chlorpyrifos, diazinon, other pesticides and/or other toxicants to Calleguas Creek, its tributaries and Mugu Lagoon cause exceedances of water quality objectives for toxicity established in the Basin Plan. Source analysis determined that agricultural and urban uses are the largest sources of chlorpyrifos and diazinon in the watershed.

A waste load of 1.0 TUc is allocated to the major point sources (POTWs) discharging to the Calleguas Creek Watershed. Minor sources include NPDES permittees other than wastewater treatment plants, and urban storm water co-permittees (MS4s) discharging to the Calleguas Creek watershed.

A WLA of 1.0 TUc is allocated to minor point sources. In addition, WLAs for acute and chronic toxicity for diazinon and chloropyrifos are allocated to the minor point sources.

13. Total Maximum Daily Load for Organochlorine (OC) Pesticides and Polychlorinated Biphenyls (PCBs) in Calleguas Creek

Eleven of fourteen reaches in the Calleguas Creek Watershed (CCW) were identified on the 2002 303(d) list of water-quality limited segments as impaired due to elevated levels of organochlorine (OC) pesticides and/or polychlorinated biphenyls (PCBs) in water, sediment and/or fish tissue. Additionally, Mugu Lagoon was listed as impaired for sedimentation/siltation. OC pesticides and PCBs can bioaccumulate in fish tissue and cause toxicity to aquatic life in estuarine and inland waters. Siltation may transport OC Pesticides and PCBs to surface waters and impair aquatic life and wildlife habitats.

Monitoring data from major NPDES discharges and land use runoff were analyzed to estimate the magnitude of OC pesticides and PCBs loads to Calleguas Creek, its tributaries and Mugu Lagoon. The largest source of OC pesticides in the listed waters is agricultural runoff. Most PCB residues are due to past use of PCBs as coolants and lubricants in transformers, capacitors, and other electrical equipment. Atmospheric deposition is also a potential source of PCBs. Urban runoff and POTWs are minor sources of OC pesticides and PCBs.

14. Total Maximum Daily Load for Toxics in the Marina del Rey Harbor

The back basins of Marina del Rey Harbor are on the Clean Water Act Section 303(d) list of impaired water bodies for chlordane, copper, lead, zinc, PCBs, DDT, dieldrin, sediment toxicity and a fish consumption advisory. Review of available data during the development of this TMDL indicated that dieldrin and DDT are no longer causes of impairment. The following designated beneficial uses are impaired by chlordane, copper, lead, zinc, PCBs, and toxicity: water contact recreation (REC1); marine habitat (MAR); wildlife habitat (WILD); commercial and sport fishing (COMM); and shellfish harvesting (SHELL).

Urban storm water has been recognized as a substantial source of metals. Numerous researchers have documented that the most prevalent metals in urban storm water (i.e., copper, lead, and zinc) are consistently associated with suspended solids. Because metals are typically associated with fine particles in storm water runoff, they have the potential to accumulate in marine sediments where they may pose a risk of toxicity. Similar to metals, the majority of organic constituents in storm water are associated with particulates.

Waste load allocations (WLA) are assigned to point sources for the Marina del Rey watershed. A grouped mass-based waste load allocation is developed for the storm water permittees (Los Angeles County MS4, Caltrans, General Construction and General Industrial) by subtracting the load allocations from the

total loading capacity. Sediment concentration-based waste load allocations are developed for other point sources in the watershed.

15. Total Maximum Daily Load for Bacteria in Ballona Creek, the Ballona Estuary, and the Sepulveda Channel

Elevated bacterial indicator densities are causing impairment of the water contact recreation (REC-1) beneficial use designated for Ballona Estuary and Sepulveda Channel, limited water contact recreation (LREC) designated for Ballona Creek Reach 2, and non-contact recreation (REC-2) beneficial uses of Ballona Creek Reach 1.

The major contributors of flows and associated bacteria loading to Ballona Creek and Estuary are dry- and wet-weather urban runoff discharges from the storm water conveyance system. Run-off to Ballona Creek is regulated as a point source under the Los Angeles County MS4 Permit, the Caltrans Storm Water Permit, and the General Construction and Industrial Storm Water Permits. In addition to these regulated point sources, the Ballona Estuary receives input from the Del Rey Lagoon and Ballona Wetlands through connecting tide gates.

The Los Angeles County MS4 and Caltrans storm water permittees and co-permittees are assigned waste load allocations (WLAs) expressed as the number of daily or weekly sample days that may exceed the single sample targets equal to the TMDLs established for the impaired reaches.

Waste load allocations are expressed as allowable exceedance days because the bacterial density and frequency of single sample exceedances are the most relevant to public health protection. According to the TMDL, discharges from general NPDES permits, general industrial storm water permits and general construction storm water permits are not expected to be a significant source of bacteria.

16. Total Maximum Daily Load for Metals in the Calleguas Creek Watershed

Three of fourteen reaches in the Calleguas Creek Watershed (CCW) including Revolon Slough, Lower Calleguas Creek – Reach 2, and Mugu Lagoon are identified on the 2002 Clean Water Act Section 303(d) list of water-quality limited segments as impaired due to elevated levels of metals and selenium in water. The 303(d) listings, which were approved by the State Water Resources Control Board in February 2003, require the development of Total Maximum Daily Loads (TMDLs) to establish the maximum amount of pollutants a water body can receive without exceeding water quality standards.

Significant sources of metals and selenium include urban runoff, agricultural runoff, groundwater seepage, and POTW effluent. For mercury, open space was also a significant source. Sources were also analyzed as a function of wet and

dry weather. Higher loads were delivered during wet weather for all constituents, due to the association between metals and particulate matter.

In the case of copper, nickel, and selenium, waste load allocations (WLAs) were developed for both wet and dry-weather. The dry-weather WLAs apply to days when flows in the stream are less than the 86th percentile flow rate for each reach. The wet-weather WLAs apply to days when flows in the stream exceed the 86th percentile flow rate for each reach. Annual mass loads of mercury in suspended sediment were developed according to low, medium, and high annual flow categories. Final WLAs were established for POTWs, permitted storm water dischargers, and for all other NPDES dischargers.

17. Total Maximum Daily Load for Salts in the Calleguas Creek Watershed

Eleven of fourteen reaches in the Calleguas Creek Watershed (CCW) are identified on the 2002 Clean Water Act Section 303(d) list of water quality limited segments as impaired due to elevated levels of boron, chloride, sulfate, or total dissolved solids (TDS) (these constitutions are commonly referred to as salts). Sources of salts in the watershed include water supply (water imported from the State Water Project or Freeman Diversion and deep aquifer groundwater pumping), water softeners that discharge to publicly owned treatment works (POTWs), POTW treatment chemicals, atmospheric deposition, pesticides and fertilizers, and indoor water use (chemicals, cleansers, food, etc.). Salts that are transported during dry weather to the surface water are quantified via the following mechanisms: groundwater pumping, groundwater exfiltration, POTWs, dry weather urban and agricultural runoff. Wet weather loadings from each of these sources have the potential to be significant, but tend to be lower in concentration and do not occur during the critical conditions for salts. Wet weather loads are significant from the perspective of transporting stranded salts off the watershed.

The TMDL includes WLAs for five POTWs, permitted storm water dischargers, and all other NPDES dischargers. Concentration-based WLAs are assigned to all other NPDES dischargers based on the Basin Plan objectives.

18. Total Maximum Daily Load for Bacteria in the Harbor Beaches of Ventura County

Elevated bacteria indicator densities are causing impairment of the water contact recreation (REC-1) beneficial use at Kiddie Beach and Hobie Beach. Kiddie and Hobie Beach are referenced in the Staff Report as the Harbor Beaches of Ventura County. Bacteria sources in the Harbor Beaches of Ventura County include anthropogenic and non-anthropogenic sources and point and non-point sources. Each of these sources contributes to the elevated levels of bacteria indicator densities at the Harbor Beaches of Ventura County during dry- and wet-weather.

WLAs are expressed as allowable exceedance days. According to the TMDL, discharges from general NPDES permits, general industrial storm water permits and general construction storm water permits are not expected to be a significant source of bacteria.

19. Total Maximum Daily Load for OC Pesticides, Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCB), and Metals in the Colorado Lagoon

Colorado Lagoon is identified on the 1998, 2002, and 2006 Clean Water Act Section 303(d) lists of water quality limited segments as impaired due to elevated levels of OC pesticides, PCBs, sediment toxicity, PAHs, and metals in fish tissue and sediment. The point sources of OC pesticides, PCBs, PAHs, and metals discharged to Colorado Lagoon are urban runoff and storm water discharges from MS4s and the California Department of Transportation (Caltrans).

Mass-based WLAs for MS4 permittees including the City of Long Beach, Los Angeles County Flood Control District, and Caltrans are allocated to the five major storm drain outfalls that currently discharge to the lagoon. Concentration-based WLAs for sediment are also assigned to these mentioned permittees. For all other point sources such as minor NPDES permits, other storm water and non-storm water permittees, sediment concentration-based WLAs are also assigned.

20. Total Maximum Daily Load for Bacteria in the Santa Clara River

Elevated bacterial indicator densities are causing impairment of the water contact recreation (REC-1) beneficial use designated for the Santa Clara River (SCR) Estuary and Reaches 3, 5, 6, and 7. Recreating in waters with elevated bacterial indicator densities has long been associated with adverse human health effects. The significant contributors of bacteria loading to the SCR and Estuary are dry- and wet-weather urban runoff discharges from the storm water conveyance system.

General NPDES permits, individual NPDES permits, the Statewide Industrial Stormwater General Permit, the Statewide Construction Activity Storm Water General Permit, and the Statewide Stormwater Permit for Caltrans Activities are assigned WLAs of zero (0) allowable exceedance days of the single sample targets for both dry and wet weather and no exceedances of the geometric mean targets.

Discharges from general NPDES permits, general industrial storm water permits and general construction storm water permits are not expected to be a significant source of bacteria.

21. Total Maximum Daily Load for Toxics in Machado Lake

Machado Lake is identified on the 1998, 2002, 2006, and 2008 Federal Clean Water Act Section 303(d) lists of impaired water bodies due to chlordane, DDT, dieldrin, Chem A, and PCBs in fish tissue. Chem A (the abbreviation for 'chemical group A') is a suite of bio-accumulative pesticides that includes chlordane and dieldrin. The 1998 303(d) listing (and subsequent listings) for Chem A was predominately based on fish tissue concentrations of chlordane and dieldrin; there was only minimal detection of other Chem A pollutants in 1983 and 1984. Chlordane and dieldrin have been recently detected in fish tissue, while other Chem A pollutants have not been detected in 25 years. Therefore, this TMDL only addresses the Chem A pollutants (chlordane and dieldrin) that are causing impairment.

Because of potential harm to human health and the environment, the use of these pollutants has been banned for many years; however, the physiochemical properties of the pollutants cause them to persist in the environment. These pollutants, bound to soil particles, are easily transported with surface runoff to water bodies. Contaminated sediments accumulate in the receiving water bodies and aquatic organisms are exposed to the toxic pollutants. Sediment toxicity has been documented at Machado Lake, and it is likely that pesticides and PCBs contribute to the toxic condition of the sediments. Moreover, all of these pollutants biomagnify as they move up the food chain, thereby increasing concentrations in higher trophic-lever aquatic organisms and wildlife.

22. Total Maximum Daily Load for Bacteria in the Los Angeles River

General NPDES permits, individual NPDES permits, the Statewide Industrial Storm Water General Permit, the Statewide Construction Activity Storm Water General Permit, and WDR permittees in the Los Angeles River Watershed are assigned WLAs of zero (0) days of allowable exceedances of the single sample target for both dry and wet weather.

Discharges from general NPDES permits, general industrial storm water permits and general construction storm water permits are not expected to be a significant source of bacteria. Therefore, the WLAs for these discharges are zero (0) days of allowable exceedances for all three time periods and for single sample limits.

23. Total Maximum Daily Load for Metals and Toxics in the Los Angeles and Long Beach Harbors

The waters of Dominguez Channel and the Greater Los Angeles and Long Beach Harbor area are impaired by heavy metals and organic pollutants. These water bodies are included on the State's Clean Water Act 303(d) impaired waters list for one or more of the following pollutants: cadmium, chromium, copper, mercury, lead, zinc, chlordane, dieldrin, toxaphene, DDT, PCBs, certain PAH compounds, benthic community effects and toxicity. These impairments exist in

one or more environmental media—water, sediment, or tissue. Impairments in fish tissue are for DDT, PCBs, toxaphene, chlordane and dieldrin. Beneficial uses designated in these waters to protect aquatic life include the marine habitat use (MAR) and rare, threatened or endangered species habitat use (RARE). In addition, the estuaries (EST) are recognized as areas for spawning, reproduction and/or early development (SPWN), migration of aquatic organisms (MIGR), and wildlife habitat (WILD). Dominguez Channel also has an existing designated use of warm freshwater habitat (WARM) and the Los Angeles River Estuary has the designated use of wetland habitat (WET). Beneficial uses associated with human use of these waters include recreational use for water contact (REC1), non-contact water recreation (REC2), industrial service supply (IND), navigation (NAV), commercial and sport fishing (COMM), and shellfish harvesting (SHELL).

24. Total Maximum Daily Load for Algae, Eutrophic Conditions and Nutrients in the Ventura River and its Tributaries

The Ventura River Estuary and Reaches 1 and 2 are on the Clean Water Act (CWA) section 303(d) list as impaired for algae and eutrophic conditions. San Antonio Creek and Cañada Larga are on the CWA section 303(d) list as impaired for nitrogen and dissolved oxygen, respectively. Recent data confirm these impairments and demonstrate additional impairments for low dissolved oxygen in the Estuary, San Antonio Creek, and Reaches 1-4. The algae and nutrient related impairments are caused by excessive loading of nutrients, particularly nitrogen and phosphorus, to Ventura River and its tributaries. The water quality impairments due to eutrophication and increased nutrient loading occur during the dry season when algae growth primarily occurs. For purposes related to this TMDL, the dry season is defined as occurring from May 1 to September 30.

Waste load allocations addressing point and non-point sources of nutrients are assigned to discharges to the Ventura River watershed**.**

25. Total Maximum Daily Load for Metals in the San Gabriel River

Segments of the San Gabriel River and its tributaries are on the Clean Water Act section 303(d) list of impaired water bodies for copper, lead, zinc, and selenium. The constituents subject to this TMDL are toxic pollutants, and the existing water quality objectives for these constituents reflect national policy that the discharge of toxic pollutants in toxic amounts be prohibited. When one of the constituents subject to this TMDL is present at levels exceeding the existing numeric objectives, then the receiving water is toxic. The beneficial uses impaired by metals and selenium in the San Gabriel River and its tributaries are those associated with aquatic life and water supply, including wildlife habitat, rare, threatened or endangered species, warm freshwater habitat, wetlands, and groundwater recharge.

TMDLs are developed for reaches on the 303(d) list and for reaches where recent data indicate additional impairments. Addressing the impairing metals and selenium throughout the San Gabriel River watershed will ensure that they do not contribute to impairments elsewhere in the watershed. Metals and selenium allocations are therefore developed for upstream reaches and tributaries that drain to impaired reaches.

These TMDLs address dry-weather impairments of copper in the estuary and selenium in San Jose Creek Reach 1 and wet-weather impairments of lead in San Gabriel River Reach 2 and copper, lead, and zinc in Coyote Creek.

26. Total Maximum Daily Load for Metals in the Los Cerritos Channel

Los Cerritos Channel was included on the 1998, 2002 and 2006 California 303(d) lists as an impaired water body for copper, zinc, and lead. (Regional Board, 1998 and California State Water Resources Control Board, 2002 and 2006.)

The NPDES permits in the Los Cerritos Channel Freshwater Watershed include municipal separate storm sewer system (MS4) permits, the California Department of Transportation (Caltrans) storm water permit, general construction storm water permits, general industrial storm water permits, minor NPDES permits, and general NPDES permits.

Concentration based waste load allocations are established for minor NPDES permits and general non-storm water permits that discharge to the Los Cerritos Channel to ensure that these discharges do not contribute to exceedences of the California Toxic Rule criteria. The waste load allocation for these metals is based on dry and wet weather flows.

27. Total Maximum Daily Load for Indicator Bacteria in the Long Beach City Beaches and Los Angeles River Estuary

General NPDES permits, individual NPDES permits, the Statewide Industrial Storm Water General Permit, the Statewide Construction Activity Storm Water General Permit, the Statewide General Waste Discharge Requirements for Sanitary Systems, and the Vessel General Permit in the Long Beach City Beaches Watershed are assigned WLAs of zero (0) days of allowable exceedances for all time periods for the single sample targets and no exceedances of the 30-day geometric mean targets because they are not expected to be a significant source of indicator bacteria.

San Diego Regional Board TMDLs

Continuing the listing from above, the following is a summary of the TMDLs in the San Diego region that have waste load allocation for general NPDES discharge categories, followed by a general summary. Further detailed information on the already adopted

TMDLs can be found at the following website:

http://www.waterboards.ca.gov/sandiego/water_issues/programs/tmdls/index.shtml

28. Total Maximum Daily Load for Metals in Chollas Creek

Chollas Creek was placed on the Clean Water Act (CWA) section 303(d) List of Water Quality Limited Segments (List of Water Quality Limited Segments) in 1996 for the metals copper, lead, and zinc. Storm water samples from Chollas Creek collected between 1994 and 2003 periodically exceeded California Toxics Rule (CTR) water quality criteria for copper, lead, and zinc, dissolved copper, lead and zinc concentrations in Chollas Creek violate numeric water quality criteria for copper, lead, and zinc promulgated in the California Toxics Rule, and the narrative objective for toxicity. Concentrations of these metals in Chollas Creek threaten and impair the designated beneficial uses of warm freshwater habitat (WARM), and wildlife habitat (WILD). For Chollas Creek, essentially all metals sources (point and nonpoint) are discharged through municipal separate storm sewer systems (MS4) that are regulated under waste discharge requirements (WDRs), NPDES Permits. The point source discharges that could affect Chollas Creek are the MS4 discharges, storm water discharges from industrial sites, and discharges of extracted groundwater. All point source discharges to Chollas Creek will be required to achieve this WLA.

This TMDL establishes concentration-based WLAs set equal to 90 percent of the numeric water quality objectives for copper, lead, and zinc, as defined in the California Toxics Rule. Because the concentration of these metals resulting in toxic effects varies significantly with hardness, the resulting WLAs are hardness dependent.

29. Total Maximum Daily Load for Total Nitrogen and Total Phosphorus in Rainbow Creek

Nitrate, total nitrogen, and total phosphorus concentrations in Rainbow Creek exceed the inorganic chemicals nitrate and biostimulatory substances water quality objectives. These exceedances threaten to unreasonably impair the municipal supply (MUN), warm freshwater habitat (WARM), cold freshwater habitat (COLD), and wildlife habitat (WILD) beneficial uses of Rainbow Creek. Excessive nutrient levels in Rainbow Creek promote the growth of algae in localized areas, creating a nuisance condition, that unreasonably interferes with aesthetics and contact and non-contact water recreation (REC1, REC2) and threatens to impair WARM, COLD and WILD beneficial uses. State highways, agricultural fields and orchards, commercial nurseries, residential and urban areas, and septic tank disposal systems contribute to increased nutrient levels in Rainbow Creek as a result of storm water runoff, irrigation return flows, and ground water contributions to the creek.

WLAs for the discharge of total nitrogen and total phosphorus into Rainbow Creek were established. Identified dischargers of total nitrogen and total phosphorus loading include Caltrans, County of San Diego and nonpoint sources. The TMDL provides WLAs of 2 percent of the total annual TMDL for both total nitrogen and total phosphorus for additional point sources, however the TMDL Implementation Action Plan does not provide for the assignment of WLAs to unidentified point source discharges, effectively resulting in the prohibition of discharges of total nitrogen and total phosphorus into Rainbow Creek.

30. Total Maximum Daily Load Indicator Bacteria in Twenty Beaches and Creeks in the San Diego Region for Direct Discharges Only

Bacteria densities in the Pacific Ocean at various beach and coastal creek mouth segments (referred to hereafter as “beaches”) exceed water quality objectives (WQOs) for indicator bacteria. Bacteria densities in ocean water at these beaches unreasonably impair and threaten to impair the water quality needed to support the contact water recreation (REC-1) designated beneficial use. Bacteria densities in the waters of Aliso Creek, San Juan Creek, Tecolote Creek, Forrester Creek, the (lower) San Diego River, and Chollas Creek exceed WQOs for indicator bacteria. Bacteria densities in these creeks unreasonably impair and threaten to impair the water quality needed to support REC-1. The federal Clean Water Act requires the establishment of Total Maximum Daily Loads (TMDLs) for pollutants that exceed the WQOs needed to support designated beneficial uses, i.e., that cause or contribute to exceedances of state “water quality standards”.

Unidentified point sources have not been assigned WLAs, which is equivalent to being assigned a WLA of zero. No discharges of bacteria are expected or allowed from unidentified point sources under the dry or wet weather TMDLs.

IV. RATIONALE FOR DISCHARGE SPECIFICATIONS AND EFFLUENT LIMITATIONS

The Clean Water Act (CWA) requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants discharged into waters of the United States. The control of pollutants discharged during drinking water system discharge events is established primarily through required Best Management Practices specifications established to require water purveyors to implement a minimum level of pollutant control through best management practices that are proven to be effective in the water supply industry. Numeric effluent limitations are established for chlorine in circumstances where the water discharged from a drinking water system poses an immediate threat to aquatic life with receiving waters. There are two principal bases for effluent limitations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards, and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable water quality objectives and criteria to protect the beneficial uses of receiving waters.

A. Applicable Objectives and Criteria

This Order authorizes discharges to inland surface waters, enclosed bays, estuaries and the ocean, statewide. The water quality objectives and criteria applicable to these receiving waters are contained in the corresponding Basin Plan(s), other water quality control plans, and policies, such as the State Implementation Plan and the California Ocean Plan, that implement federal and state water quality objectives.

1. **Regional Boards Basin Plans Objectives.** Basin Plans specify various narrative and numeric water quality objectives, including the maximum contaminant levels (MCLs) in California Code of Regulations, title 22. Typical narrative objectives most relevant to this Order are listed below:

   a. **Toxicity.** The toxicity objective typically states, "All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms." U.S. EPA water quality criteria were used to translate this objective with respect to chlorine. U.S. EPA's recommended 1-hour average acute criterion for chlorine is 0.019 mg/L and its 4-day average chronic criterion is 0.011 mg/L (the acute or chronic criteria are not to be exceeded more than once every three years on average in any single location).

   b. **pH.** The pH objective in basin plans vary; some objectives are fixed numeric objectives while others provide a numeric range such as *"the pH shall not to be depressed below 6.5 nor raised above 8.5. This encompasses the pH range usually found in waters. Controllable water quality factors shall not cause changes greater than 0.5 units in normal ambient pH levels."*

   c. **Sediment.** Sediment objectives in basin plans vary; however, the basin plans typically provide a narrative objective such as, *"The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses."*

   d. **Settleable Material.** The settleable material objectives in basin plans vary; however, the basin plans typically provide a narrative objective such as, *"Waters shall not contain substances in concentrations that result in the deposition of material that cause nuisance or adversely affect beneficial uses."*

   e. **Suspended Material.** The suspended material objectives in basin plans vary; however, the basin plans typically provide a narrative objective that typically states, *"Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses."*

   f. **Turbidity.** The turbidity objectives in basin plans vary; some objectives are fixed numeric objectives while others provide a narrative objective such as, *"Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases from normal background light penetration or turbidity*

relatable to waste discharge shall not be greater than 10 percent in areas where natural turbidity is greater than 50 NTU."

2. **California Toxic Rule (CTR) Criteria.** The CTR specifies numeric aquatic life and human health criteria for numerous priority pollutants. Some human health criteria are for consumption of "water and organisms" and others are for consumption of "organisms only." The criteria applicable to "water and organisms" apply to many receiving waters subject to this Order because they are potential drinking water sources with the municipal and domestic supply (MUN) beneficial use. In accordance with Resolution 2014-XXXX, this Order grants a SIP exception to the CTR criteria for a number of priority pollutants on the basis that these discharges are less than significant with mitigation, and that mandated activities to protect public safety and health are held paramount.

3. **Ocean Plan Water Quality Objectives.** The Ocean Plan specifies in Table 1 of the Ocean Plan numeric water quality objectives for the protection of Marine Aquatic Life and Human Health (Carcinogens and non-carcinogens) for numerous priority pollutants. In accordance with Resolution 2014-XXXX, this Order grants an exception to the Ocean Plan water quality objectives for a number of priority pollutants on the basis that these discharges are less than significant with mitigation, and that mandated activities to protect public safety and health are held paramount.

4. **Sediment Quality Objectives.** The *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality* contains a narrative water quality objective: "Pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities in bays and estuaries of California." This objective is to be implemented by integrating three lines of evidence: sediment toxicity, benthic community condition, and sediment chemistry. The policy requires that if the Water Board determines that a discharge has reasonable potential to cause or contribute to an exceedance of this objective, it is to impose the objective as a receiving water limit.

B. Technology-Based Effluent Specifications and Effluent Limitations

CWA section 301(b) and 40 C.F.R. section 122.44 require that permits include conditions meeting technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet water quality standards. The CWA requires U.S. EPA to develop effluent limitations guidelines (ELGs), and standards representing application of best practicable treatment control technology (BPT), best available technology economically achievable (BAT), best conventional pollutant control technology (BCT), and best available demonstrated control technology for new sources (NSPS). CWA section 402(a)(1) and 40 C.F.R. section 125.3 authorize the use of Best Professional Judgment to derive technology-based requirements and effluent limitations on a case-by-case basis when ELGs are unavailable.

1. Technology-Based Best Management Practices Effluent Specifications

This Order does not establish technology-based effluent limitations because U.S. EPA has not established ELGs for the types of discharges this Order authorizes. Moreover, data necessary to develop technology-based effluent limitations on a case-by-case basis for each water body in California, using Best Professional Judgment, are unavailable. The State Water Board finds that the technology-based effluent limitations in Regional Water Board Basin Plans apply to discharges that are continuous in nature and contain "wastes". This statewide Order regulates intermittent and seasonal discharges of drinking water that are short-term, and in and of themselves do not contain the degree of "waste" contained in municipal or industrial wastewater or storm water. Therefore technology-based effluent limitations are not included.

The State Water Board finds that technology is available to control solids in drinking water system discharges, and chemical constituents such as chlorine and other chemical agents added to the water supply source, treatment, and distribution process. Therefore numeric and narrative technology-based best management practices specifications are included in this Order. Attachment C of this Order provides example of such BMPs.

To assure that implemented BMPs are effective, this Order requires:

- Dischargers to assure that quality assurance and quality control protocol is implemented to assure best management practices, monitoring, and reporting are effective, valid, and in compliance with this Order. A Discharger shall train all personnel operating the drinking water system and responding to emergency discharges to assure the quality assurance and quality control protocol is properly implemented.
- For planned discharges, a Discharger shall implement BMPs prior to and during any discharge. For planned but unscheduled or automated discharges from pressure relief valves and unchlorinated pump-to waste wells, BMPs shall be implemented unless infeasible (e.g., inaccessible, inadequate space). For emergency discharges, the BMPs shall be implemented as soon as feasible following assurance that public safety, property, and infrastructure are protected.
- In fulfilling the requirements of this section, the Discharger may implement the example BMPs contained in Attachment C, or proven BMPs per updated approved guidance established by industry experts, professional associations, or entities (e.g. *2014 Edition of the BMP Manual for Drinking Water System Releases* published by the California-Nevada Section of the American Water Works Association).
- The Discharger shall maintain a documented log of all BMPs implemented for its discharges and make it available to State and Regional Water Board staff upon request.

- The Discharger shall modify its BMPs as necessary to maintain compliance with the requirements of this Order. If monitoring results or other available information demonstrates that the discharge is not in compliance, the Discharger shall determine the source of non-compliance, and develop and implement new or revised BMPs as necessary. As part of this process, the Discharger shall validate the effectiveness of any new or revised BMPs to comply with the requirements of this Order. All non-compliance and corresponding corrective actions to address non-compliance are required to be reported to the State Water Board in the annual report, as required in the Monitoring and Reporting Program (Attachment E) of this Order. A log documenting the additional or revised BMPs shall be made available upon request by staff of the State and/or Regional Water Board.

2. **Toxicity (Chlorine and other chemical agents).** This Order translates the narrative toxicity objective with respect to chlorine by using U.S. EPA's water quality criteria for chlorine. Water distribution systems are usually chlorinated to meet the minimum total chlorine residual requirements in California Code of Regulations, title 22. According to the most recent Annual Consumer Confidence Reports from various water agencies, the typical average total chlorine residual concentration in a distribution system is about 2.0 mg/L, which is roughly 100 times U.S. EPA's acute water quality criterion of 0.019 mg/L. However, chlorine in water discharges can dissipate from volatilization and reaction with dirt and organic matter on streets and storm drain systems. Based on the analysis in section IV.C. below, reasonable potential for toxicity exists only for superchlorinated waters and other chlorinated waters that are in closer proximity to receiving waters (within 300 feet). For all other discharges, this Order establishes narrative technology-based specifications, specifying that proven management practices must be implemented to treat or control pollutants from its discharges to maintain compliance with this Order.

   At minimum, this Order requires that dischargers properly manage <u>all</u> planned discharges and implement proven dechlorination and chemical-control BMPs provided by professional associations or institutes such as the American Water Works Association, to assure that beneficial uses of the receiving water body(ies) are not adversely affected or impacted. Such BMPs include natural dissipation of chlorine in the discharge prior to it reaching the surface water body. For emergency discharges, the Discharger shall implement BMP procedures as soon as feasible while concurrently protecting public health and safety. Attachment C of this Order provides example of such dechlorination BMPs.

   Copper and zinc are known constituents in chemical agents used for to control algae in water supplies and control corrosion in drinking water facilities. Management practices proven to control copper and other metals during pesticide applications are not the same management practices needed to control these metals in drinking water system discharges. Although the State Water Board has granted a regulatory exception to CTR constituents including copper and zinc, the State Water Board expects dischargers to implement BMPs to reduce metals concentrations to the best

extent possible. Attachment C of this Order provides example BMPs for copper and zinc concentration reduction specifically in drinking water system discharges.

3. Solids (Sediment, Settleable Material, Suspended Material, Debris, and Turbidity)

Various discharges from drinking water systems may contain sediment as follows:

- Sediment accumulates at the dead ends of distribution systems during periods of low water demand. The sediment within a system must be flushed periodically.
- Raw transmitted water may contain sediment due to naturally occurring minerals and organic debris.
- Trench dewatering can result in relatively high sediment loads, depending on soil type, flow rate and duration, and excavation size.
- Discharges from new well development and in-active well rehabilitation may have high sediment loads due to drilling mud, cuttings, and removal of solids from the bottom of the well and around the screen casing.

Discharges can also contribute to sediment loading, solids loading and erosion within receiving waters due to high flows and volumes. Such discharges can dislodge sediment and transport it to receiving waters, or destabilize and erode shorelines or other natural receiving water features.

At minimum, this Order requires that dischargers implement BMP for all planned discharges to:

- Prevent riparian erosion and hydromodification by implementing flow dissipation, erosion control, and hydromodification-prevention measures; and
- Minimize sediment discharge, turbidity and color impacts by implementing sediment, turbidity, erosion and color control measures.

For groundwater supply well operations, this Order requires dischargers to implement treatment systems or BMPs for all groundwater well development, rehabilitation, or operation discharges to waters of the U.S. to maintain compliance with the following:

- Receiving water limitation V.G. Turbidity of this Order, and
- A turbidity level of 100 Nephelometric Turbidity Units (NTUs) or less in the discharge. The Discharger shall modify, change or enhance BMPs when the turbidity level is greater than 100 NTU, until the turbidity level is 100 NTU or less.

4. Instream Sediment Quality. Pollutants in some receiving water sediments may be present in quantities that alone or in combination are toxic to benthic communities. Efforts are underway to identify stressors causing such conditions. Due to the relative clean nature of potable water, it is unlikely that these discharges contribute

to sediment toxicity. However, to date there is no evidence either way; therefore, the State Water Board cannot draw a definitive conclusion about reasonable potential for these discharges to cause or contribute to exceedances of the sediment quality objectives.

C. Water Quality Based Effluent Limitations

1. Scope and Authority

This Order contains water quality-based effluent limitations (WQBELs) that implement water quality objectives and criteria that protect beneficial uses. CWA section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than federal technology-based requirements where necessary to achieve applicable water quality standards. According to 40 C.F.R. section 122.44(d)(1)(i), permits must include effluent limitations for all pollutants that are or may be discharged at levels that have a reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective, WQBELs must be established using: (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting a narrative criterion, supplemented with relevant information (40 C.F.R. § 122.44[d][1][vi]). The process for determining reasonable potential and calculating WQBELs is intended to establish effluent limitations for discharges to comply with applicable water quality objectives established to protect designated beneficial uses of receiving waters.

2. Need for Water Quality Based Effluent Limitations (Reasonable Potential Analysis)

Assessing whether a pollutant has reasonable potential to exceed a water quality objective or criterion is the fundamental step in determining whether a water quality based effluent limitation is required. As explained below, this Order finds reasonable potential for toxicity due to the chlorinated drinking water system discharges.

a. Analysis for Numeric Objectives and Promulgated Criteria. The State Implementation Plan (SIP), section 1.3 sets forth the method used in this Order for assessing whether a pollutant has reasonable potential to exceed a numeric water quality objective or promulgated criterion. The analysis begins with identifying the maximum effluent concentration (MEC) observed for each pollutant based on available effluent concentration data and the ambient background concentration (B). The SIP, section 1.4.3 states that ambient background concentrations are either the maximum ambient concentration observed or, for water quality objectives intended to protect human health, the arithmetic mean of observed concentrations. There are three triggers in determining reasonable potential and the need for a numeric effluent limitation:

- Trigger 1 is activated if the maximum effluent concentration is greater than or equal to the lowest applicable water quality objective (MEC $\geq$ water quality objective).

- Trigger 2 is activated if the ambient background concentration observed in the receiving water (B) is greater than the water quality objective (B > water quality objective) *and* the pollutant is present in any effluent sample.

- Trigger 3 is activated if a review of other information indicates that a WQBEL is needed to protect beneficial uses.

The Ocean Plan provides a similar method for assessing reasonable potential as described in Appendix V of the Ocean Plan.

Water in drinking water systems is required to comply with maximum contaminant levels (MCLs) per state regulations; therefore for pollutants that have MCLs more stringent than the CTR or Ocean Plan water quality objectives, this Order finds those priority pollutants do not have reasonable potential to exceed a water quality objective. However for the remaining priority pollutants for which the MCL is not the most stringent applicable water quality objective, an exception to those objectives has been granted through Resolution 2014-XXXX.

b. Analysis for Toxicity due to Chlorine. This Order translates the narrative toxicity objective with respect to chlorine by using U.S. EPA's water quality criteria for chlorine. Water distribution systems are usually chlorinated to meet the minimum total chlorine residual requirements in California Code of Regulations title 22. According to the most recent Annual Consumer Confidence Reports from various water agencies, the typical average total chlorine residual concentration in a distribution system is about 2.0 mg/L, which is roughly 100 times U.S. EPA's acute water quality criterion of 0.019 mg/L. However, chlorine in water discharges can dissipate from volatilization and reaction with dirt and organic matter on streets and storm drain systems. Based on the analysis below, reasonable potential for toxicity exists only for superchlorinated waters and other chlorinated waters that are in closer proximity to receiving waters (within 300 feet). Therefore this Order contains numeric chlorine water quality based effluent limitations for superchlorinated discharges and chlorinated water discharged within 300 feet of a surface water body.

Numeric effluent limitations are not included in this Order for sediment, settleable material, and suspended material, as there is no readily available means to translate the sediment, settleable material, and suspended material objectives into numeric WQBELs appropriate for the many receiving waters that could be affected by the discharges covered by this Order. This Order controls sediment, settleable material, and suspended material through BMPs as discussed above in this fact sheet.

All 126 priority pollutants in the California Toxic Rule and pollutants with Ocean Plan water quality objectives have also been considered. The pollutants with

MCLs as the most stringent water quality objective have shown no reasonable potential because these discharges are already required to comply with MCLs per state regulations and State Water Board Division of Drinking Water permits. For the remaining pollutants, a categorical SIP and Ocean Plan exception has been granted, therefore there is no reasonable potential since the exceptions lead to no applicable numeric criteria for these discharges.

3. Calculation of Water Quality Based Effluent Limitations (WQBELs)

Regulations at 40 C.F.R. section 122.44(k)(3) require numeric WQBELs unless numeric WQBELs are infeasible. This Order imposes numeric WQBELs for total residual chlorine because it is feasible and necessary to calculate numeric WQBELs for this toxic pollutant in order to protect beneficial uses in the receiving water bodies. Field chlorine meters are readily available and used to measure chlorine in drinking water system discharges, therefore it is feasible to collect representative total residual chlorine concentration data to determine compliance.

The total chlorine residual WQBEL established in this Order for discharges to inland surface waters, enclosed bays and estuaries is 0.019 mg/L based on U.S. EPA's acute water quality criterion for chlorine, which is expressed as a one-hour average. The total chlorine residual WQBEL established in this Order for discharges to the ocean is 0.008, mg/L based on the Ocean Plan criteria for chlorine. The numeric WQBELs for total residual chlorine are applicable to: (1) all superchlorinated discharges, and (2) chlorinated discharges located within 300 feet of a receiving water body.

According to a controlled field study conducted by East Bay Municipal Utilities District (EBMUD), when dechlorination BMPs are properly implemented, the total chlorine residual concentration in chlorinated discharges is fully neutralized within 200 feet to concentrations below a minimum level of 0.1 mg/L (Tikkanen et. al, 2001, *Guidance Manual for Disposal of Chlorinated Water*). The study analyzed samples from nine fire hydrants discharging at varying flow rates and treated with dechlorination BMPs within the EBMUD jurisdiction. Similarly, the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) analyzed samples from ten fire hydrants discharging at varying flow rates and treated with dechlorination BMPs in the Cities of Palo Alto, San Jose and Sunnyvale. Based on the SCVURPPP study, eight of the discharge events monitored achieved full neutralization (to concentrations below 0.1 mg/L) by 160 feet. The two remaining discharge events spiked above the minimum level of 0.1 mg/L, but ultimately achieved full neutralization within 425 feet. The spike in concentration was suspected to be due to turbidity interference.

Based on these data and adding an additional safety factor due to the immediate toxicity to aquatic life from chlorine, the State Water Board determines that discharges where dechlorination BMPs have been properly implemented that are more than 300 feet from a receiving water body do not pose a reasonable potential to exceed the applicable total residual chlorine water quality objective. Thus, the numeric WQBEL is not applicable to such discharges.

The turbidity numeric WQBEL established in this Order for discharges to the ocean is 225 NTU based on the Ocean Plan criteria for turbidity. The numeric WQBELs for turbidity is applicable to all discharges located within 300 feet of the ocean. These discharges pose a reasonable potential to cause exceedance of ocean turbidity water quality objective due to high solids levels in drinking water systems discussed in detail above in this fact sheet.

V. DISCHARGES NOT AUTHORIZED BY THIS ORDER

This Order implements the regulatory exceptions granted to water purveyors by Resolution 2014-XXXX. Requirements in this Order are designed for discharges described in the corresponding Mitigated Negative Declaration (attached to Resolution 2014-XXXX) that, when properly mitigated through the implementation of BMPs, monitoring, and reporting, do not pose a significant threat to the environment. Discharges not authorized by this Order (or other NPDES permits specifically granting the regulatory exceptions provided in Resolution 2014-XXXX) do not have an approved regulatory exception to the SIP or Ocean plan requirements.

Discharges not authorized by this Order include:

- Discharges other than those authorized in the Notice of Applicability issued by the Deputy Director of Water Quality; or
- Discharges to a water of the U.S. with a total maximum daily load (TMDL) that prescribes a waste load allocation to a water purveyor, where the Deputy Director determines that the requirements of this Order are not consistent with the assumptions and requirements of the TMDL, and thus compliance with this Order is not sufficient for the water purveyor to comply with the imposed TMDL requirements; or
- Discharges from new drinking water systems (not an expansion of an existing system) into an impaired water body that is impaired for a constituent that exists in the new discharge at a concentration greater than the criteria used to establish the impairment of the water body; or
- Direct discharges into areas designated by the State Water Board as Areas of Special Biological Significance (ASBS).

VI. RATIONALE FOR RECEIVING WATER LIMITATIONS

The receiving water limitations in this Order are established in accordance with federal and State water quality standards per the CWA and regulations adopted thereunder, and narrative and numeric water quality objectives in the Regional Water Boards' Basin Plans and State Water Board water quality control plans and policies.

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Title 40 Code of Federal Regulations part 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (Attachment E) of this Order, establishes monitoring, recordkeeping and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in Attachment E of this Order.

A. Effluent Monitoring

Pursuant to the requirements of title 40 Code of Federal Regulations part 122.44(i)(2), reporting of effluent monitoring is required for all constituents with effluent limitations and specifications. Effluent monitoring is necessary to assess compliance with effluent limitations and specifications, assess the effectiveness of the implemented BMPs and treatment process (where applicable), and to assess the impacts of the discharge on the receiving water.

Effluent monitoring requirements have been established in this Order to provide: (1) the Discharger with necessary information to make informed decisions regarding the implementation of effective management practices, and (2) the State Water Board to determine compliance with effluent specifications and limitations. Required effluent monitoring includes event monitoring and representative monitoring as follows:

1. **Event Monitoring.** This Order requires monitoring of all superchlorinated discharges, all discharges from well development and rehabilitation activities, and individual discharge events that are greater than 325,850 gallons (one acre-foot). The Discharger shall monitor all such events per the sample types and frequencies specified in Attachment E.

2. **Annual Representative Monitoring.** This Order allows discharges of similar nature to be monitored on a representative basis. Representative monitoring is the use of monitoring results of one water quality monitoring sample to represent other discharges expected to have the same water quality. A representative monitoring measurement must represent discharges of similar nature, meaning discharges that have all the following items in common:

    (i) The same general water source (ground water or surface water of similar water quality), and

    (ii) The same water treatment, and

    (iii) The same type of implemented BMPs.

The Discharger shall monitor all planned discharges not defined as events (Item 1. above) using representative monitoring per the sample types and frequencies specified in Attachment E. In its annual report, the Discharger shall:

(a) Submit a copy of its site schematic submitted in its application for enrollment with labeled representative monitoring locations, and
(b) Identify the portions of its system in which the representative monitoring results represent, and
(c) Include any changes in its representative monitoring locations that have occurred during the monitoring-year, as applicable.

3. Annual Discharge Volume Monitoring Requirements

This Order requires the Discharger to monitor and keep record of:
(a) The number of direct discharge to a water of the U.S that is greater than 50,000 gallons, during each calendar year,
(b) An estimate of the total volume discharged to surface water during each calendar year, and
(c) An estimate of the total volume of discharge water directed to a reuse or beneficial use in accordance with section VI. of this Order.

4. Monitoring Not Required

This Order does not establish monitoring requirements for any discharges that: (a) do not ultimately reach a water of the U.S., and (b) are implemented for multiple uses or routed to a beneficial reuse, in accordance with section V. of the Order, prior to surface water discharge.

B. Receiving Water Monitoring

This Order requires visual receiving water monitoring for all direct planned discharges that do not comply with the requirements contained in section IV. and V. of the Order, and that may potentially adversely affect or impact beneficial uses of the receiving waters. Receiving water monitoring shall be conducted during or immediately after the Discharger became aware of a non-compliant discharge that adversely effects or impacts beneficial uses of the receiving water. The Discharger shall monitor the point of confluence of the discharge and the receiving water. If the receiving water presents hazards to the monitoring personnel, visual monitoring shall be conducted using telephoto lenses and binoculars. If further hazards exist beyond such measures, monitoring is not required, and the hazards shall be documented in the corresponding monitoring report.

C. Post-Notification Requirements

Within 24 hours of the Discharger becoming aware of an adverse effect(s) or impact on beneficial uses of the receiving water body due to non-compliance with this Order, or within 24 hours of the Discharger becoming aware of a system failure or emergency involving a discharge from its drinking water system that may adversely affect or impact

beneficial uses of a receiving water, the Discharger shall notify the corresponding Regional Water Board, and the Discharger shall confirm this notification in writing within five days. The notification shall include all of the following:

1. The location and extent of non-compliance or emergency discharge;

2. The cause of the non-compliance or emergency discharge;

3. The date, time and expected duration of the non-compliance or emergency discharge;

4. The estimated volume of discharge;

5. The applicable receiving water body; and

6. The corrective actions taken (or being taken) to prevent future non-compliance or repair the system failure.

D. Pre-Notification Requirements

Three (3) days prior to initiation of a planned discharge (or retroactively within 24-hours after the Discharger is informed to conduct an urgent planned discharge) of a volume equal to or greater than one acre-foot (325,850 gallons), the Discharger shall notify the appropriate Regional Water Board and provide:

1. The start date of discharge
2. The location of discharge and the applicable receiving water
3. The estimated volume of discharge, and
4. The reasons for discharge

E. Reporting and Recordkeeping Requirements

1. This Order requires the Discharger to maintain self-monitoring reports, including compliant and non-compliant discharge monitoring information, in its main office and to make those reports available upon request of State and Regional Water Board staff.

2. Monitoring periods and reporting for all required monitoring shall be completed according to the schedule in Attachment E.

3. The Order requires the Discharger to arrange and summarize any reported numerical data in a tabular format.

4. If a Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the self-monitoring report.

5. The Order requires the Discharger to report to the State Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act" of 1986.

6. This Order requires the Discharger to report, by March 1 of every year, all non-compliant discharge monitoring information contained in the Discharger's self-monitoring report for the past calendar year. All non-compliant discharge monitoring information shall be accompanied by the corrective actions the Discharger has taken to return the discharge to compliance. Identified non-compliance must include a description of the requirement that was violated and a description of the violation.

7. The Discharger is required to attach a cover letter to the report that clearly identifies discharge events of non-compliance with the permit; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions.

F. Increase in Monitoring Requirements

The Deputy Director may modify the monitoring and reporting requirements at any time to ensure the protection of the beneficial uses of the receiving water. The modified requirements will be based on site-specific data or information indicating that a site-specific discharge threatens to cause or contribute to an exceedance of a receiving water quality criteria or objective.

At any time during the term of this permit, the Deputy Director may notify authorized Dischargers to electronically submit monitoring reports using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, each Discharger shall submit a hard copy of its monitoring reports. Subsequent guidance will be provided to the Discharger upon the Deputy Director's notification for electronic submittal of reports. (Direction and guidance for electronic SMR submittals is currently available on the CIWQS Web site at http://www.waterboards.ca.gov/water_issues/programs/ciwqs/chc_npdes.shtml

VIII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 Code of Federal Regulations part 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 Code of Federal Regulations part 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 Code of Federal Regulations part 122.42.

Title 40 Code of Federal Regulations part 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Title 40 Code of Federal Regulations part 123.25(a) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with

40 Code of Federal Regulations part 123.25, this Order omits federal conditions that address enforcement authority specified in 40 Code of Federal Regulations part 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Reopener Provisions

The reopener provisions in this Order provide an explanation of the State Water Board authority to reopen this Order in accordance with 40 Code of Federal Regulations part 122.62. For example, the State Water Board is developing a Proposed Total Residual Chlorine and Chlorine-Produced Oxidants Policy of California, which when adopted is intended to establish consistent standards and implementation procedures for regulating chlorine statewide. This provision is the avenue by which the State Water Board may reopen this Order to include a revised reporting level to determine compliance with effluent limitations for total residual chlorine if a statewide policy for total residual chlorine is adopted during the term of this Order.

IX. PUBLIC PARTICIPATION

The State Water Board adopted this Order that serves as a statewide general NPDES permit for low threat discharges from drinking water systems on October 21, 2014. State Water Board staff developed the draft Order using input from water purveyors and other interested parties over the course at least two years. The language and requirements in the draft order were developed to eliminate, where possible, unnecessary interference with mandated activities to protect public health. State Water Board staff held nine stakeholder meetings statewide and other verbal correspondences to incorporate the most crucial concerns related to small systems, and the feasibility and cost of permit compliance. The State Water Board encouraged public participation at the August 5, 2014 public hearing and the October 21, 2014 adoption meeting for this item.

A. Notification of Interested Parties

The State Water Board notified interested agencies, parties, and persons of its intent to consider adoption of this general Order for low threat discharges from drinking water systems and provided them with an opportunity to submit their written comments and recommendations. Notification was provided to interested parties through specific mailings, distribution through the Water Board Lyris Email System and through publication in the following newspapers for the following communities:

- Inter-City Express - Alameda County
- Tahoe Daily Tribune - Alpine County
- Fresno Bee - Fresno County
- Imperial Valley Press - Imperial County
- Los Angeles Daily Journal - LA County
- Orange County Recorder - Orange County
- Daily Recorder - Sacramento County

- San Diego Commerce - San Diego County
- New Times - San Luis Obispo County
- Record Searchlight - Shasta County
- Sonoma County Herald - Sonoma County

B. Public Comments

A draft Order was issued for public comment and review on June 6, 2014. Interested persons were invited to submit written comments concerning the draft Order. A revised draft Order was issued on July 3, 2014, mainly incorporating TMDL implementation language to the previously issued draft Order. For State Water Board staff and the State Water Board to be fully responsive and consider public comments, all comments were required to be submitted to the State Water Board by noon on August 19, 2014.

C. Public Hearing

The State Water Board held a public hearing on the draft Order during its regular Board meeting on the following date and time and at the following location:

Date:	August 5, 2014
Time:	9:00 a.m.
Location:	California Environmental Protection Agency Headquarters Office 1001 I Street, 2nd Floor Sacramento, CA 95814

Interested persons were invited to attend. At the public hearing, the State Water Board heard testimony pertinent to the subject discharges, and this Order. Oral testimony was heard; however, for accuracy of the record, important testimony was required to be submitted in writing.

The State Water Board considered comments that were provided orally at the public hearing, and in writing in accordance with the public notice issued for this Order, for the development of the final draft permit considered for adoption on October 21, 2014.

All pertinent dates, documents and agendas were kept updated and accessible on the NPDES Program Page of the State Water Board website at the following web address: http://www.waterboards.ca.gov/water_issues/programs/npdes/.

D. Waste Discharge Requirements

This Order serves as statewide Waste Discharge Requirements (WDRs) pursuant to California Water Code, article 4, chapter 4, division 7 (commencing with § 13260). This Order is also issued pursuant to federal Clean Water Act (CWA) section 402 and implementing regulations adopted by the U.S. Environmental Protection Agency (U.S. EPA), and California Water Code chapter 5.5, division 7 (commencing with § 13370). This Order shall serve as a statewide general NPDES permit for point source discharges

from single or multiple discharge points to surface waters, storm drains, and other storm water conveyances leading to waters of the U.S.

Due to the drought conditions and the State of California water conservation goals, the State Water Board strongly encourages water purveyors with a discharge authorized under this Order to place the discharge water to multiple uses prior to surface water discharge, or to a beneficial reuse. The multiple use or beneficial reuse of the discharges authorized under this Order does not require coverage under waste discharge requirements if the discharge is collected and reused for landscape irrigation or other uses in a manner that augments the existing supply, or if the discharge is directly or indirectly discharged to:

- Storm water capture basin(s),
- Low impact development features
- Other groundwater-recharge system(s), or

Discharges from drinking water systems to land that do not drain to waters of the U.S. do not need authorization to discharge under an NPDES permit. Although discharges to groundwater may require waste discharge requirements issued by the State and/or Regional Water Boards, as an incentive to promote multiple uses of drinking water system discharges, the State Water Board will not require waste discharge requirements or monitoring for such drinking water system discharges that are beneficially reused rather than discharged to a water of the U.S. A water purveyor must estimate and report in its annual report, the quantity of water that would otherwise have been discharged but is used multiple times or is beneficially reused for this provision to apply.

E. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding this Order must register on the Drinking Water Systems Discharge Permit lyris listing at http://www.waterboards.ca.gov/resources/email_subscriptions/swrcb_subscribe.shtml, by selecting 'Water Quality Topics', then selecting 'Drinking Water Systems Discharges'.

F. Additional Information

Requests for additional information or questions regarding this Order should be directed to Ms. Diana Messina, staff of the State Water Board, at diana.messina@waterboards.ca.gov.

ATTACHMENT G – WATER BODIES WITH TOTAL MAXIMUM DAILY LOADS (TMDLs) AND WASTE LOAD ALLOCATIONS (WLAs) TO WATER PURVEYORS

As of the adoption date of this Order, no already-adopted TMDLs have established WLAs that apply exclusively to discharges from drinking water systems regulated under this Order. Due to the nature of the discharges authorized under this Order, it is unlikely that these discharges contribute to the impairment of the TMDL-related water bodies; therefore existing TMDL-related requirements that include WLAs to general categories of discharges are not applicable.

This Attachment is reserved for the State Water Board to include additional permit requirements in a subsequent permit renewal to implement future TMDLs that:

1) address pollutants likely to be in discharges from drinking water systems, and

2) allocate waste loads specifically to water purveyors regulated under this Order.

ATTACHMENT H - MAP OF THE REGIONAL WATER QUALITY CONTROL BOARDS

To find the Regional Water Board for a particular location, click on the map or enter a street address at the following website:*http://www.waterboards.ca.gov/waterboards_map.shtml#rwqcbs*

Or click on the map below: