

North Coast



San Francisco Bay Area



Sacramento River



Central Coast



San Joaquin River



Tulare/Kern



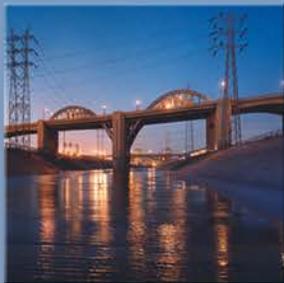
North/South Lahontan



San Diego



Los Angeles



Santa Ana



Colorado River Basin



Implementation

Proposal Solicitation Package

Integrated Regional Water Management
Proposition 84
Round 2



This page is left blank intentionally.

FOREWORD

This document contains the California Department of Water Resources' (DWR) Integrated Regional Water Management (IRWM) Program Proposal Solicitation Package (PSP) for Round 2 IRWM Implementation Grants funded by Proposition 84 (The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006).

This document details the application process from the history of the program, to the eligibility requirements, to the application instructions, and finally to the Review and Scoring criteria. General information is covered in the front end of the document and detailed instructions for portions of the application are contained within Exhibits A-F. This document is not a standalone document and the applicant will need to refer to the IRWM Grant Program 2012 Guidelines (2012 Guidelines) for additional information. The 2012 Guidelines can be found at <http://www.water.ca.gov/irwm/grants/guidelines.cfm>. Potential applicants are encouraged to read both the 2012 Guidelines and this PSP prior to deciding to submit an application.

The application process for this solicitation is a one-step process. This document contains the procedures for submitting applications for grant funding and the detailed scoring criteria. All qualified interested parties are encouraged to submit a grant proposal.

Contact

For questions about this document, or other technical issues, please contact DWR's Financial Assistance Branch at (916) 651-9613 or by e-mail at: DWR_IRWM@water.ca.gov.

For questions regarding Urban Water Management Plans (UWMPs), Assembly Bill (AB) 1420, or Water Meter Implementation compliance, please contact Elizabeth Vail at (916) 651-9667 or evail@water.ca.gov.

Website

This document as well as other pertinent information about the IRWM Program can be found at: <http://www.water.ca.gov/irwm/grants/implementation.cfm>. In addition to the website, DWR will distribute information via e-mail. If you are not already on the IRWM contact list and wish to be placed on it, please visit <http://www.water.ca.gov/irwm/grants/subscribe.cfm>.

Tables

Electronic versions of all tables in this PSP can be found here:

<http://www.water.ca.gov/irwm/grants/implementation.cfm>

Due Date

The complete application and all supporting documentation must be submitted via DWR's Bond Management System (BMS) (which is in the process of being renamed as the Grant Review and Tracking System (GRanTS)) and hardcopies received by 5:00 p.m. on Friday, March 29, 2013. For questions regarding BMS/GRanTS, please contact BMS/GRanTS administration at (888) 907-4267 or grantsadmin@water.ca.gov.

Grant Agreement Template

All Implementation applicants that are awarded funding will be required to sign a grant agreement with DWR. A template of this agreement can be found at the following link:

<http://www.water.ca.gov/irwm/grants/resourceslinks.cfm>

TABLE OF CONTENTS

TOPIC	PAGE #
I. INTRODUCTION	6
II. ELIGIBILITY	6
A. ELIGIBLE GRANT APPLICANTS.....	6
B. ELIGIBILITY CRITERIA	6
C. ELIGIBLE PROJECT TYPES.....	8
III. FUNDING	8
A. MAXIMUM GRANT AMOUNT	8
B. FUNDING MATCH.....	9
IV. SCHEDULE.....	9
V. APPLICATION INSTRUCTIONS	10
A. HOW TO SUBMIT	10
1. <i>Electronic Submittal</i>	10
2. <i>Hard Copy Application Submittal</i>	11
B. WHAT TO SUBMIT – REQUIRED APPLICATION ATTACHMENTS	12
1. <i>Grant Application Checklist</i>	12
2. <i>Attachment Instructions</i>	17
Attachment 1. Authorization and Eligibility Requirements	17
Attachment 2. Adopted Plan and Proof of Formal Adoption.....	19
Attachment 3. Work Plan.....	19
Attachment 4. Budget.....	20
Attachment 5. Schedule.....	20
Attachment 6. Monitoring, Assessment, and Performance Measures.....	21
Attachment 7. Technical Justification of Projects.....	21
Attachment 8. Benefits and Cost Analysis	22
Attachment 9. Program Preferences	23
Attachment 10. Disadvantaged Community Assistance	23
Attachment 11. GWMP, AB 1420, and Water Meter Compliance Information.....	24
Attachment 12. Consent Form.....	24
Attachment 13. IRWM Plan – Reduce Delta Water Dependence	24
VI. REVIEW AND SCORING CRITERIA	25
EXHIBIT A WORK PLAN.....	31
EXHIBIT B BUDGET	35
EXHIBIT C TECHNICAL JUSTIFICATION OF PROJECTS	40
EXHIBIT D BENEFITS AND COST ANALYSIS	43
EXHIBIT E DISADVANTAGED COMMUNITY ASSISTANCE	61
EXHIBIT F CONSENT FORM	63

LIST OF TABLES

TABLE TITLE	PAGE #
TABLE 1 – OVERVIEW OF SELECTED IRWM PLAN STANDARDS	7
TABLE 2 – PROPOSITION 84 IRWM IMPLEMENTATION FUNDING.....	9
TABLE 3 – IRWM IMPLEMENTATION GRANTS PROPOSAL SOLICITATION PROCESS AND SCHEDULE	10
TABLE 4 – GRANT APPLICATION CHECKLIST.....	12
TABLE 5 – SUPPLEMENTAL SCORING CRITERIA AND SCORING STANDARDS	26
TABLE 6 – TYPICAL WORK PLAN OUTLINE.....	33
TABLE 7 – PROJECT BUDGET.....	36
TABLE 8 – SUMMARY BUDGET	39
TABLE 9 – ANNUAL PROJECT PHYSICAL BENEFITS.....	42
TABLE 10 – COMMON TYPES OF BENEFITS TO REPORT	43
TABLE 11 – STATEMENT OF COST-EFFECTIVENESS.....	45
TABLE 12 – NON-MONETIZED BENEFITS CHECKLIST	47
TABLE 13 – DISCOUNT FACTORS.....	49
TABLE 14 – UPDATE FACTORS	50
TABLE 15 – ANNUAL BENEFIT	51
TABLE 16 – ANNUAL COSTS OF AVOIDED PROJECTS.....	53
TABLE 17 – EXAMPLE CALCULATION OF EXPECTED ANNUAL DAMAGE	56
TABLE 18 – PRESENT VALUE OF EXPECTED ANNUAL DAMAGE REDUCTION BENEFITS	57
TABLE 19 – ANNUAL COSTS OF PROJECT	59
TABLE 20 – PROPOSAL BENEFITS AND COSTS SUMMARY.....	60

LIST OF FIGURES

FIGURE TITLE	PAGE #
FIGURE 1 – PROJECT BENEFIT ANALYSIS OPTIONS SELECTION PROCESS.....	22

I. INTRODUCTION

The IRWM Grant Program is designed to encourage integrated regional strategies for management of water resources and to provide funding for programs and projects that support integrated water management planning and implementation. This PSP works in conjunction with the 2012 Guidelines to disburse the second round of Implementation Grant funding under the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84). For this solicitation DWR will use a one-step application process to evaluate IRWM Implementation Grant applications.

A complete list of acronyms and a glossary of terms used throughout this PSP are available in the 2012 Guidelines. The 2012 Guidelines are posted on the DWR website at:

<http://www.water.ca.gov/irwm/grants/guidelines.cfm>

Prospective applicants for IRWM Implementation Grants should read this PSP and the entire 2012 Guidelines. Specific emphasis should be directed to the Guidance for IRWM Plan Standards (Appendix C of the Guidelines) and to the Proposal Selection section (Section V of the Guidelines) to ensure that the submittal will meet the grant program requirements.

II. ELIGIBILITY

Only one application per eligible IRWM Region will be accepted for this solicitation. This section of the PSP provides an overview of the eligibility requirements that must be met to apply for this IRWM Implementation Grant Program solicitation.

A. Eligible Grant Applicants

A Grant Applicant is the entity submitting the grant application on behalf of an IRWM Region. The IRWM Region must have been accepted, for Implementation funding, into the IRWM Grant program through DWR's Region Acceptance Process (RAP). A list of accepted regions can be found at the following link: <http://www.water.ca.gov/irwm/grants/rap.cfm>

Grant Applicants will enter into an agreement with the State, should the application be successful. Eligible applicants are local public agencies or non-profit organizations. Project proponents are generally any stakeholder responsible for implementing a project within a grant proposal. Section III of the 2012 Guidelines contains more information on applicants and project proponents.

B. Eligibility Criteria

Applications for IRWM Implementation Grants must meet all Eligibility Criteria in order for the application to be considered for grant funding. Eligibility requirements that apply to all PSPs within the IRWM Grant program are included in the 2012 Guidelines, Section III. Specific eligibility criteria that apply to this round of Implementation Grants are listed below. Eligibility will be determined based on information furnished by the applicant as described in Section V of this PSP.

Grants shall be available only for projects included in an IRWM Plan that meet the following conditions:

1. The IRWM Plan complies with Part 2.2 of Division 6 of the CWC, commencing with §10530.
2. If the IRWM Plan was adopted before September 30, 2008: the Regional Water Management Group (RWMG) must enter into a binding agreement with DWR to update, within two years of the execution date of the agreement, the IRWM Plan to meet the IRWM Plan standards contained in the 2012 Guidelines; and the RWMG must undertake all reasonable and feasible efforts to take into account water-related needs of disadvantaged communities (DACs) in the area within the IRWM region.

3. For IRWM Regions that receive water supplied from the Sacramento-San Joaquin Delta, eligible programs and projects shall be components of an IRWM Plan that will help reduce dependence on the Sacramento-San Joaquin Delta for water supply – Senate Bill (SB) 855 (Committee on Budget and Fiscal Review Resources, Chapter 718, Stats 2010).

For this solicitation, any application claiming eligibility based on Condition 1 (IRWM Plan adopted on or after September 30, 2008) must include their IRWM Plan for review to determine eligibility, unless the plan was submitted to DWR as part of Round 1, Proposition 84, Implementation Grant Application. The IRWM Plan review will consist of the following items:

- ↗ Verification that the IRWM Plan has been adopted or will be adopted prior to the final award date (estimated to be September 30, 2013).
- ↗ Verification that the IRWM Plan addresses all the Plan Standards, as listed in the IRWM Guidelines that were final at the time of adoption (i.e., either 2010 or 2012 Guidelines).

All applicants must complete the Overview of Selected IRWM Plan Standards in Table 1, and include it as part of Attachment 1. DWR will use the Table 1 responses to understand the respective regions' progress towards adopting an IRWM Plan that meets the IRWM Plan Standards contained in Appendix C of the 2012 Guidelines¹. Responses to the questions in Table 1 must be limited to six 8.5"x11" pages using a font no smaller than 12 point. Table 1 can be accessed as a separate document here:

<http://www.water.ca.gov/irwm/grants/implementation.cfm>

Applicants within an IRWM Region that have received a Round 1 or Round 2, Proposition 84, Planning Grant must also be in compliance with the terms of the Planning Grant Agreement (i.e., on schedule, submitting quarterly progress reports, etc.).

Table 1 – Overview of Selected IRWM Plan Standards

Standard	Specific Standard Questions
Governance	Will the governance structure need to be altered in the Updated IRWM Plan in order to ensure that balanced access and opportunity for participation in the IRWM effort is provided?
Region Description	Has the regional description changed significantly from the current IRWM Plan?
Objectives	Will your objectives change from those in the current IRWM Plan? If so, how?
Resource Management Strategies	Will the Updated IRWM Plan consider the resource management strategies from the California Water Plan, Update 2009?
Integration	Will the process used in the Updated IRWM Plan allow, encourage, and actively pursue integration in both the planning process and project formulation and implementation?
Project Review Process	Will the project review process consider climate change vulnerabilities and greenhouse gas emissions (for both construction and operation)?
Technical Analysis	Have any data gaps been identified and how will the Updated IRWM Plan help fill the gaps?
Relation to Local Water Use Planning	Will changes to the existing IRWM Plan be needed in order to improve coordination with local water use planning efforts?

¹ The required adoption date varies depending on whether the region has a Round 1 Implementation Grant, is awarded a Round 2 Implementation Grant, or it wishes to be eligible for a Round 3 Implementation Grant. Round 3 applicants will be expected to have an adopted IRWM Plan by the application due date (estimated to be June 30, 2014).

Table 1 – Overview of Selected IRWM Plan Standards

Standard	Specific Standard Questions
Relation to Local Land Use Planning	Will changes to the existing IRWM Plan be needed in order to improve coordination with local land use planning efforts?
Stakeholder Involvement	Will changes or improvements to the stakeholder involvement process be needed to ensure effective stakeholder participation?
Coordination	Has the RWMG identified a need for changes/improvements to the ongoing coordination efforts?
Climate Change	<p>Will the Updated IRWM Plan contain:</p> <ul style="list-style-type: none"> • A climate change vulnerability assessment of the IRWM region that is at least equivalent to the qualitative check list assessment in the Climate Change Handbook for Regional Water Planning (Handbook)? • A list of prioritized vulnerabilities derived from the vulnerability assessment and the IRWM's decision making process? • A plan, program, or methodology for further data gathering/analyzing of the prioritized vulnerabilities?

C. Eligible Project Types

Section III.C of the 2012 Guidelines provides specific detail on eligible project types. Eligible projects must be consistent with an adopted IRWM Plan (PRC §75026(a)). Consistency with an adopted IRWM Plan means either the project is included as an implementation project for the adopted IRWM Plan, or the project has been added to the IRWM Plan implementation list after adoption, but in accordance with the procedures in the adopted IRWM Plan. If the IRWM Plan is silent regarding a process to update or change the project list, the proposal must include documentation demonstrating that those projects added to the implementation project list after the IRWM Plan's adoption have been fully vetted by the IRWM Region.

As stated in the 2012 Guidelines, projects that directly address a critical water quality or water supply issue in a DAC and urban water suppliers implementing either of the two specific BMPs described in the 2012 Guidelines are not required to be included in an adopted IRWM Plan. However, such projects must not be inconsistent with the IRWM Plan objectives. This is to encourage assistance to DACs and encourage implementation of BMPs by urban water suppliers. Also, DACs may not have a fully developed project to put forward. The types of eligible projects to address critical water supply or water quality needs may include studies needed to help identify a specific project that may lead to a construction project to address DAC needs, such as engineering designs and specifications, and needs assessments where a critical water supply or quality issue is perceived but specific needs have not been determined.

III. FUNDING

DWR is administering multiple rounds of solicitations for Proposition 84 IRWM Implementation Grants. This PSP is applicable to Round 2 only. In Round 2, approximately \$131 million will be available for Implementation grant awards.

DWR is obligated to award statewide 10% of SB 855 appropriation of funds (\$25 million) to projects that help meet a critical water supply or water quality need of DACs. In 2011, DWR awarded approximately \$9,000,000 to such projects; leaving a balance of approximately \$16,000,000 to be awarded in Round 2. If DWR does not receive sufficient funding requests for applicable projects to meet this target, DWR will reserve (not award) the unmet amount of funding target specified.

A. Maximum Grant Amount

DWR will strive to allocate the Proposition 84 Implementation Grant funds to each funding area consistent with the allocation schedule provided in Proposition 84 and in proportion to the amount of total allocation

included in this solicitation, as shown in Column C of Table 2. DWR may alter the anticipated allocation schedule depending on the total amount of grant requests received, the grant requests received by individual funding area, and whether the submitted proposals demonstrate sufficient technical feasibility or anticipated project benefits.

Column A	Column B	Column C
Funding Area	Prop 84 Schedule	Anticipated Maximum Allocation Schedule for Round 2
North Coast	\$37,000,000	\$5,386,000
San Francisco Bay	\$138,000,000	\$20,086,000
Central Coast	\$52,000,000	\$7,569,000
Los Angeles-Ventura	\$215,000,000	\$31,294,000
Santa Ana	\$114,000,000	\$16,671,000
San Diego	\$91,000,000	\$13,245,000
Sacramento River	\$73,000,000	\$10,626,000
San Joaquin River	\$57,000,000	\$8,296,000
Tulare/Kern	\$60,000,000	\$8,734,000
Lahontan	\$27,000,000	\$3,930,000
Colorado River	\$36,000,000	\$5,240,000
Total	\$900,000,000	Less than or equal to \$131,076,000

B. Funding Match

The minimum funding match is 25% of the total proposal cost. Project costs must be incurred after September 30, 2008 to be considered as funding match. For projects that address the needs of a DAC, the funding match may be waived for these projects only. See instructions for Attachment 10 and Exhibit E for more information on applying for a funding match waiver. See 2012 Guidelines, Section II.E for additional information on Funding Match.

IV. SCHEDULE

The schedule in Table 3 shows the program timeline from release of the Final 2012 Guidelines and PSP through approval of awards. Updates for the events listed in this schedule may be required. When finalized, an updated schedule will be posted on the DWR website listed in the Foreword. Updates may also be advertised through e-mail announcements and news releases. Parties that are not already on the IRWM mailing list and wish to receive updates on the IRWM Grant Program should e-mail the request to the address listed in the Foreword.

Table 3 – IRWM Implementation Grants Proposal Solicitation Process and Schedule	
Milestone or Activity	Schedule ⁽¹⁾
Release Final Program 2012 Guidelines and PSP	November 2012
On-line application available	<i>January 18, 2013</i>
Applicant Workshops: Dates, times, and locations to be determined. Future notification will be provided on DWR's IRWM Grant Program Website: http://www.water.ca.gov/irwm/grants/	<i>February 2013</i>
Implementation Grant applications must be submitted via BMS/GRanTS and hardcopies to DWR by 5:00 p.m. Applications submitted after 5:00 p.m. on the due date will not be reviewed or considered for funding.	March 29, 2013
Public meeting to discuss initial funding recommendations	<i>August 2013</i>
DWR approves final grant awards	<i>October 2013</i>

(1) *Italics denote approximate dates.*

V. APPLICATION INSTRUCTIONS

This section provides instructions for preparing and submitting an application. The Application Instructions section consists of two subsections: How to Submit and What to Submit. It is important that the applicants follow the Application Instructions to ensure their application will address all of the required elements. Applicants are reminded that once the application has been submitted to DWR, any privacy rights as well as other confidentiality protections afforded by law with respect to the application package will be waived.

A. How to Submit

Applicants must submit a complete application both electronically and in hardcopy.

1. *Electronic Submittal*

Applicants must submit a complete application on-line using DWR's BMS/GRanTS. BMS/GRanTS can only be accessed with Internet Explorer. The on-line BMS/GRanTS application for the Round 2 Implementation Grant will be made available at the following link:

<http://www.water.ca.gov/irwm/grants/bms.cfm>

The on-line application will be available no later than January 18, 2013.

Applicants are encouraged to review the BMS/GRanTS User Manual and Frequently Asked Questions, available at the above link, prior to completing the on-line application. If an applicant has questions as to the content or the information requested in the PSP or questions or problems with BMS/GRanTS, please contact GRanTS administration at the phone number or e-mail listed in the Foreword.

The grant application in BMS/GRanTS consists of four sections or "tabs" outlined in Table 4. Within BMS/GRanTS, pull down menus, text boxes, or multiple-choice selections will be used to receive answers to

the questions. BMS/GRanTS will allow applicants to type text or cut and paste information from other documents directly into a BMS/GRanTS submittal screen.

When uploading an attachment in BMS/GRanTS, the following attachment title naming convention must be used:

Att#_IG2_AttachmentName_#ofTotal#

Where:

- a. "Att#" is the attachment number
- b. "IG2" is the code of this solicitation
- c. "AttachmentName" is the name of the attachment as specified in Section V.B.1 – Attachment Instructions
- d. "#ofTotal#" identifies the number of files that make up an attachment, where "#" is the number of a file and "Total#" is the total number of files submitted in the attachment

For example, if the Attachment 3 – Work Plan for the applicant is made up of 3 files, the second file in the set would be named "Att3_IG2_WorkPlan_2of3".

File size for each attachment submitted via BMS/GRanTS is limited to 50 megabytes (MB). Breaking documents into components such as chapters or logical components so that files are less than 50 MB will aid in uploading files. Acceptable file formats are: MS Word, MS Excel, MS Project, or PDF. PDF files should be generated, if possible, from the original application file rather than scanned hard copy. All portions of the application, BMS/GRanTS submittal and hard copies, must be received by the application deadline. Late submittals will not be reviewed or considered for funding.

Applications may include attachments with supplemental materials such as design plans and specifications, detailed cost estimates, feasibility studies, pilot projects, additional maps, diagrams, copies of agreements, or other applicable items. Applicants are encouraged to submit attachments and supporting documentation in an electronic format.

2. *Hard Copy Application Submittal*

The addresses for mailing by U.S. mail, overnight courier, or hand delivery of hard copy and CD/DVD application components are listed as follows:

By U.S. Mail:

California Department of Water Resources
 Division of Integrated Regional Water Management
 Financial Assistance Branch
 Post Office Box 942836
 Sacramento, CA 94236-0001
 Attn: Zaffar Eusuff

Or Overnight courier to:

California Department of Water Resources
 Division of Integrated Regional Water Management
 Financial Assistance Branch
 1416 9th Street, Room 338
 Sacramento, CA 95814
 Attn: Zaffar Eusuff

Or hand-deliver to:

901 P Street, Lobby
Sacramento, CA 95814
Attn: Zaffar Eusuff

B. What to Submit – Required Application Attachments

This section presents the required elements of an application for grants funded by the IRWM Implementation Grant Program. Applicants must submit a complete application by the deadline contained in the Schedule shown in Table 3. The grant application consists of four sections or “Tabs” as outlined in Table 4 – Grant Application Checklist, which is provided as a guide for the applicants to ensure that they have submitted the required information for a complete application.

Attachments are required as noted in the Grant Checklist. Applicants may use BMS/GRanTS to print out completed tables for submittal with the hardcopy. Failure to submit any required attachment will make the application incomplete, and it will not be reviewed or considered for funding. A discussion of each of these attachments is provided below and the attachments and associated exhibits are summarized in Table 4.

A complete application consists of all the following items:

- Electronic submittal of an application through the BMS/GRanTS
- **Four** (4) hard copies (preferably double-sided) of attachments (as applicable) submitted to DWR.

1. Grant Application Checklist

Table 4 – Grant Application Checklist	
APPLICANT INFORMATION TAB	
<i>The following information is general and applies to the applicant and the overall proposal. Specific project information should be detailed on separate project tabs provided in the BMS/GRanTS application.</i>	
APPLICANT INFORMATION	
<input type="checkbox"/>	Organization Name: Provide the name of the Agency/Organization responsible for submitting the application. Should the Proposal be successful, this Agency/Organization will be the Grantee.
<input type="checkbox"/>	Tax ID: Tax ID is automatically displayed for registered organizations. Verify the applicant’s federal tax ID number.
<input type="checkbox"/>	Point of Contact: <ul style="list-style-type: none"> • Select “Existing Registered Users” only. Note: Do not select “Add New User” (this feature is not currently functional and is under development, if selected the application may not be saved). • Select the registered user associated with the organization specified above. • The rest of the contact information (Division, Address, e-mail, etc.) are auto populated once the above registered user is selected.
<input type="checkbox"/>	Proposal Name: Provide the title of the Proposal (Maximum Character Limit: 150)
<input type="checkbox"/>	Proposal Objective: Briefly describe how the Proposal helps achieve the objectives of the IRWM Plan. (Maximum Character Limit: 2000)
PROPOSAL BUDGET	
<i>For the proposal, the following budget items should be taken from Table 8 in Exhibit B where applicable.</i>	
<input type="checkbox"/>	Other Contribution: Provide the amount of other funds not included in the following four funding categories as listed below. If there is no other contribution, enter zero.

Table 4 – Grant Application Checklist

<input type="checkbox"/>	Local Contribution (Funding Match): Provide the total funding match that will be committed to the Proposal. The Implementation Grant Program requires a minimum local contribution of 25% of total proposal cost unless there is a DAC project included in the Proposal.
<input type="checkbox"/>	Federal Contribution: Enter Federal funds being used. If none, enter zeros.
<input type="checkbox"/>	In-kind Contribution: Provide the total amount of in-kind services in dollars. In-kind Contribution – refers to work performed by the grantee. The cost of which is considered funding match. If there is no in kind contribution, then enter zeroes in this field.
<input type="checkbox"/>	Amount Requested (Grant Funds Requested): Provide the amount of total grant funds requested.
<input type="checkbox"/>	Total Proposal Cost (Total Project Cost): Provide the total Proposal cost, in dollars. This amount must agree with the total proposal cost shown in Attachment 4. Total project cost is automatically calculated based on the contribution amounts entered above.
GEOGRAPHIC INFORMATION	
GRanTS requests latitude and longitude in degrees, minutes, and seconds. You may use converters on the web such as http://transition.fcc.gov/mb/audio/bickel/DDMMSS-decimal.html . X/Y center points for each IRWM region can be found here: http://www.water.ca.gov/irwm/grants/resourceslinks.cfm	
<input type="checkbox"/>	Latitude: Enter the Latitude at the location that best represents the center of the IRWM Region.
<input type="checkbox"/>	Longitude: Enter the Longitude at the location that best represents the center of the IRWM Region.
<input type="checkbox"/>	Longitude/Latitude Clarification: Only use if necessary. (Maximum Character Limit: 250)
<input type="checkbox"/>	Location: Identify the approximate location that best represents the center of the IRWM Region. (Maximum Character Limit: 100)
<input type="checkbox"/>	County(ies): Provide the county in which the IRWM region is located. If the IRWM region covers multiple counties hold the control key down and select all that apply.
<input type="checkbox"/>	Groundwater Basins: Provide the groundwater basin(s) as listed in the current version of DWR Bulletin 118 (http://www.water.ca.gov/groundwater/bulletin118/gwbasin_maps_descriptions.cfm) in which your Project is located. For proposals covering multiple groundwater basins, hold the control key down and select all that apply.
<input type="checkbox"/>	Hydrologic Regions: Provide the hydrologic region in which your IRWM region is located. For proposals covering multiple hydrologic regions, hold down the control key and select all that apply.
<input type="checkbox"/>	Watershed(s): (Maximum Character Limit: 250) Provide the name of the watershed the region covers. A map of California watersheds can be found at the following link: http://www.conservation.ca.gov/dlrp/wp/Documents/CALFED_Watershed_Map[1].pdf . If your Proposal covers multiple watersheds, you may only provide one “Unique Watershed Number” as listed on the watershed map.
LEGISLATIVE INFORMATION	
<input type="checkbox"/>	Enter the State Assembly, State Senate, and U.S. Congressional Districts in which the IRWM region is located (use district numbers only, not the name of the Legislator). For IRWM regions that include more than one district, Hold the control key down and select all that apply.
PROJECTS TAB	
<i>This section contains information about the projects contained in the Proposal.</i>	
<i>Each project in the Proposal should be detailed on a separate Project Tab. Applicants may generate as many Project Tabs as are necessary. The following questions will be used to gather information on each specific project.</i>	
PROJECT INFORMATION	
<input type="checkbox"/>	Project Name: Provide the project name. (Maximum Character Limit: 125 characters)

Table 4 – Grant Application Checklist

<input type="checkbox"/>	<u>Implementing Organization:</u> (Maximum Character Limit: 125 characters)
<input type="checkbox"/>	<u>Secondary Implementing Organization:</u> (Maximum Character Limit: 125 characters)
<input type="checkbox"/>	<u>Proposed Start Date:</u>
<input type="checkbox"/>	<u>Proposed End Date:</u>
<input type="checkbox"/>	<u>Scope Of Work:</u> (Maximum Character Limit: 125 characters) <u>Note: BMS/GRanTS proposal shows a character limit of 500, however, the maximum allowable character limit is 125 for this data field.</u>
<input type="checkbox"/>	<u>Project Description:</u> (Maximum Character Limit: 2000 characters)
<input type="checkbox"/>	<u>Project Objective:</u> (Maximum Character Limit: 500 characters)
PROJECT BENEFITS INFORMATION	
<i>Please do not enter any information into BMS/GRanTS for the following Project Benefits Questions. They are standard BMS/GRanTS questions and cannot be removed, but are unnecessary for Implementation Grant Applicants:</i>	
<input type="checkbox"/>	<u>Benefit Level:</u> Leave blank.
<input type="checkbox"/>	<u>Benefit Type:</u> Leave blank.
<input type="checkbox"/>	<u>Benefit:</u> Leave blank.
<input type="checkbox"/>	<u>Description:</u> Leave blank.
<input type="checkbox"/>	<u>Measurement:</u> Leave blank.
PROJECT BUDGET	
<i>For each project, the following budget items should be taken from Table 7, Exhibit B where applicable.</i>	
<input type="checkbox"/>	If only one project is being proposed, use the “Copy Budget data from Applicant Info” feature to populate previously entered data. Otherwise, enter individual budget items for each project in the same manner as described for the Applicant Information Tab. The sum of the budget items must agree with the total project budget.
GEOGRAPHIC INFORMATION	
<input type="checkbox"/>	Enter the geographical information for each project in the same manner as described for the Applicant Information Tab.
LEGISLATIVE INFORMATION	
<input type="checkbox"/>	If only one project is being proposed, use the “Copy Legislative data from Applicant Info” feature to populate previously entered data. Otherwise, enter the legislative information for each project in the same manner as described for the Applicant Information Tab. For projects covering more than one district, hold the control key down and select all that applies.
APPLICANT INFORMATION AND QUESTIONS TAB	
<i>The answers to these questions will be used in processing the application and determining eligibility and completeness.</i>	
<input type="checkbox"/>	<u>Q1. Proposal Description:</u> Provide a brief abstract of the Proposal, including a listing of individual project titles. Please note which projects, if any, directly address a critical water supply or water quality issue for DACs or Native American Tribal communities.
<input type="checkbox"/>	<u>Q2. Project Director:</u> Provide the name and details of the person responsible for executing the grant agreement for the applicant. Persons that are subcontractors to be paid by the grant cannot be listed as the Project Director.

Table 4 – Grant Application Checklist

<input type="checkbox"/>	Q3. Project Management: Provide the name and contact information of the Project Manager from the applicant agency or organization that will be the day-to-day contact on this application.
<input type="checkbox"/>	Q4. Applicant Information: Provide the agency name, address, city, state and zip code of the applicant submitting the application.
<input type="checkbox"/>	Q5. Additional Information: Provide the IRWM funding area(s) in which projects are located.
<input type="checkbox"/>	Q6. DAC Waiver Cost Share Request: Are you applying for a DAC cost share waiver? If yes, fill out Attachment 10.
<input type="checkbox"/>	Q7. Responsible Regional Water Quality Control Board(s) (RWQCB): List the name of the RWQCB in which your Proposal is located. For a region that extends beyond one RWQCB boundary, list the name of each Board.
<input type="checkbox"/>	Q8. Eligibility: The Implementation Grant Program requires a minimum funding match of 25% of total project cost unless there is a DAC project included in the proposal. Requirements for DAC funding match reductions are included in Exhibit E of this PSP. Are your matching funds less than 25%? If so, please explain.
<input type="checkbox"/>	Q9. Eligibility: Does the application represent a single application from an IRWM Region approved in the RAP? To verify, see RAP website: http://www.water.ca.gov/irwm/grants/rap.cfm . If yes, include the name of the IRWM Region. If no, please explain.
<input type="checkbox"/>	Q10. Eligibility: Please specify whether the applicant is a local public agency or non-profit organization as defined in Appendix B of the 2012 Guidelines.
<input type="checkbox"/>	Q11. Eligibility: List the urban water suppliers that will receive funding from the proposed grant. Please provide the agency name, a contact phone number and e-mail address. Those listed must submit self certification of compliance with CWC §525 <i>et seq.</i> and AB 1420, see Attachment 11. If there are none, so indicate and go to Q13.
<input type="checkbox"/>	Q12. Eligibility: Have all of the urban water suppliers, listed in Q11 above, submitted complete Urban Water Management Plans (UWMPs), to DWR? Have those plans been verified as complete by DWR? If not, explain and provide the anticipated date for having a complete UWMP.
<input type="checkbox"/>	Q13. Eligibility: Have any urban water suppliers, listed in Q11, submitted AB 1420 compliance tables and supporting documentation to DWR for a different grant program on or after January 1, 2013? If so, please list the urban water supplier and the grant program. An urban water supplier must submit AB 1420 compliance documentation to DWR. If the urban water supplier has not submitted AB 1420 documentation, or that documentation was determined to be incomplete by DWR, the urban water supplier's projects will not be considered eligible for grant funding. Refer to Section IIIB of the 2012 Guidelines for additional information.
<input type="checkbox"/>	Q14. Eligibility: Does the Proposal include any groundwater projects or other projects that directly affect groundwater levels or quality? If so, provide the name(s) of the project(s) and list the agency(ies) that will implement the project(s)
<input type="checkbox"/>	Q15. Eligibility: For the agency(ies) listed in Q14, how has the agency complied with CWC §10753 regarding Groundwater Management Plans (GWMPs), as described in Section III.B of the 2012 Guidelines?
<input type="checkbox"/>	Q16. Eligibility: Does the IRWM region receive water supplied from the Sacramento-San Joaquin Delta? Please answer yes or no. If no, please explain and go to Q19. If yes, please answer Q17 and Q18.
<input type="checkbox"/>	Q17. Eligibility: Does the existing IRWM Plan help reduce dependence on the Sacramento-San Joaquin Delta for water supply? Please answer yes or no. If no, please explain. If yes, please complete Attachment 13.
<input type="checkbox"/>	Q18. Eligibility: If an update to the IRWM plan will take place in the near future, will the updated plan continue to reduce dependence on the Sacramento-San Joaquin Delta for water supply? Please answer yes or no. If no, please explain. If yes, please complete Attachment 13.
<input type="checkbox"/>	Q19. Eligibility: List the agricultural water suppliers that will receive funding from the proposed grant. Please provide the agency/organization name, a contact phone number and e-mail address. If there are none, please indicate so and go to Q21.
<input type="checkbox"/>	Q20. Eligibility: Have all of the agricultural water suppliers, listed in Q19 above, submitted complete Agricultural Water Management Plan to DWR? Have those plans been verified as complete by DWR? If the plan has not been submitted, please indicate the anticipated submittal date?
<input type="checkbox"/>	Q21. Eligibility: List the surface water diverters that will receive funding from the proposed grant. Please provide the agency/organization name, a contact phone number and e-mail address. If there are none, please indicate so and go to Q23.

Table 4 – Grant Application Checklist

<input type="checkbox"/>	Q22. Eligibility: Have all of the surface water diverters, listed in Q21 above, submitted to the State Water Resources Control Board surface water diversion reports in compliance with requirements outlined in Part 5.1 (commencing with §5100) of Division 2 of the CWC? If not, explain and provide the anticipated date for meeting the requirements.
<input type="checkbox"/>	Q23. Eligibility: List the groundwater users that will receive funding from the proposed grant. Please provide the agency/organization name, a contact phone number and e-mail address. If there are none, please indicate so and skip Q24.
<input type="checkbox"/>	Q24. Eligibility: Have all of the groundwater users, listed in Q23 above, met the requirements of DWR's CASGEM Program: http://www.water.ca.gov/groundwater/casgem/ ? If not, explain and provide the anticipated date for meeting the requirements.

APPLICATION ATTACHMENTS TAB

Provide the attachments listed below by attaching files to the BMS/GRanTS application. When attaching files, please use the naming convention found in Section V.A of this PSP. For instructions on attaching files, please refer to the BMS/GRanTS User Manual. Requirements for information to be included in these attachments are found in Section V.B.2 of this PSP.

Acceptable file formats are: MS Word, MS Excel, MS Project, or PDF. PDF files should be generated, if possible, from the original application file rather than scanned hardcopy. All portions of the application, BMS/GRanTS submittal and hardcopies, must be received by the application deadline. Late submittals will not be reviewed or considered for funding.

Maps, photographs, documents, and reports should be formatted with no component larger than 50 MB. However, DWR strongly recommends that for speed of upload you limit the file size to 20 MB. Documents greater than 50 MB should be divided into their parts (e.g., cover page, table of contents, chapters, figures, photos, appendices).

Attachment # ¹	Attachment Title	Additional Information in Exhibits ²
<input type="checkbox"/> Attachment 1	Authorization and Eligibility Requirements	
<input type="checkbox"/> Attachment 2	Adopted Plan and Proof of Formal Adoption	
<input type="checkbox"/> Attachment 3	Work Plan	Exhibit A
<input type="checkbox"/> Attachment 4	Budget	Exhibit B
<input type="checkbox"/> Attachment 5	Schedule	
<input type="checkbox"/> Attachment 6	Monitoring, Assessment, and Performance Measures	
<input type="checkbox"/> Attachment 7	Technical Justification of Project Physical Benefits	Exhibit C
<input type="checkbox"/> Attachment 8	Benefits and Cost Analysis	Exhibit D
<input type="checkbox"/> Attachment 9	Program Preferences	2012 Guidelines, Section II. F.
<input type="checkbox"/> Attachment 10	Disadvantaged Community Assistance	Exhibit E – Required if the proposal contains a project that addresses need of a DAC and/or is requesting a funding match waiver.
<input type="checkbox"/> Attachment 11	GWMP, AB1420, and Water Meter Compliance Information	Submit signed originals to DWR and upload scanned copy of signed document to online system.

Table 4 – Grant Application Checklist

<input type="checkbox"/>	Attachment 12	Consent Form	Exhibit F – Required if the proposal is from a region with an IRWM Plan adopted on or before September 30, 2008. Submit signed originals to DWR and upload scanned copy of signed document to online system.
<input type="checkbox"/>	Attachment 13	IRWM Plan – Reduce Delta Water Dependence	Required if IRWM Region received water supplied from the Sacramento-San Joaquin Delta

- (1) *The attachment discussion below provides the applicant with general directions regarding the content of each attachment.*
- (2) *The exhibit discussion provides specific direction regarding what information is to be submitted in the associated attachment.*

2. Attachment Instructions

Applicants are required to submit Attachments 1 through 13 (as applicable) to complete the IRWM Implementation Grant Application. A discussion of each of these attachments is provided below.

ATTACHMENT 1. AUTHORIZATION AND ELIGIBILITY REQUIREMENTS

For the “AttachmentName” in the naming convention of BMS/GRanTS, use “Eligible” for this attachment.

Attachment 1 is mandatory and consists of authorization and eligibility documentation including Urban Water Management Planning Act Compliance, CWC §525 compliance, AB 1420 compliance, GWMP Compliance, IRWM Plan consistency, and Table 1 – Overview of Selected IRWM Plan Standards. Self-certification documents must be completed and included in Attachment 11 (where applicable) for CWC §525, AB 1420, and GWMP compliance. In Attachment 1 please provide the following items:

Authorizing Documentation – The applicant must provide a resolution adopted by the applicant’s governing body designating an authorized representative to submit the application and execute an agreement with the State of California for an IRWM Implementation Grant. The following text box provides an example resolution.

RESOLUTION NO. _____

Resolved by the <Insert name of governing body, city council, organization, or other> of the <Insert name of agency, city council, organization, or other>, that application be made to the California Department of Water Resources to obtain an Integrated Regional Water Management Implementation Grant pursuant to the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Public Resource Code Section 75001 *et seq.*), and to enter into an agreement to receive a grant for the: <Insert name of Proposal>. The <Insert title – Presiding Officer, President, Agency Manager, or other officer> of the <Insert name of agency, city, county, organization, or other> is hereby authorized and directed to prepare the necessary data, conduct investigations, file such application, and execute a grant agreement with California Department of Water Resources.

Passed and adopted at a meeting of the <Insert name of agency, city, county, organization, or other> on <Insert date>.

Authorized Original Signature: _____

Printed Name: _____

Title: _____

Clerk/Secretary: _____

Eligible Applicant Documentation: Eligible applicants are local public agencies or non-profit organizations.

If DWR determines that the applicant does not have the authority to enter into a grant agreement with the State, the applicant will not be eligible for funding and the application will not be reviewed.

The applicant must provide a written statement (and additional information if noted) containing the appropriate information outlined below:

Local Public Agencies

- ↪ Is the applicant a local public agency as defined in Appendix B of the 2012 Guidelines? Please explain.
- ↪ What is the statutory or other legal authority under which the applicant was formed and is authorized to operate?
- ↪ Does the applicant have legal authority to enter into a grant agreement with the State of California?
- ↪ Describe any legal agreements among partner agencies and/or organizations that ensure performance of the Proposal and tracking of funds.

Non-Profit Organizations

- ↪ Is the applicant a non-profit organization as defined in Appendix B of the 2012 Guidelines? Please explain.
- ↪ Does the applicant have legal authority to enter into a grant agreement with the State of California?
- ↪ Describe any legal agreements among partner agencies and/or organizations that ensure performance of the Proposal and tracking of funds.
- ↪ Include a copy of the certificate of incorporation for the organization.

GWMP Compliance – For groundwater projects or other projects that directly affect groundwater levels or quality, the applicant or the participating agency responsible for such projects must provide in Attachment 1 the following, as applicable:

- ↪ If the Proposal does not contain a groundwater project or other project that directly affect groundwater levels or quality, so indicate, and include in Attachment 1 the justification for such a conclusion.
- ↪ Identification of projects in the Proposal that involve any groundwater projects or other projects that directly affect groundwater levels or quality.
- ↪ The agency(ies) that will implement such project(s).
- ↪ The status of the applicable GWMP compliance option as described below:
 - ◆ The applicant or participating agency has prepared and implemented a GWMP that is in compliance with CWC §10753.7.
 - ◆ The applicant or participating agency consents to be subject to a GWMP, basin-wide management plan, or other IRWM program or plan that meets the requirements of CWC §10753.7.
 - ◆ The applicant or participating agency conforms to the requirements of an adjudication of water rights in the subject groundwater basin.
 - ◆ The applicant or participating agency is in the process of revising the GWMP to be compliant with CWC §10753. In which case, Attachment 1 must state the estimated date for adoption, which must be within one year of application due date (see the Schedule in Table 3).

Progress on Meeting Current IRWM Plan Standards – All applicants in the process of updating their IRWM Plan must complete the Overview of Selected IRWM Plan Standards in Table 1 and include it as part of

Attachment 1, to demonstrate that its respective region will adopt an IRWM Plan that meets the IRWM Plan Standards contained in Appendix C of the 2012 Guidelines.

Please keep responses to each standard in Table 1 to less than one page, 12-point font. Section II.B of this PSP presents two possible scenarios whereby projects within an IRWM Plan are eligible for Implementation Grant funding. If eligibility for this criterion is being established using an IRWM Plan that meets current plan standards as explained in the 2012 Guidelines that plan must be submitted as part of Attachment 1. If eligibility is being established using an IRWM Plan adopted prior to September 30, 2008 the Plan does not need to be submitted.

Project Consistency with an adopted IRWM Plan – Consistency with the adopted IRWM Plan means either the project is included as an implementation project in the IRWM Plan, or the project has been added to the IRWM Plan after adoption, but in accordance with the procedures in the adopted IRWM Plan. In Attachment 1, the applicant must provide a listing of projects proposed for funding and how those projects are consistent with the adopted IRWM Plan. In cases where the project has been added post adoption, please discuss how the addition of the project(s) was consistent with the procedures established in the adopted IRWM Plan. Applicant must provide documentation indicating that project(s) added post adoption were vetted by the IRWM group. Meeting minutes and/or project approval letters from the IRWM group are considered acceptable documentation for submittal.

ATTACHMENT 2. ADOPTED PLAN AND PROOF OF FORMAL ADOPTION

For the “AttachmentName” in the naming convention of BMS/GRanTS, use “Adopt” for this attachment.

Attachment 2 is mandatory and consists of proof of formal adoption (i.e. a signature page, with dates of signature) for all RWMG entities and project proponents adopting the IRWM Plan and other documentation that the IRWM Plan was adopted consistent with CWC §10543 (applicable only to those establishing eligibility with a plan meeting current plan standards and Guideline provisions).

The Work Plan, Budget, and Schedule, Attachments 3, 4, and 5, deal specifically with the Proposal and are used to evaluate whether the applicant’s projects are ready to proceed. Attachments 3, 4, and 5 relate to one another and each should support the other. For example, if the Work Plan is detailed, the budget estimate should be equally detailed. Lump sum costs in the Budget may indicate a work item that is less ready to implement. The detail and accuracy of the Work Plan and Budget should support the readiness presented in the Schedule. Work items that are not detailed or are unclear indicate to a reviewer that the items are not ready to proceed.

ATTACHMENT 3. WORK PLAN

For the “AttachmentName” in the naming convention of BMS/GRanTS, use “WorkPlan” for this attachment.

Attachment 3 is mandatory. See Exhibit A for detailed guidance on preparing this attachment. There is no page limitation for Attachment 3; however, applicants are encouraged to be clear and concise. See Exhibit A for an outline of tasks that will also meet the major tasks listed in the Budget in Exhibit B.

The Work Plan contains summary descriptions of all the projects constituting the Proposal and tasks necessary to complete each project in the Proposal. The Work Plan must be sufficiently detailed to demonstrate that the Proposal is ready for implementation, and should include a brief discussion of the supporting studies, data, and resources for each project, to ensure implementation of the proposal is based on sound scientific and technical principles. Deliverables should be identified in the Work Plan. The Work Plan should identify linkages between and among projects that are critical to the success of the regional effort. The Work Plan tasks must also be consistent with the major tasks and sub-tasks identified in the Budget (Attachment 4) and Schedule (Attachment 5).

ATTACHMENT 4. BUDGET

For the “AttachmentName” in the naming convention of BMS/GRanTS, use “Budget” for this attachment. See Exhibit B for detailed guidance on preparation of this attachment.

Attachment 4 is mandatory. Table 7 (Exhibit B) must be completed for each project in the Proposal and Table 8 must be completed as a summary or roll-up budget for the entire Proposal. For each project contained in the Proposal, provide detailed budget documentation supporting the costs shown in Table 7, Project Budget. For each budget category shown in Table 7, there may be several tasks and sub-tasks.

Table 8 will be used to present the funding match for the Proposal, including documenting that the Proposal will meet the minimum requirement of at least 25% of the total costs. As discussed in the 2012 Guidelines, the requirement for 25% funding match may be waived for projects that demonstrate they address a need of a DAC. See Exhibit B for more information on how to present the budget and also, where relevant, requesting a funding match waiver.

Applicants must consider the relevant labor code compliance requirements and the applicability of prevailing wage laws in developing the Budget as explained in Section IV of the 2012 Guidelines. Applicants should also identify funding for the Data Management and Monitoring Deliverables identified in the Work Plan, including any data sharing efforts with the applicable State databases.

ATTACHMENT 5. SCHEDULE

For the “AttachmentName” in the naming convention of BMS/GRanTS, use “Schedule” for this attachment.

Attachment 5 is mandatory. Provide a schedule for implementation of the Proposal showing the sequence and timing of the proposed project or suite of projects. The schedule must show the start and end dates as well as milestones for each task contained in the Work Plan and should be in a horizontal bar or Gantt chart format. The schedule should also illustrate any dependencies or predecessors by showing links between tasks. An assumed end date of the grant agreement will not be established by DWR, instead applicants must include a reasonable estimate of the end date, based on their Proposal, including time for any final reports and invoicing. The schedule, Attachment 5 must be consistent with the Work Plan (Attachment 3) and the Budget (Attachment 4), and must use October 1, 2013 as the assumed award date of the grant.

At a minimum, the following tasks should be included in the schedule:

- ↻ Development of financing
- ↻ Development of environmental documentation and California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA) compliance
- ↻ Project design and bid solicitation process
- ↻ Acquisition of rights-of-way, if required
- ↻ Identification and acquisition of all necessary permits
- ↻ Development of a Project Monitoring Plan
- ↻ Construction start and end dates including significant milestones
- ↻ Implementation of any environmental mitigation or enhancement efforts
- ↻ Construction Administration
- ↻ Project Administration
- ↻ Progress Report and Final Report submittals

ATTACHMENT 6. MONITORING, ASSESSMENT, AND PERFORMANCE MEASURES

For the “AttachmentName” in the naming convention of BMS/GRanTS, use “Measures” for this attachment. There is no page limitation for Attachment 6; however, applicants are encouraged to be clear and concise.

Attachment 6 is mandatory. Describe the performance measures that will be used to quantify and verify project performance. Provide a discussion of the monitoring system to be used to verify project performance with respect to the project benefits or objectives identified in the Proposal. Indicate where the data will be collected and the types of analyses to be used. Include a discussion of how monitoring data will be used to measure the performance in meeting the overall goals and objectives of the IRWM Plan.

This attachment presents the planned project monitoring, assessment, and performance measures that will demonstrate that the Proposal will meet its intended goals, achieve measurable outcomes, and provide value to the State of California. The purpose of Attachment 6 is to provide a preview of the information that would go into a monitoring plan.

For Attachment 6, applicants are required to submit Project Performance Measures Tables specific to their Proposal. Project Performance Measures Tables should include the following items:

- ↻ Project goals
- ↻ Desired outcomes
- ↻ Targets – measurable targets that are feasible to meet during the life of the project(s)
- ↻ Performance indicators – measures to evaluate change that is a direct result of the project being built
- ↻ Measurement tools and methods – to effectively track performance

A Project Performance Measures Table should be submitted for each project included in the Proposal. When multiple projects carry the same goals and outcomes, a combined table can be developed to cover those projects. The measurement parameters (metrics) should fit the performance evaluation needs of the Proposal. The metrics may include additional acre-feet of water supply, improved water supply reliability and flexibility, water quality measurements, measurement-based estimates of pollution load reductions, acres of habitat successfully restored, feet of stream channel stabilized, groundwater level measurements, stream flow measurements, improved flood control, or other quantitative measures or indicators.

If the grant application is successful, upon implementation of the proposal, the monitoring tables should be used to develop the project monitoring plan.

ATTACHMENT 7. TECHNICAL JUSTIFICATION OF PROJECTS

For the “AttachmentName” in the naming convention of BMS/GRanTS, use “TechJust” for this attachment.

Attachment 7 is mandatory. See Exhibit C for detailed guidance on the preparation of this attachment. There is no page limitation for Attachment 7; however, applicants are encouraged to be specific, clear, and concise.

Scoring for Attachment 7 will be based solely on the technical justifications of project(s) with respect to the claimed physical benefits (i.e., technical basis of the project and capability of yielding the benefits). Documentation may include, but is not limited to: technical reports, feasibility studies, needs assessments, expert opinion or local knowledge, journals, etc. The magnitude of physical benefits will not be scored under this criterion. Please note that the magnitude of project benefits relative to costs will be evaluated based on the information provided in Attachment 8.

ATTACHMENT 8. BENEFITS AND COST ANALYSIS

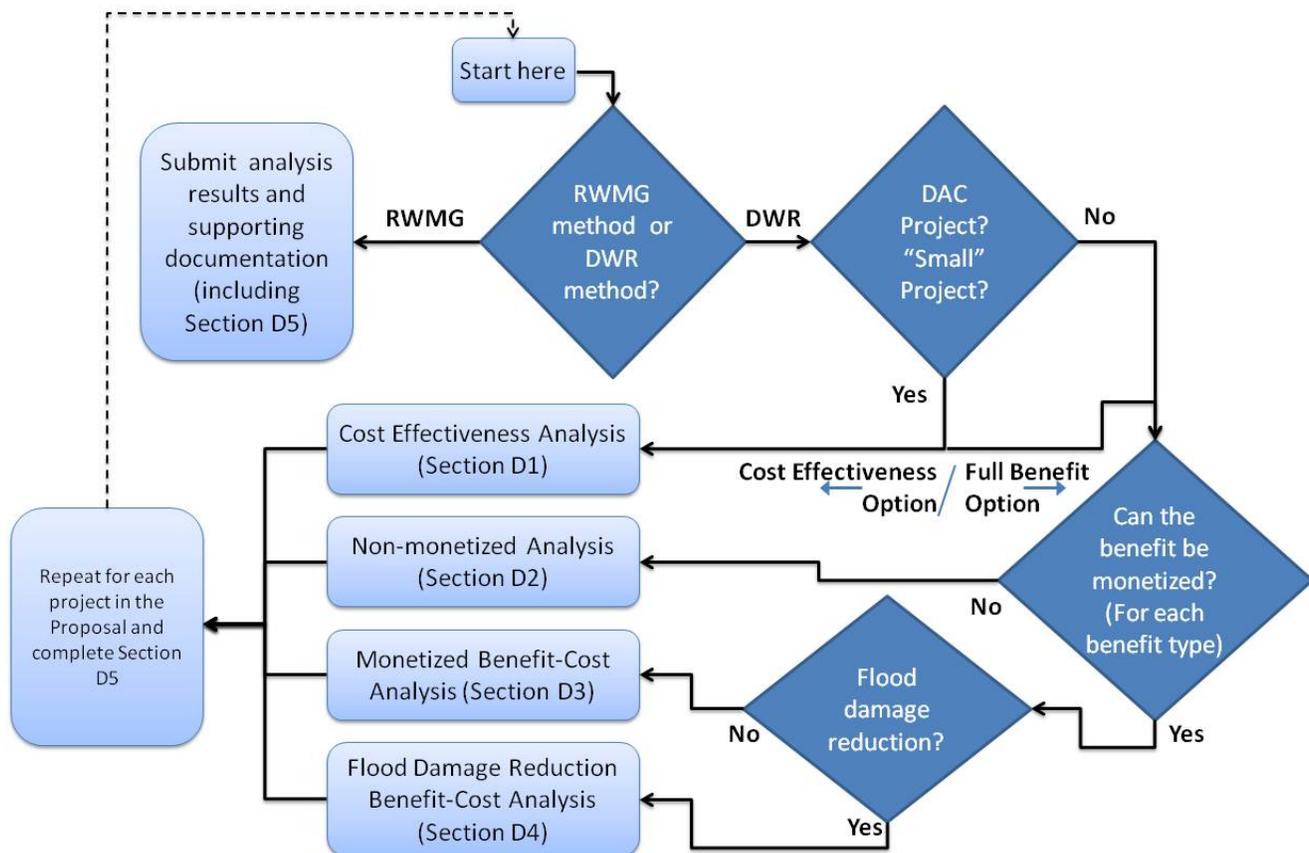
For the “AttachmentName” in the naming convention of BMS/GRanTS, use “BenCost” for this attachment.

Attachment 8 is mandatory. See Exhibit D for detailed guidance on the preparation of this attachment. There is no page limitation for Attachment 8; however, applicants are encouraged to be specific, clear, and concise.

Consistent with the IRWM Program 2012 Guidelines, all projects must yield multiple benefits to be eligible for grant funding. Describe and quantify (if applicable) the benefits and costs of each project in the proposal. The content provided in this attachment will be evaluated in a collective manner to see how all project benefits (combined) compare against the costs of all projects in the proposal.

This attachment allows applicants to claim monetized and non-monetized benefits based on the physical benefit descriptions as documented in Attachment 7. Individual project benefit analysis requirements vary as they depend on the type of project or benefit type. A process is provided in Figure 1 to guide applicants in selecting analysis methods. For the entire proposal, the applicant can submit the analysis performed with the method of analysis of their choice (termed “RWMG Method”) or the “DWR Method” of analysis. If the DWR Method is chosen, there are four possible options for analyzing each project. Regardless of the methods or options chosen, a benefits and costs analysis must be completed for every project in the proposal. Whether the applicant chooses to use the DWR Method or the RWMG Method, the analysis will be evaluated and scored using the same scoring criterion.

Figure 1 – Project Benefit Analysis Options Selection Process



RWMG Method

Applicants may choose to submit a Benefits and Cost Analysis (i.e., Attachment 8) using a comparable analysis method in lieu of preparing an analysis based on the guidance provided in Exhibit D. While performing the benefit analysis, RWMGs are encouraged to read Exhibit D and the guidance presented in DWR's Economic Analysis Guidelines (January 2008 <http://www.water.ca.gov/economics/guidance.cfm>). These documents may provide useful assistance to the RWMG.

DWR Method

Four benefit analysis options are available for a project. Following is a brief description of these options. More detail is provided in Exhibit D.

Section D1 – Cost Effectiveness Analysis. For relatively small non-DAC projects (total project cost is less than \$300,000) or projects that benefit a DAC (up to a total project cost of \$1 million), applicants have the option of completing a Cost Effectiveness Analysis. This option evaluates whether the physical benefits provided by the project are provided at the least possible cost, or not.

Applicants may not split a single project into multiple smaller components or phases in order to be eligible for the cost effectiveness analysis option.

Section D2 – Non-Monetized Benefit Analysis. For projects where benefits cannot be monetized, a Non-Monetized Benefit Analysis should be completed. This analysis requires a description (where possible) of applicable social, environmental stewardship, and sustainability benefits that may result from the implementation of a project.

Section D3 – Monetized Benefits Analysis. For projects which do not fall in Section D1 option and benefits can be quantified in dollar terms (excluding flood damage reduction (FDR) benefits), a Monetized Benefits Evaluation should be completed.

Section D4 – Flood Damage Reduction Benefit Analysis. For projects with FDR benefits, determination of the expected annual damages with and without the project should be completed.

Section D5 – Proposal Costs and Benefits Summary. Annual costs (Table 19) must be provided for each individual project; and a benefit-cost summary (Table 20) must be presented for the entire proposal, regardless of benefit analysis method or options used.

ATTACHMENT 9. PROGRAM PREFERENCES

For the “AttachmentName” in the naming convention of BMS/GRanTS, use “Preference” for this attachment.

Attachment 9 is mandatory and must be no more than 10 pages in length using a minimum 10-point type font.

Submit a discussion on how the Proposal assists in meeting the Program Preference(s) described in Section II.F of the 2012 Guidelines. The discussion must identify the specific Program Preference(s) that the Proposal will meet; the certainty that the Proposal will meet the Program Preference(s); and the breadth and magnitude to which the Program Preference(s) will be met. Include graphics or maps as necessary to demonstrate how your proposal meets the preferences.

ATTACHMENT 10. DISADVANTAGED COMMUNITY ASSISTANCE

For the “AttachmentName” in the naming convention of BMS/GRanTS, use “DAC” for this attachment.

This attachment is required only if the proposal includes a project that specifically addresses a need of a DAC. See Exhibit E for instructions on preparations for this attachment. DWR will use the information in

Attachment 10 to evaluate the application with regard to DAC program preference, DAC funding targets, and waiver of funding match (if requested). If a DAC waiver is granted, a term of the grant agreement will require the grantee to verify that the claimed DAC benefits have been provided by completing the proposed project.

ATTACHMENT 11. GWMP, AB 1420, AND WATER METER COMPLIANCE INFORMATION

For the “AttachmentName” in the naming convention of BMS/GRanTS, use “SelfCert” for this attachment.

Attachment 11 is mandatory and consists of three self-certification documents: GWMP (CWC §10753.7), AB 1420 (CWC §10631.5), and Water Meter Compliance (CWC §525 *et seq.*). GWMP, AB 1420, and Water Meter compliance self certification documentation must be signed and submitted in hard copy. **Only a single hard copy (with wet signature) submittal per project is required for this attachment; do not submit four (4) hard copies.** Agencies submitting these forms should be consistent with the answers given in Q11, Q13, Q14, and Q15 of the electronic application.

Each urban water supplier that would receive grant funding must submit self certification documents to verify the compliance of AB1420 (CWC §10631.5) and Water Meter Compliance (CWC §525 *et seq.*). The AB 1420 self certification documentation must be prepared in accordance to the instructions found at: <http://www.water.ca.gov/wateruseefficiency/finance/>. As DWR is both the funding agency and the approval agency, a single submittal to DWR is sufficient. The Water Meter compliance self certification form and instructions can be found at the following link: www.water.ca.gov/irwm/grants/resourceslinks.cfm. Each urban water supplier proposing wastewater projects, water use efficiency projects, or drinking water projects must complete the form.

The GWMP (CWC §10753.7) self certification document must be submitted by each proponent of a project with potential groundwater impacts. The GWMP self certification documentation must be prepared in accordance to the instructions found at: <http://www.water.ca.gov/irwm/grants/resourceslinks.cfm>

ATTACHMENT 12. CONSENT FORM

For the “AttachmentName” in the naming convention of BMS/GRanTS, use “Consent” for this attachment.

This attachment is required only if the proposal is utilizing an IRWM Plan that was adopted on or before September 30, 2008. **The Consent Form contained in Exhibit F must be signed and submitted in hard copy.** By signing the Consent Form, the RWMG acknowledges that it understands that it will be required to enter into a binding agreement with DWR to meet the conditions detailed in Section II.B. Failure to meet those requirements may result in DWR revoking the grant award and demanding return of State funds.

ATTACHMENT 13. IRWM PLAN – REDUCE DELTA WATER DEPENDENCE

For the “AttachmentName” in the naming convention of BMS/GRanTS, use “Delta” for this attachment.

This attachment is required only if the IRWM region receives water supplied from the Sacramento-San Joaquin Delta. Attachment 13 must summarize the portions of the plan that address how implementation of the IRWM Plan will help reduce dependence on the Sacramento-San Joaquin Delta for water supply, and include relevant plan excerpts to support the summary.

The summary text must be no more than five pages in length using a minimum 10-point type font. Attachment 13 must:

- 1) Identify and include portions of the IRWM Plan that demonstrate it helps reduce dependence on the Sacramento-San Joaquin Delta for water supply.
- 2) Provide assurances that any revised or subsequent IRWM Plan will continue to help reduce dependence on the Sacramento-San Joaquin Delta for water supply.

VI. REVIEW AND SCORING CRITERIA

The review process is discussed in detail in Section V.G of the 2012 Guidelines. First, applications will be screened for eligibility and completeness in accordance with Section V of the 2012 Guidelines (summarized in text box below) and Section II of this PSP. The information provided by applicants in BMS/GRanTS, as well as Attachments 1, 2, and 11 of the application, will be used in determining eligibility and completeness. All complete and eligible applications will then be evaluated as described below.

Applications that are complete and eligible will be scored based on the evaluation criteria summarized in Table 5. Each criterion will be scored by technical reviewers and assigned a score within the range of points shown in Table 5. The score for each criterion will then be multiplied by a weighting factor and summed for a total score for the application.

Where standard scoring criteria are applied, points will be assigned as follows (2012 Guidelines, Section V.G.):

- 5 points will be awarded where the criterion is fully addressed and supported by thorough and well-presented documentation and logical rationale.
- 4 points will be awarded where the criterion is fully addressed but is not supported by thorough documentation or sufficient rationale.
- 3 points will be awarded where the criterion is less than fully addressed and documentation or rationales are incomplete or insufficient.
- 2 points will be awarded where the criterion is marginally addressed and documentation is incomplete and insufficient.
- 1 point will be awarded where the criterion is minimally addressed and not documented.
- 0 points will be awarded where the criterion is not addressed.

Table 5 – Supplemental Scoring Criteria and Scoring Standards

Scoring Criteria	Weighting Factor	Range of Points Possible	Score	Scoring Standards
<p>Work Plan</p> <p><i>Scoring will be based on whether the applicant has presented a detailed and specific Work Plan that adequately documents the Proposal (i.e., suite of projects).</i></p> <p>Does the Work Plan contain an introduction that includes:</p> <ul style="list-style-type: none"> a) goals and objectives of the Proposal and how the Proposal helps achieve the goals and objectives of the adopted IRWM Plan? b) a tabulated overview of each project, including an abstract and project status; c) a map showing relative project locations; and d) a discussion of the synergies or linkages among projects? <p>Are tasks for each project of adequate detail and completeness so that it is clear that the project can be implemented?</p> <p>Do the tasks include appropriate deliverables and reporting submittals (i.e., quarterly and final reports)?</p> <p>Is the proposal consistent with the applicable Basin Plan?</p> <p>Do the tasks collectively implement each project in the Proposal?</p> <p>Is this a study or part of a larger – multi-phased project effort? If so, will the proposed project(s) be operational as a standalone project(s) without the completion of the end project(s)?</p> <p>Does the Work Plan include a listing of required permits and their status including CEQA compliance?</p> <p>Are the submitted plans and specifications consistent with the design tasks included in the Work Plan?</p> <p>Does the Work Plan include Data Management and Monitoring Deliverables consistent with the IRWM Plan Standards and Guidance - Data Management Standard?</p>	3	0–15	0–5	<p>Standard Scoring Criteria See 2012 Guidelines, Section V.G</p>
<p>Budget</p> <p><i>Scoring will be based on whether the applicant has presented a detailed and specific budget that adequately documents the Proposal.</i></p>	1	0–5	5	<p>A score of 5 points will be awarded where the Budgets for all the projects in the Proposal have detailed cost information as described in Attachment 4; the costs are reasonable, and all the Budget categories of Exhibit B are thoroughly supported.</p>

Table 5 – Supplemental Scoring Criteria and Scoring Standards

Scoring Criteria	Weighting Factor	Range of Points Possible	Score	Scoring Standards
<p>Was a summary Budget provided for the Proposal and detailed Budgets provided for each project contained in the Proposal?</p> <p>Are the tasks shown in the Budget consistent with the work items shown in the Work Plan and Schedule?</p> <p>Are the detailed costs shown for each project reasonable?</p> <p>Are all the costs shown in the Budget supported by documentation, if required, and is that documentation complete?</p> <p>Does the budget attachment contain an explanation of how the project costs were estimated?</p>			4	A score of 4 points will be awarded where the Budgets for all the projects in the Proposal have detailed cost information as described in Attachment 4 and the costs are considered reasonable but the supporting documentation for some of the Budget categories of Exhibit B are not fully supported or lack detail.
			3	A score of 3 points will be awarded where the Budgets for more than half of the projects in the Proposal have detailed cost information as described in Attachment 4, but not all costs appear reasonable or supporting documentation is lacking for a majority of the Budget categories described in Exhibit B.
			2	A score of 2 points will be awarded where the Budgets for less than half the projects in the Proposal have detailed cost information as described in Attachment 4, many of the costs cannot be verified as reasonable, or supporting documentation is lacking for a majority of the Budget categories described in Exhibit B.
			1	A score of 1 will be awarded where there is no detailed Budget information provided for any of the proposed projects.
			0	A score of 0 will be awarded where there is no Budget information provided.
<p>Schedule</p> <p><i>Scoring will be based on whether the applicant has presented a detailed and specific schedule that adequately documents the Proposal and on the readiness to proceed with the Proposal. Readiness will be measured by construction cycles following the anticipated award date of October 1, 2013. It is assumed in the Scoring Standards that the first construction cycle will begin April 2014, the second cycle will begin April 2015, and the third cycle will begin April 2016.</i></p> <p>Are the tasks in the schedule consistent with the tasks described in the Work Plan?</p> <p>Given the task descriptions in the Work Plan, does the schedule seem reasonable?</p> <p>How many construction cycles occur between the assumed agreement execution date and the start of construction or implementation for the</p>	1	0-5	5	A score of 5 points will be awarded if the schedule is consistent with the Work Plan and Budget, reasonable, and demonstrates a readiness to begin construction or implementation of at least one project of the Proposal no later than October 2014.
			4	A score of 4 points will be awarded if the schedule is consistent with the Work Plan and Budget, demonstrates a readiness to begin construction or implementation of at least one project of the Proposal no later than October 2015.
			3	A score of 3 points will be awarded if the schedule is consistent with the Work Plan and Budget, reasonable, and demonstrates a readiness to begin construction or implementation of at least one project of the Proposal no later than October 2016.
			2	A score of 2 points will be awarded if the schedule is consistent with the Work Plan and Budget, demonstrates a readiness to begin construction or implementation of no project of the Proposal earlier than October 2016.

Table 5 – Supplemental Scoring Criteria and Scoring Standards

Scoring Criteria	Weighting Factor	Range of Points Possible	Score	Scoring Standards
earliest of the Proposal's projects?			1	A score of 1 point will be awarded if the Schedule is not consistent with a majority of the tasks presented in the Work Plan and Budget, and is clearly not reasonable. Readiness to begin construction or implementation will be disregarded.
			0	A score of 0 will be awarded if the schedule was not included in the application.
<p>Monitoring, Assessment, and Performance Measures</p> <p><i>Scoring will be based on whether the applicant has presented an adequate monitoring and assessment program including performance measures that will allow a determination of whether the objectives are met.</i></p> <p>Are the identified monitoring targets appropriate for the benefits claimed?</p> <p>Will the measurement tools and methods effectively monitor project performance and target progress?</p> <p>Is it feasible to meet the targets within the life of the project(s)?</p>	1	0-5	0-5	Standard Scoring Criteria See 2012 Guidelines, Section V.G
<p>Technical Justifications of Projects</p> <p><i>Scoring will be based solely on the technical justifications of project(s) with respect to claimed physical benefits. Magnitude of physical benefits will not be scored under this criterion. However, physical benefits must be clearly described and quantified (if applicable) as points will be allocated based on the quality of the technical analysis and supporting documentation in consideration of the type of benefit claimed. Scoring is designed to not bias types or sizes of projects with respect to each other.</i></p> <p>Did the applicant provide information that clearly identifies and describes the physical benefits of each project included in the Proposal?</p> <p>Is the technical analysis appropriate and justified considering the size of the project and the type of benefit claimed?</p>	2	0-10	5	A score of 5 points will be awarded to a proposal that is technically justified to achieve the claimed benefits and is fully supported by well described physical benefits and documentation that demonstrates the technical adequacy of the project(s).
			4	A score of 4 points will be awarded to a proposal that is technically justified to achieve the claimed benefits but is either not fully supported by documentation that demonstrates the technical adequacy of the project(s) or physical benefits are not well described.
			3	A score of 3 points will be awarded to a proposal that appears to be technically justified to achieve the claimed benefits but lacks documentation that demonstrates the technical adequacy of the project(s) and/or physical benefits are not well described.
			2	A score of 2 points will be awarded to a proposal where technical justification cannot be determined due to a lack of documentation that demonstrates the technical adequacy of the project(s) and/or physical benefits are not well described.

Table 5 – Supplemental Scoring Criteria and Scoring Standards

Scoring Criteria	Weighting Factor	Range of Points Possible	Score	Scoring Standards
			1	A score of 1 point will be awarded to a proposal that is not technically justified due to a lack of documentation that demonstrates the technical adequacy of the project(s) and/or physical benefits are not well described.
			0	A score of zero will be awarded to proposals that do not include supporting documentation to demonstrate the project(s) is technically justified to achieve the claimed benefits.
<p>Benefits and Costs Analysis</p> <p><i>Scoring will be based on the magnitude of benefits and quality of analysis. Magnitude includes both monetized and non-monetized benefits and will be evaluated relative to total proposal costs. For proposals where a cost effectiveness evaluation is provided, scores will be based on the quality and completeness of the evaluation. Scoring is designed to not bias types of projects with respect to each other.</i></p> <p>Points will be allocated based on: 1) the benefits realized through implementation of the Proposal relative to proposal costs and 2) the quality of the analysis and supporting documentation demonstrating those benefits. Points will be allocated from a range of scores based on the consideration of all project(s) in the Proposal. If the reviewers find that important costs are not included in the analysis, points will be deducted.</p> <p>Are the costs and benefits claimed supported with clear and complete documentation?</p> <p>Is the benefit analysis appropriate considering the size of the project and the type of benefit claimed?</p> <p>Are the benefits of all projects taken together large relative to costs of the Proposal?</p> <p>For proposals with a cost effectiveness evaluation, did the evaluation prove that the least cost alternative was utilized? If not, why?</p> <p>Note the following:</p> <ul style="list-style-type: none"> • Applicants must not split a single project into multiple smaller components or phases in order to be eligible for the Cost Effectiveness Analysis Option (Section D1). • Points will be reduced if DWR determines that the benefits described in the Non-Monetized Benefit Analysis (Section D2) or the FDR benefits (Section D4) could readily be quantified in dollar 	3	0-30	8-10	Collectively the proposal is likely to provide a high level of benefits in relationship to cost and this finding is supported by detailed, high quality analysis and clear and complete documentation.
			7-8	Collectively the proposal is likely to provide a high level of benefits in relationship to cost, but the quality of the analysis or clear and complete documentation is lacking.
			5-7	Collectively the proposal is likely to provide a medium level of benefits in relationship to cost and this finding is supported by detailed, high quality analysis and clear and complete documentation.
			4-5	Collectively the proposal is likely to provide a medium level of benefits in relationship to cost, but the quality of the analysis or clear and complete documentation is lacking.
			1-4	Collectively the proposal is likely to provide a low level of benefits in relationship to cost. Varying degree of quality of the analysis and supporting documentation is provided.
			0	A score of zero will be awarded to proposals that do not demonstrate any level of benefit.

Table 5 – Supplemental Scoring Criteria and Scoring Standards

Scoring Criteria	Weighting Factor	Range of Points Possible	Score	Scoring Standards
terms and the applicant did not monetize the benefits. This judgment may involve the type of benefit, the size of the project, and the availability of information.				
<p>Program Preferences</p> <p><i>Scoring will be based on whether the Proposal will implement one or more of the specified IRWM Grant Program Preferences (See Section II.F of 2012 Guidelines). Proposals that demonstrate significant, dedicated, and well-defined projects that meet multiple Program Preferences will be considered more favorably than Proposals that demonstrate a significant potential to meet a single Program Preference or demonstrate a low degree of commitment or certainty to meeting Program Preferences.</i></p> <p>Did the applicant demonstrate a high degree of certainty that the Proposal will implement the Program Preferences claimed?</p> <p>Did the applicant document the magnitude and breadth of Program Preferences that the Proposal will achieve?</p> <p>Did the applicant include a project(s) that will address critical water supply or water quality needs of disadvantaged communities within the IRWM region?</p>	2	0-10	0-5	<p>One half point will be awarded for each Program Preference (including the Statewide Priorities listed in Table 1 of the 2012 Guidelines) that will be met through the implementation of the Proposal, with one exception. One full point will be awarded if the Proposal includes a project(s) that will meet the Preference: “Address critical water supply or water quality needs of disadvantaged communities within the IRWM region” (DAC Program Preference).</p> <p>The maximum score of 5 points will be awarded only if the Proposal, upon implementation, will meet at least 8 non-DAC Program Preferences AND includes a project(s) that will meet the DAC Program Preference.</p> <p>If the Proposal does not include a project that will meet the DAC Program Preference, the maximum score that may be awarded is 4 points.</p> <p>Program Preference points will be granted if it is clear that the preference will be met upon implementation of the Proposal.</p>
Total Range of Points Possible Without Tie Breaker Points =		0 – 80		
<p>Tie Breaker Points</p> <p>Up to five (5) points may be awarded to aid in the distribution of funds.</p>	1	0-5	0-5	<p>These points may be applied in cases where applications have a tied score. Tie breaker points will be added to proposal scores for proposals from IRWM regions that have not yet received Proposition 84 IRWM Implementation Grant funding. These points will be assigned by the Selection Panel after consensus technical reviews are complete.</p>

EXHIBIT A

WORK PLAN

This exhibit provides guidance for presenting Attachment 3, the Work Plan, for the Proposal.

All Proposals must include a detailed description of the proposed implementation project(s) for which funding will be requested. The goals and objectives of the Proposal must be identified. Where requested funding is for a component of a larger project, this section must describe all of the components of the larger project and identify which elements of the project the IRWM Grant is proposed to fund. Linkages to any other projects that must be completed first or that are essential to obtain the full benefits of the Proposal must be discussed.

Based on the goals and objectives of the Proposal, a description of all work that will be necessary to complete the project or suite of projects must be included in this section. The Work Plan should include a description of work to be performed under each task and deliverables for assessing progress and accomplishments. The description should include as much detail as possible, and explain all tasks necessary to complete the Proposal and how the applicant will coordinate with DWR.

The tasks described in the Work Plan must agree with the tasks shown on the Budget and Schedule discussed in

Attachment 4 and 5. Additionally, the application must describe how the Proposal is consistent with the adopted IRWM Plan.

Attachment 3, Work Plan should consist of two sections: (1) an introduction and (2) proposed work. The Work Plan must include a summary of the entire Proposal as well as details for each project within the Proposal. Any supporting documentation necessary to substantiate work already completed should be submitted as appendices to Attachment 3.

Introduction

The introduction should provide information about the Proposal and shall include, but not be limited to the following items:

Goals and Objectives: A presentation of the goals and objectives of the Proposal.

Purpose and Need: A description of the purpose and need of the Proposal and how it addresses the adopted IRWM Plan's goals and objectives.

Project List: A table of specific projects in the Proposal, including an abstract of each project, the current status of each project in terms of percent completion of design, and implementing agencies.

Integrated Elements of Projects: A description of synergies or linkages between projects that result in added value or require coordinated implementation or operation.

Regional Map: Detailed maps that show, at a minimum, the location of activities or facilities of the project(s), the water resources (groundwater or surface water) that will be affected, DACs within the region, and proposed monitoring locations.

Completed Work: A description of the work that has been completed or is expected to be completed prior to the grant award date. For example, if CEQA/NEPA and other environmental compliance efforts have been completed discuss the environmental determination made by the lead agency and the documents that were filed.

Existing Data and Studies: A brief discussion of the data that have been collected and studies that have been performed that support the project(s) site location, feasibility, and technical methods. If necessary, include references to the page locations of the studies or reports that support the claims made in this discussion.

Project Map: Provide a site map showing the project(s) geographical location and the surrounding work boundaries.

Project Timing and Phasing: If the proposed project(s) is part of a multi-phased project complex, provide a description that demonstrates that the proposal can operate on a standalone basis, i.e., can be fully functional without implementation of the subsequent projects.

Where requested funding is for a component of a larger project, this section must describe all of the components of the larger project complex and identify project elements the IRWM Implementation Grant is proposed to fund. Linkages to any other projects that must be completed first or that are essential to obtain the full benefits of the Proposal must be discussed.

Proposed Work

This section should include the necessary tasks for each project within the Proposal. Tasks are specific activities that will be performed to implement each project in the Proposal. The task descriptions will be used as the scope of work in the grant agreement if the Proposal is selected for funding. The task detail must be sufficient to demonstrate a high expectation of successful implementation and must allow the reviewer to fully understand the work to be performed in order to evaluate the adequacy of the Proposal. Additionally,

the tasks must provide sufficient detail to justify the project(s) cost estimates. Tasks listed in the Work Plan should be consistent with those used in Attachment 4, Budget, and Attachment 5, Schedule.

The Proposed Work Section must contain the following items:

- ↻ For each project contained in the Proposal, include a description of work to be performed under each task and the current status of the task. The description should include as much detail as possible and explain all work necessary to complete each project in the Proposal.
- ↻ Grant reporting tasks including the submittal of Quarterly Progress Reports, Invoices, Final Reports, and Post Completion Reports.
- ↻ Procedures by which the applicant will coordinate with its partner agencies and organizations that may receive funding from the grant including any contracts, memorandums of understanding (MOUs), and other formal agreements.
- ↻ A discussion of standards, such as construction standards, health and safety standards, laboratory analysis, or accepted classifications methods that will be used in implementation.
- ↻ Development of performance measures and monitoring plans for the project(s) listed in the Proposal.
- ↻ A discussion of the status of acquisition of land or rights-of-way, if applicable.
- ↻ Identification of all necessary permits and the status of securing such permits.
- ↻ A discussion of the status of preparation and completion of requirements to comply with the CEQA, NEPA, and other environmental laws. If environmental compliance efforts have not been completed, include tasks for environmental compliance. Discuss the status of environmental mitigation or enhancement actions or tasks to comply with recommended mitigation measures. There is a tribal notification requirement pertaining to projects using Proposition 84 funds (PRC §75102). Applicants need to account for this step in the CEQA process in the work plan. See Appendix D of the 2012 Guidelines for further information.
- ↻ A description of deliverables to DWR for assessing progress and accomplishments, such as Quarterly and Final reports.
- ↻ Any other tasks or sub-tasks that may be applicable to describe implementation of the projects but are not listed above.
- ↻ Additionally, the most recent plans and specifications should be referenced, including page or sheet numbers, in the Work Plan and copies of the plans and specifications must be submitted as part of the application, as detailed in Section V, Application Instructions. Table 6 provides an outline of a typical work plan that may be submitted for this grant program. Individual tasks may vary; however, ensure they are consistent with the budget and schedule tables provided in the following exhibits.

Table 6 – Typical Work Plan Outline

Table 6 – Typical Work Plan Outline	
Category (a): Direct Project Administration	
Task 1: Administration: [Description of work]	Deliverables: Preparation of invoices and other deliverables as required.
Task 2: Labor Compliance Program: [Description of work]	Deliverable: Submission of Labor Compliance Program
Task 3: Reporting: [Description of work]	Deliverables: Submission of quarterly, final, and post completion reports as specified in the Grant Agreement.

Table 6 – Typical Work Plan Outline

Table 6 – Typical Work Plan Outline
Category (b): Land Purchase/Easement
If applicable, describe work.
Category (c): Planning/Design/Engineering/Environmental Documentation
Task 4: Assessment and Evaluation: [Description of work] Deliverables: Technical studies
Task 5: Final Design: [Description of work] Deliverables: Completion of project plans and specifications at the final level.
Task 6: Environmental Documentation: [Description of work] Deliverable: Approved and adopted CEQA/NEPA documentation
Task 7: Permitting: [Description of work] Deliverables: Section 1602, 401, 402, 404, etc.
Category (d): Construction/Implementation
Task 8: Construction Contracting: [Description of work] Deliverables: Advertisement for bids; pre-bid contractors meeting; evaluation of bids; award contract
Task 9: Construction: [Description of work] Subtask 9.1 Mobilization and Site Preparation: [Description of work] Subtask 9.2 Project Construction: [Description of work] Subtask 9.3 Performance Testing and Demobilization: [Description of work]
Category (e): Environmental Compliance/Mitigation/Enhancement
Task 10: Environmental Compliance/Mitigation/Enhancement: [Description of work]
Category (f): Construction Administration
Task 11: Construction Administration: [Description of work]

EXHIBIT B

BUDGET

The Proposal must provide a detailed estimate of costs. The estimate must at a minimum include the following for each individual project within the Proposal:

- ↪ Land costs, planning and design costs, environmental compliance and documentation costs; construction costs shown by project task, or phase; and the construction contingency amount for the Proposal.
- ↪ Funding match (i.e., Grantee's non-state cost share) can include, subject to DWR approval, eligible costs borne by the applicant or individual project proponent before Grant Award Date but after September 30, 2008. A minimum funding match for each proposal is 25% of the total costs of the Proposal. Proposals that include one or more projects that meet the needs of a DAC, as described in the 2012 Guidelines, may request a reduction or waiver of the required funding match. The 25% minimum funding match is calculated based on the total proposal cost [column (d) from Table 8], less any total project costs for qualified DAC projects. For example, if the total proposal cost as shown in column (d), Table 8 is \$10,000,000 and the Proposal includes a DAC project cost of \$1,000,000, then the new total proposal cost for calculating the minimum 25% funding match is now \$9,000,000.
- ↪ Any other State funds being used that will not come from this grant should be entered in column (c) of Tables 7 and 8. State Revolving Funds (SRF) are considered State funds, not funding match, and should be entered in column (c) of Tables 7 and 8. American Recovery and Reinvestment Act (ARRA) funds are not considered State funds and may be used as funding match (entered in column (b) of Tables 7 and 8).
- ↪ Tasks that are completely supported by funding match.

The detailed budget should be commensurate with the design stage that is being submitted and be broken out by task used in the Work Plan. Where applicable, documentation should be included to support the costs included in each budget category. Acceptable documentation may include, but is not limited to, bid documents, rate sheets, feasibility studies, or other project reports. The detailed budget should clearly identify a contingency amount (i.e. contingency percentage) applied to the project budget. Applicants must also provide an explanation of the rationale used to determine this contingency percentage. The tasks shown on the Budget must agree with the tasks described in the Work Plan and shown in the schedule in Attachment 3 and 5.

Table 7 must be completed for each project in the Proposal. Table 8 must be completed as a summary (roll-up) Budget for the entire Proposal. The "Table 8 – Summary Budget" must be clearly marked as such. Although the applicant should complete row (i) for each individual project, for IRWM Implementation Grant funding, the minimum funding match requirement applies to the costs of the overall Proposal.

Table 7 – Project Budget

Proposal Title: _____				
Project Title: _____				
Project serves a need of a DAC?: <input type="checkbox"/> Yes <input type="checkbox"/> No				
Funding Match Waiver request?: <input type="checkbox"/> Yes <input type="checkbox"/> No				
	(a)	(b)	(c)	(d)
Category	Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source*	Total Cost
(a)	Direct Project Administration			
(b)	Land Purchase/Easement			
(c)	Planning/Design/Engineering/Environmental Documentation			
(d)	Construction/Implementation			
(e)	Environmental Compliance/Mitigation/Enhancement			
(f)	Construction Administration			
(g)	Other Costs			
(h)	Construction/Implementation Contingency			
(i)	Grand Total (Sum rows (a) through (h) for each column)			
*List sources of funding: Use as much space as required				

Table 7

For each of the categories shown in the Table 7 above, the applicant must provide supplemental detailed costs for each project as follows:

Row (a) Direct Project Administration Costs

Detail shall include hourly wage paid by discipline; number of hours to be expended for administration; and costs shown for equipment or supplies, with back-up data provided. If project administrative costs are shown as a percentage of a cost, include both: a) the total on which the project administration is based (i.e., total project costs, total construction cost, etc.) and b) how the percentage was determined (i.e., flat rate, based on prior experience, etc.). This budget category includes all such costs for the grant recipient and any partner agencies or organizations. Applicants are encouraged to limit administrative costs proposed to be reimbursed by the grant to less than 5% of the total Proposal costs. Such administrative costs expenses are necessary costs incidentally, but directly related to the project including an appropriate pro-rata allocation of overhead and administrative expenses that are regularly assigned to all such projects in accordance with the standard accounting practices of the grantee.

Row (b) Land Purchase/Easement

Detail shall distinguish whether the cost is for purchase of land or an easement to use the land. If land purchase is to be included in the funding match, include whether it is a proposed acquisition or whether the

land is already owned by the applicant or partner agency/organization. If the land is already owned by the applicant or partner agency/organization, indicate when the land was purchased (to be an eligible cost it must be after September 30, 2008), the purchase price and what methodology was used to determine land value. The purchase price for that portion of the land that will be dedicated to the Proposal may, in certain circumstances, be included as funding match.

Row (c) Planning/Design/Engineering/Environmental Documentation

Detail shall include hourly wage paid by discipline, number of hours, and the total cost for the particular item (i.e., 60% design, final design (See below for discussion of design stages), engineering field investigations, preparation of CEQA documentation etc.). If any contingency amounts are used in the estimate, provide an explanation for the rationale used to determine the contingency percentage.

For purposes of this PSP, the following design stages are provided to assist applicants in determining their design percentage for projects under design:

- ↪ 10% (Conceptual) Design – The 10% design shows project siting and the layout of major facilities. No specifications are provided. Design analysis has been started and is nearing completion. Background geologic, seismic literature research has been performed. A listing of project objectives, environmental or infrastructure constraints is provided.
- ↪ 30 % (Concept) Design – The 30% design shows project siting and all project appurtenances. Some detail is provided for each of the disciplines (such as civil, structural, mechanical, and geology). Design analysis should be complete at this stage. A rough listing of specifications required for the project is provided. Preliminary geologic and foundation studies have been performed.
- ↪ 60% Design – The 60% design is the same as for the 30% design submittal, with more details provided for each design discipline, including electrical, and traffic control, if applicable. Standard details and outline specifications, including the front end and technical portion, are provided. Foundation studies completed, lab testing performed, structural analysis and/or modeling performed, permitting underway.
- ↪ 90% (Pre-final) Design – The 90% design is the final, un-stamped, submittal. Complete plans and specifications are prepared, and a detailed itemized cost estimate is included.
- ↪ 100% (Final) Design – The 100% design is the design package that will be advertised for project award for construction/implementation of project. The package consists of the complete, signed, and “As-Advertised” plans and specifications.

Row (d) Construction/Implementation

Provide a cost estimate commensurate with the design stage that is being submitted for the project. For example, if the applicant states that the design for a particular project is at the 60% design stage, then a cost estimate with appropriate detail based on that design stage must be included (See above for guidance on design stages). The estimate should include the quantity of materials used, unit cost, number of units, and, if possible, should have separate costs for labor, equipment, and materials. Do not show any construction/implementation contingency costs in this category. They will be shown in Construction/Implementation Contingency category. For any implementation costs, show as much detail as required to support the implementation costs shown in Row (d).

Row (e) Environmental Compliance/Mitigation/Enhancement

This item includes an estimate of all environmental compliance, mitigation, and enhancement costs. The estimate of costs for this work should be provided in the same format as shown for Construction/Implementation.

Row (f) Construction Administration

The costs to administer and manage construction of the project must be presented. Provide a discussion of the method used to determine this cost. If a percentage of the construction costs is used here, indicate the percentage used and how the percentage was determined. If the estimate will be based on expected hours of effort, list the hours, by discipline, unit cost, equipment costs, and total cost.

Row (g) Other Costs

Include detail for any legal services costs required to support the project. Include the costs associated with obtaining licenses and permits. Include any costs of monitoring and assessment required during the construction/initial implementation of the project. Do not include any monitoring and assessment costs for efforts required after project construction is complete as those costs are ineligible.

Row (h) Construction/Implementation Contingency

Normally this line item is included to handle unknown conditions encountered during construction or implementation of the project and may cover items that are not yet shown in the design. Specify the percentage used for this cost, and provide a reason for using the percentage used. Include only those contingency costs for construction/implementation efforts here. All other contingency costs should be included in the appropriate cost category.

Row (i) Proposal Total (Sum rows (a) through (h) for each column)

Sum each of the columns in Table 7 (Project Budget) to determine the Proposal total of costs for each project.

Table 8

Use Grand Totals from row (i) in Table 7 (Project Budget) to populate the matching columns in Table 8, Summary Budget, for each individual project.

Row (j) DAC Funding Match Waiver Total (Sum column (d) only for projects seeking DAC funding match waiver in rows (a) through (h))

If the applicant is seeking a funding match waiver for projects in the Proposal that benefit a DAC, complete row (j). If the applicant is not seeking a DAC funding match waiver, do not complete row (j) and copy the entries from row (i) into row (k).

To complete row (j), sum only the total cost of each project (from rows (a) through (h)) that is seeking a DAC funding match waiver and enter that value in column (e).

Row (k) Grand Total (Subtract row (j) from row (i) and recalculate column (e) – Funding Match %)

If the applicant is not seeking a DAC funding match waiver, the Grand Total (row (k)) will be identical to the Proposal Total (row (i)). Please copy the entries from row (i) into row (k).

If the applicant is seeking a DAC funding match waiver, the Total Cost of the Proposal (column (d)) and Funding Match Percentage (column (e)) must be adjusted to reflect the waiver. Columns (a) through (c) of row (k) are identical to row (i). Column (d) is the result of subtracting row (j) from row (i). Column (e) of row (k) is calculated by dividing column (b), of row (k), by column (d), of row (k).

Table 8 – Summary Budget

Proposal Title: _____						
		(a)	(b)	(c)	(d)	(e)
Individual Project Title		Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source*	Total Cost	% Funding Match (col. b/col. d)
(a)	Project A	Grand Total (Sum rows (a) through (h) from Table 7)	Grand Total (Sum rows (a) through (h) from Table 7)	Grand Total (Sum rows (a) through (h) from Table 7)	Grand Total (Sum rows (a) through (h) from Table 7)	
(b)	Project B					
(c)	Project C					
(d)	Project D					
(e)	Project E					
(f)	Project F					
(g)	Project G					
(h)	Project H (add more rows for additional projects as necessary)					
(i)	Proposal Total (Sum rows (a) through (h) for each column)					
(j)	DAC Funding Match Waiver Total (Sum column (d) only for projects seeking DAC funding match waiver in rows (a) through (h))					
(k)	Grand Total (Subtract row (j) from row (i) and recalculate column (e) – Funding Match %)					

EXHIBIT C

TECHNICAL JUSTIFICATION OF PROJECTS

This exhibit provides guidance for presenting (Attachment 7) the physical benefits and technical justification of the project(s).

As stated in Attachment 7, scoring will be based solely on the technical justifications of project(s). The magnitude of physical benefits will not be scored under this criterion. Magnitude of benefits relative to costs will be evaluated based on the information provided in Attachment 8. However, physical benefits must be clearly defined as points will be allocated based on quality of the technical analysis and supporting documentation in relation to the project and type of benefit claimed.

Technical Justification

Applicants should provide technical justification for the proposed projects claimed physical benefits. Regardless of the magnitude of benefits claimed, studies or documents used to support the projects must be clearly referenced. Estimates based on expert opinion or local knowledge (for example, from a District Engineer) should be documented with the individual's contact information. See Section V for guidance on submitting studies, documents, or other reference materials.

Project Physical Benefits

Physical benefits are the expected measurable accomplishments of projects. Physical benefits should be based on estimated measures of project accomplishments over the period of analysis. Any measurable restoration, protection, or enhancement of beneficial uses should be included. Physical benefits may include, but are not limited to, the following benefit types:

- ↗ Amount of water supply produced, saved, or recycled
- ↗ Types (constituents) and amounts of water quality improvement provided, and the amount of water treated or improved
- ↗ Types and amounts of environmental benefits provided, such as the types of species and their numbers benefited, acreage of habitat or floodplain improved, restored or protected, amount of flow provided, or habitat units restored or protected. If a Habitat Evaluation Procedure has been performed, provide information from that analysis
- ↗ Amount of land and types of land uses, structures and equipment protected from flooding, provided for different flood events with associated probabilities
- ↗ Amount of recreation resources or open space provided, expressed as additional expected use if possible
- ↗ Amount of energy produced or saved, and amount of greenhouse gases (GHGs) that can be avoided
- ↗ Any other information about physical benefits used to support Attachment 8, Costs and Benefits Analysis. Applicants should review Exhibit D Costs and Benefits Analysis, to understand the types of benefits to report.

Each applicant must provide the following information for each project:

- ↗ A summary (tabular or bullet list) of the types of physical benefits being claimed

- ↗ Narrative description of all of the project's expected physical benefits, which shall address the following items:
 - ◆ Recent and historical conditions that provide background for benefits to be claimed; for example, recent water shortages, loss of habitat or ecosystem function, and water quality problems.
 - ◆ Estimates of without-project conditions; e.g. levels of the physical benefits in the future, without the project, but with other projects that might be planned.
 - ◆ A description of the project and its relationship to other projects in the Proposal. If the project includes a suite of projects, describe the relationship of each project to the overall physical benefits of the entire suite of projects.
 - ◆ Description of methods used to estimate physical benefits.
 - ◆ Acknowledgment of all new facilities, policies, and actions required to obtain the physical benefits.
 - ◆ Uncertainty of the benefits and factors that lead to uncertainty.
 - ◆ Description of any potential adverse physical effects.
- ↗ If applicable, quantified estimates of physical benefits should be listed using Table 9 (or similar format). If expected physical benefits cannot be quantified, explain why and justify.

Annual Physical Benefits (Table 9)

Table 9 or a functional equivalent must be used to present physically quantifiable benefits. The applicant should complete one table for each project for all benefit(s) claimed (such as primary and secondary benefits). To complete Table 9, the applicant should use the following steps:

- ↗ Format a table that will display one of the physical benefits that are claimed for the project.
- ↗ Once the table has been appropriately formatted, the applicant should provide the following information:
 - ◆ Row (1) Provide the project name
 - ◆ Row (2) Identify the exact type of physical benefit being claimed
 - ◆ Row (3) Identify the units of the benefit claimed (e.g. acre-feet, mg/l, acres, average annual cubic feet per second (cfs))
 - ◆ Row (4) Additional information needed to explain this measure; for example, if Row (3) is mg/l, Row (4) might read "for an average of 1,000 acre-feet (AF) treated"
 - ◆ Column (b): This column should be completed if the project will increase physical benefits of an existing project, facility or program. Enter the level (units) of the physical benefit for the without-project condition, if applicable.
 - ◆ Column (c): enter the total amount of the physical benefit provided in the without-project condition, plus the amount of benefit provided by the project. If the project will delay or replace some other project entirely or in part, do NOT reduce the physical benefits in Column (c) for the amount of replacement.
 - ◆ Column (d): enter the result of subtracting Column (b) from Column (c) to determine the change in the amount of physical benefit resulting from the project.
 - ◆ Comment Box: Enter any sources and references, including page numbers, supporting the numbers used in this table, or other information as needed to explain entries.

Generally, the quantities provided for each year should be an average from a representative hydrologic period that reflects the development condition in that year, future demands, and facilities in place. In some cases, quantities in the early years might reflect incomplete projects and starting conditions as of the end of 2011.

If the same level of physical benefit is expected in every year of the project life, a Table 9 showing every year is not required. Rather, provide a Table 9 with one row showing 1) the years of project life in column (a); 2) the without-project amount of benefit, if applicable; 3) the with-project amount of benefit; and 4) the difference.

Table 9 – Annual Project Physical Benefits			
Project Name: _____			
Type of Benefit Claimed: _____			
Measure of Benefit Claimed (Name of Units): _____			
Additional Information About this Measure _____			
(a)	(b)	(c)	(d)
	Physical Benefits		
Year	Without Project	With Project	Change Resulting from Project (b) – (c)
2012			
2013			
2014			
Etc.			
Last Year of Project Life			
Comments:			

EXHIBIT D

BENEFITS AND COST ANALYSIS

This section provides guidance, methods, and formats for completing and presenting a benefits and cost analysis for each project.

It is recommended that applicants ensure that the analysis of benefits and cost are consistent with the physical benefits presented in Attachment 7, and adequately addresses all the Scoring Criterion and requirements in Exhibit D.

General Principles

Applicants must adhere to the following principles in a benefit analysis for any project:

- ↻ *Consistency* – The analysis must be completed for the entire project and must be consistent with other data and information provided about the project and other projects in the proposal.
- ↻ *Completeness* – All new facilities, policies, and actions required to obtain the benefits must be revealed and their costs included.
- ↻ *Without-Project and With-Project Comparison* – The analysis should be based on a comparison of expected conditions without- and with-project over the period of analysis.
- ↻ *Period of Analysis* – The analysis will be based on a project life cycle specified by the applicant which shall include the construction period and operational life.

Additional Guidance

Additional guidance for describing and quantifying (where applicable) all costs and benefits is provided below. Applicants may use the tables contained in this Exhibit to present the benefits of the project, or may use other formats if desired. Excel spreadsheet versions of the following tables can be found at the links listed in the Foreword.

Table 10 lists common types of benefits that should be quantified if possible. Benefits that cannot be quantified should still be described.

Table 10 – Common types of benefits to report	
Water Supply	Benefits include avoided water supply purchase costs, including those for environmental purposes, avoided costs of water supply projects, avoided water shortage costs, avoided operations and maintenance costs, or water revenue from water sales to another purveyor or third party. Only one of these can be claimed for each unit of water supply benefit.
Water Quality	Benefits may include, reduced costs of protecting, restoring, or enhancing beneficial uses, avoided water quality project costs; avoided water treatment costs; avoided wastewater treatment costs; and water supply benefits caused by water quality improvements (if not already captured as a water supply benefit), and willingness to pay for water quality improvements for drinking water, impaired water bodies and sensitive habitats.
Ecosystem Improvement	Ecosystem improvement includes habitat restoration, protection, or preservation, and enhancement of native fish and wildlife enhancement. Benefits measures for ecosystem improvement could include avoided costs, alternative cost of the same habitat improvement, and willingness to pay for recreation, aesthetics, or special-status species.

Table 10 – Common types of benefits to report

Recreation and Public Access	Recreation and public access benefits should be documented on a with-and-without-project basis. With- and without-project conditions could include the types and quality of recreational activities, amount of use such as visitor days in each activity, and value per unit of use such as unit day values.
Power Cost Savings and Power Production	Power cost savings and power production benefits should be based on market value of power. Document the quantity and the unit value of the power saved or produced. Include information on when the savings or production would occur (time of year, time of day), change in capacity, or other factors that influence the cost savings or production benefit. Do not double-count with water supply benefits; water supply cost savings are often energy savings.
Other	In general, cost savings or willingness to pay for goods and services

Different benefit analysis options and project benefits and cost summary requirements are described below.

Method of Analysis

The applicant can submit the analysis performed using either RWMG method or DWR Method. Applicants that chose to use methods other than the DWR Method for the analysis of benefits and costs analysis will be evaluated and scored according to the same scoring criterion as those applicants that use the DWR Method.

RWMG Method

Applicants may choose to perform and submit a Benefits and Cost Analysis (i.e., Attachment 8) using a comparable method in lieu of DWR method as described below. To develop their own method, RWMG can follow the guidance provided in the 2010 IRWM program Guidelines and DWR's Economic Analysis Guidelines, which can be found, respectively, at the following links:

http://www.water.ca.gov/irwm/grants/docs/Guidelines/Prop84/GL_Final_07_20_10.pdf

<http://www.water.ca.gov/economics/guidance.cfm>.

DWR Method

If the DWR Method is chosen, there are four possible options for analyzing each project. A process is provided in Figure 1 (see Section V) to guide applicants in selecting proper analysis methods.

Section D1 – Cost-Effectiveness Analysis - A simple and brief procedure is allowed for projects with a total project cost less than \$300,000 and for DAC projects with total project cost less than \$1 million. Table 11 should be completed. However, for these projects, applicants may opt to provide full benefits analysis (i.e., follow Sections D2, D3, or D4).

Section D2 – Non-Monetized Benefits Analysis - If a benefit of any project cannot be monetized, Table 12 should be completed. A non-monetized benefit evaluation is recommended under the following conditions.

- ↪ For physical benefits that can be described but cannot be quantified
- ↪ For benefits that can be quantified physically but cannot be monetized

Benefits quantified as part of Section D3 or D4 must NOT be reported as part of Section D2, unless there are significant aspects of the same physical benefit, only a portion of which is monetized. An example could be if some salinity-reduction benefits are quantified as part of the evaluation documented in Attachment 8, but other water quality benefits are not – those would be described in Section D2. In such cases, Applicant must take care to ensure that benefits are not double-counted.

The content provided in this attachment will be evaluated based on how significant benefits are relative to the cost of the proposal.

Section D3 – Monetized Benefits Analysis - If a project has monetized benefits (excluding flood damage reduction benefits), Section D3 suggests methods to monetize such benefits and Tables 13 and 14 to present the monetized benefits. The content provided in this attachment will be evaluated based on how much these benefits contribute to the cost of the proposal.

Section D4 – Flood Damage Reduction Benefits Analysis - For FDR benefits, this guidance recommends specific protocols and models to calculate the expected annual damages with and without the project. In some cases, the FDR project will cause the cost of another project to be avoided. If so, complete Section D3 and use Table 16.

The content provided in this attachment will be evaluated based on how much these benefits contribute to the cost of the proposal.

Section D5 – Project Benefits and Cost Summary –Table 19 from Section D5 **must** be completed for **each project**. Table 20 **must** be completed for **each proposal**, even if no economic benefits are monetized.

SECTION D1. Cost-Effectiveness Analysis

GUIDANCE FOR DOCUMENTATION

- ↗ For the cost-effectiveness analysis in Table 11, applicants should first consider alternative ways or methods for achieving the same physical benefits as the proposed project.
- ↗ If none can be identified, answer “no” to Question 2 in Table 11, and briefly explain why “no”.
- ↗ If at least one alternative can be identified and its cost estimated, report that cost for Question 2. Provide a short narrative discussion about this alternative method.
- ↗ For Question 3, describe how this alternative is different from the project. If the alternative appears to be lower cost, provide an explanation of why the proposed project is still preferred.
- ↗ If a lower cost alternative exists and no other features of the proposed project justify its implementation over the alternative, then the proposed project is not cost-effective. If the lowest cost alternative costs more than the proposed project, then the cost savings from implementing the proposed project will be viewed as a project benefit.

Table 11 – Statement of Cost-Effectiveness	
Project name: _____	
Question 1	Types of benefits provided
Question 2	Have alternative methods been considered to achieve the same types and amounts of physical benefits as the proposed project been identified?
	If no, why?
	If yes, list the methods (including the proposed project) and estimated costs.
Question 3	If the proposed project is not the least cost alternative, why is it the preferred alternative? Provide an explanation of any accomplishments of the proposed project that are different from the alternative project or methods.
Comments:	

Section D2. Non-Monetized Benefit Analysis

Non-monetized benefits include, but are not limited to:

- ↗ Community/Social Benefits, including
 - ◆ Education and technology
 - ◆ Recreation and public access
 - ◆ Conflict avoidance and resolution
 - ◆ Public health and safety
- ↗ Environmental Stewardship Benefits, including
 - ◆ Enhancement, preservation, or restoration of native aquatic or riparian habitat
 - ◆ Improvement or prevention of water quality degradation
 - ◆ Reduction of harmful emissions
- ↗ Sustainability Benefits, including
 - ◆ Improve long-term management of California Groundwater Resources
 - ◆ Reduce demand on Delta
 - ◆ Promoting energy savings and renewable energy
 - ◆ Improve water supply reliability
 - ◆ Adding to overall system resilience and promoting more robust infrastructure

GUIDANCE FOR DOCUMENTATION

The general principles include consistency, completeness, a without- and with-project comparison, period of analysis, and the guidelines for documenting benefits should be followed.

Table 12 provides a checklist of questions to assist applicants in identifying other benefits and project effects.

For any “yes” answer, provide a description of how the proposal provides that benefit. In some instances, a summary of the benefit description from Attachment 7 may be appropriate, but do not include descriptions from Attachment 7 in their entirety.

Simply enter “No” if the benefit does not apply.

Any adverse effects of the proposal must also be reported. If a proposal (which may include a suite of projects including their planned mitigation) will result in negative impacts for any question in Table 12, enter “neg” and provide a full explanation.

Table 12 – Non-Monetized Benefits Checklist

No.	Question	Enter "Yes", "No" or "Neg"
Community/Social Benefits Will the proposal		
1	Provide education or technology benefits?	
	Examples are not limited to, but may include: <ul style="list-style-type: none"> - Include educational features that should result in water supply, water quality, or flood damage reduction benefits? - Develop, test, or document a new technology for water supply, water quality, or flood damage reduction management? - Provide some other education or technological benefit? 	
2	Provide social recreation or access benefits?	
	Examples are not limited to, but may include: <ul style="list-style-type: none"> - Provide new or improved outdoor recreation opportunities? - Provide more access to open space? - Provide some other recreation or public access benefit? 	
3	Help avoid, reduce or resolve various public water resources conflicts?	
	Examples are not limited to, but may include: <ul style="list-style-type: none"> - Provide more opportunities for public involvement in water management? - Help avoid or resolve an existing conflict as evidenced by recurring fines or litigation? - Help meet an existing state mandate (e.g., water quality, water conservation, flood control)? 	
4	Promote social health and safety?	
	Examples are not limited to, but may include: <ul style="list-style-type: none"> - Increase urban water supply reliability for fire-fighting and critical services following seismic events? - Reduce risk to life from dam failure or flooding? - Reduce exposure to water-related hazards? 	
5	Have other social benefits?	
	Examples are not limited to, but may include: <ul style="list-style-type: none"> - Redress or increase inequitable distribution of environmental burdens? - Have disproportionate beneficial or adverse effects on disadvantaged communities, Native Americans, or other distinct cultural groups? 	
Environmental Stewardship Benefits: Will the proposal		
6	Benefit wildlife or habitat in ways that were not quantified in Attachment 7?	
	Examples are not limited to, but may include: <ul style="list-style-type: none"> - Cause an increase in the amount or quality of terrestrial, aquatic, riparian or wetland habitat? - Contribute to an existing biological opinion or recovery plan for a listed special status species? - Preserve or restore designated critical habitat of a listed species? - Enhance wildlife protection or habitat? 	
7	Improve water quality in ways that were not quantified in Attachment 7?	
	Examples are not limited to, but may include: <ul style="list-style-type: none"> - Cause an improvement in water quality in an impaired water body or sensitive habitat? - Prevent water quality degradation? - Cause some other improvement in water quality? 	
8	Reduce net emissions in ways that were not quantified in Attachment 7?	
	Examples are not limited to, but may include: <ul style="list-style-type: none"> - Reduce net production of greenhouse gasses? - Reduce net emissions of other harmful chemicals into the air or water? 	

Table 12 – Non-Monetized Benefits Checklist

No.	Question	Enter “Yes”, “No” or “Neg”
9	Provide other environmental stewardship benefits, other than those claimed in Sections D1, D3, or D4?	
	Sustainability Benefits: Will the proposal	
10	Improve the overall, long-term management of California groundwater resources?	
	Examples are not limited to, but may include: - Reduce extraction of non-renewable groundwater? - Promote aquifer storage or recharge?	
11	Reduce demand for net diversions for the regions from the Delta?	
12	Provide a long-term solution in place of a short-term one?	
13	Promote energy savings or replace fossil fuel based energy sources with renewable energy and resources?	
	Examples are not limited to, but may include: - Reduce net energy use on a permanent basis? - Increase renewable energy production? - Include new buildings or modify buildings to include certified LEED features? - Provide a net increase in recycling or reuse of materials? - Replace unsustainable land or water management practices with recognized sustainable practices?	
14	Improve water supply reliability in ways not quantified in Attachment 7?	
	Examples are not limited to, but may include: - Provide a more flexible mix of water sources? - Reduce likelihood of catastrophic supply outages? - Reduce supply uncertainty? - Reduce supply variability?	
15	Other (If the above listed categories do not apply, provide non-monetized benefit description)?	

Section D3. Monetized Benefit Analysis

This section describes the process for reporting all quantified benefits (except FDR benefits) in a monetized fashion. Physical benefits (presented in Table 9) that are monetizable must be expressed in dollar terms and be included in the monetized benefits analysis.

PROJECT COSTS

The following section provides guidance for describing all costs that will be incurred to implement and operate the project and to achieve benefits from the project. This includes costs funded by local, State, and federal agencies, non-profit organizations, and other entities. All costs, both initial investments and operational costs, associated with the project necessary to accomplish full implementation of the project and achievement of the stated benefits, must be included. All costs must be clearly documented to allow a reviewer to assess the accuracy and reasonableness of the analysis.

Guidelines and Assumptions:

- ↻ *Consistency* – The economic analysis must be completed for the entire project and must be consistent with other data and information provided in the project.
- ↻ *Without-Project and With-Project Comparison* – The economic analysis should be based on a comparison of expected conditions without- and with-project over the period of analysis.

- ↻ *Period of Analysis* – The economic analysis will be based on a project life cycle specified by the applicant which shall include the construction period and operational life.
- ↻ *Economic Cost* – Any costs associated with the project, regardless of who bears the cost and regardless of the funding source is considered an economic cost. Opportunity costs should be included, but sunk costs should be excluded.
- ↻ *Sunk Costs*– Sunk costs are costs spent in the past that have no salvage value; therefore, they cannot be recovered and should not be counted.
- ↻ *Opportunity Costs* – Opportunity cost is the benefit that a resource could provide in the without-project condition and should be counted. For example, land already purchased for use in a project could be used for other purposes; therefore, a reasonable estimate of the market value of that land should be included as a cost. Note that any expenditure paid for an asset before September 30, 2008, cannot be included in Table 7 presented in Attachment 4, because it is not eligible for reimbursement. However, the current value of the asset should be included here as an economic cost.
- ↻ *Discount Rate* – Because costs and benefits are evaluated over the life of the project, they must be discounted to reflect the value of money over time. All applicants must use a 6% discount rate. Table 13 provides the discount factors that must be used.
- ↻ *Dollar Value Base Year* – All costs and benefits will be expressed in 2012 dollars. When using economic data from past years, costs should be escalated to account for inflation. The update factors shown in Table 14 can be used to update economic data to 2012 dollars. If the applicant needs to update costs from years preceding 2007, please contact DWR at the phone number or e-mail listed in the Foreword.

Table 13 – Discount Factors

Year	Discount Factor								
2012	1.000	2022	0.558	2032	0.312	2042	0.174	2052	0.097
2013	0.943	2023	0.527	2033	0.294	2043	0.164	2053	0.092
2014	0.890	2024	0.497	2034	0.278	2044	0.155	2054	0.087
2015	0.840	2025	0.469	2035	0.262	2045	0.146	2055	0.082
2016	0.792	2026	0.442	2036	0.247	2046	0.138	2056	0.077
2017	0.747	2027	0.417	2037	0.233	2047	0.130	2057	0.073
2018	0.705	2028	0.394	2038	0.220	2048	0.123	2058	0.069
2019	0.665	2029	0.371	2039	0.207	2049	0.116	2059	0.065
2020	0.627	2030	0.350	2040	0.196	2050	0.109	2060	0.061
2021	0.592	2031	0.331	2041	0.185	2051	0.103	2061	0.058

Table 14 – Update Factors

Year	Update Factor
2007	1.10
2008	1.04
2009	1.03
2010	1.02
2011	1.01
2012	1.00

PROJECT BENEFITS

This section provides guidance for displaying and describing the economic benefits of the project. The following principles should be followed in quantifying economic benefits.

- ↗ Monetized benefits are the value, measured as willingness to pay, for project physical benefits. In general, cost savings (avoided costs or alternative costs) equate to willingness to pay, but cost savings should be calculated from the State, not just the local, perspective. For example, fines collected by State government from local interests would have no net cost from the overall State perspective
- ↗ Monetized benefits should be counted from the perspective of the overall State, not only the local perspective. Local benefits should be counted, but if these benefits involve costs for other areas of the State, those costs must also be included.
- ↗ The applicant must not double-count. Only one type of monetized benefit should be claimed for a unit of physical benefit occurring in any year of the planning horizon.

ANNUAL BENEFIT (TABLE 15)

Table 15 should be used to present monetized benefits per unit of physical benefit. If the applicant claims monetized benefits based upon avoided costs of future projects, then columns (g) through (j) should **not** be completed. Instead, Table 16 should be completed for economic benefits based upon avoided future project costs. To avoid double-counting, use only one of these tables any given year of benefit.

To complete Table 15, the applicant should use the following steps:

- ↗ For each individual benefit, repeat a full block of rows for each year of the project lifecycle, including the column headings.
- ↗ Identify the benefit and measure (e.g., units) of that benefit in the boxes provided. This must be completed for each benefit claimed.
- ↗ Once the table has been appropriately formatted, the applicant should provide the following information for each year of the projects life:
 - ◆ Column (b): identify the type of benefit from the project
 - ◆ Column (c): identify the units of the benefit claimed (e.g. acre-feet)
 - ◆ Column (d): identify the level (units) of benefit for the without-project condition

- ◆ Column (e): identify the level (units) of benefit for the with-project condition
- ◆ Column (f): enter the result of subtracting Column (d) from Column (e) to determine the change in the water supply resulting from the project
- ◆ Column (g): enter the per unit monetary value for the benefit claimed
- ◆ Column (h): enter the result of multiplying the value in Column (f) by the value in Column (g)
- ◆ Column (i): these are the discount factors provided in Table 13
- ◆ Column (j): enter the result of multiplying each value in Column (h) by the discount factor in Column (i)
- ◆ Column (j) Bottom of the table: enter the total of all Column (j) values in the “Total Present Value of Discounted Benefits” row
- ◆ Comment Box: enter any sources and references, including page numbers, supporting the numbers used in this table

Table 15 – Annual Benefit									
(All benefits should be in 2012 dollars)									
Project: _____									
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Year	Type of Benefit	Measure of Benefit (Units)	Without Project	With Project	Change Resulting from Project (e) – (d)	Unit \$ Value ⁽¹⁾	Annual \$ Value ⁽¹⁾ (f) x (g)	Discount Factor ⁽¹⁾	Discounted Benefits ⁽¹⁾ (h) x (i)
2012	a							1.000	
	b							1.000	
	c							1.000	
	
2013	a							0.943	
	b							0.943	
	c							0.943	
	
2014	a							0.890	
	b							0.890	
	c							0.890	
...	
Last Year of Project Life								...	
Total Present Value of Discounted Benefits Based on Unit Value (Sum of the values in Column (j) for all Benefits shown in table)									
Comments:									

(1) Complete these columns if dollar value is being claimed for the benefit.

ANNUAL COST OF AVOIDED PROJECTS (TABLE 16)

Avoided costs are costs that occur in the without-project condition that, with the proposed project, are no longer expected. Avoided costs may include, for example, other water supply costs, water treatment costs,

salinity damage costs, energy, labor or management costs, or cost savings because other actions or projects are delayed, cancelled, or reduced in size. These avoided costs are tabulated as benefits.

Table 16 should be used if the applicant wishes to present Benefits from Avoided Costs. To estimate a benefit from avoided costs of future projects, shortages, or operations, complete Table 16 for each avoided project. While this is a benefit, the estimate will require a cost estimate for the avoided project. Estimates from existing studies, updated to 2012 dollars, can be used to complete Table 16. The applicant should show that those cost estimates are reasonably comparable to the standards and procedures described in the cost section of this exhibit.

Some notes involving avoided costs:

- ↪ Fines or penalties paid to California government agencies will generally not be allowed as an avoided cost unless these dollar amounts are similar to the costs or damages actually experienced.
- ↪ Wholesale and retail water prices will generally be accepted as appropriate unit benefits for water cost savings, so long as these prices approximately reflect the cost of providing the next increment of water supply service.
- ↪ In general, all avoided project costs such as construction, operations, repairs, maintenance and replacement costs should be valued using market prices for materials, energy and labor.
- ↪ When avoided costs are claimed, it is important to document that the avoided cost would occur in the without-project condition. Use and reference existing, published plans, if applicable.

In some cases, avoided costs are a result of some other project or action that is no longer needed. When the other project or action is avoided, its physical benefits may be replaced by the proposed project. After considering avoided costs and avoided projects, the remaining amount of physical and economic benefit should be calculated. For example, suppose a project will produce 1,000 AF annually in Table 9, and one of its benefits will be to replace a smaller project that would produce 600 AF annually. The remaining physical benefit to value is 400 AF annually. If there are no avoided costs, then the amount of remaining physical benefit discussed below is the full amount of physical benefit provided by the proposed project, shown in Table 9.

The project(s) that would be avoided because of the project are called alternative(s). Note that a precise quantification of physical benefits is not required to claim costs of alternative(s) as a benefit; however, the alternative(s) should provide approximately the same types and levels of benefits as the project. An applicant should compare the amount and timing of physical benefits from the project with the alternative to make sure they are comparable. If an alternative provides a physical benefit larger than that of the project, the applicant must make adjustments to the alternative to make it similar to the project. Without an adjustment, only a portion of the cost of the alternative can be claimed as a measure of benefit. If the alternative provides an amount of physical benefit smaller than that of the project, an additional benefit might be claimed (see Table 16, second to last row – “% Avoided Cost Claimed by Project”). If the alternative provides physical benefits at times (e.g. year types or season) different from those of the project, additional adjustments may be needed or the alternative may simply not be a reasonable alternative to the project. If the alternative would delay action until a future time within the planning horizon, enter the delayed costs when they are avoided as a benefit and enter them again as a cost at the time they would be paid with the project.

To complete Table 16, the applicant must:

- ↪ Fill out Table 16 for each avoided project/alternative.
- ↪ Describe the alternative in the box provided. This must be completed for each alternative.
- ↪ The applicant should provide the following information for each year of the alternative life:

- ◆ Column (b): enter capital costs for each year of the alternative life. Enter costs beginning in the first year of expenditure of any cost, not the first year of operation.
- ◆ Column (c): enter replacement costs for each year of the alternative life. Enter costs beginning in the first year of expenditure of any cost, not the first year of operation.
- ◆ Column (d): enter O&M costs for each year of the alternative. Enter costs beginning in the first year of expenditure of any cost, not the first year of operation.
- ◆ Column (e): enter the sum of “Total Cost Avoided for Individual Alternatives” for each alternative.
- ◆ Column (f): these are the discount factors provided in Table 13.
- ◆ Column (g): enter the result of multiplying the value in column (e) by the number provided in column (f) for each year (each row).
- ◆ Bottom of Column (g): to represent the net present value of all costs discounted at 6% and to take into account the percentage of the alternative claimed, do the following:
 - Enter the sum of all values in Column (g) in the row marked “Total Present Value of Discounted Costs.” This represents the net present value of all costs discounted at 6%.
 - In the next row, enter the “% Avoided Cost Claimed by Project.” This is the percentage of the cost of the alternative that the applicant is claiming for the project. If claiming the entire cost, enter 100%.
 - In the final row labeled “Total Present Value of Discounted Costs Claimed by Alternative Project,” enter the result of multiplying the “Total Present Value of Discounted Costs” by the “% Annual Avoided Cost Claimed by Project.”
- ◆ Comment box: enter any sources and references, including page numbers, supporting the numbers used in this table.

Table 16 – Annual Costs of Avoided Projects
(All avoided costs should be in 2012 dollars)

Project: _____

Project: _____						
Costs					Discounting Calculations	
(a)	(b)	(c)	(d)	(e)	(f)	(g)
Year	Alternative (Avoided Project Name): _____ Avoided Project Description: _____				Discount Factor	Discounted Costs (e) x (f)
	Avoided Capital Costs	Avoided Replacement Costs	Avoided Operations and Maintenance Costs	Total Cost Avoided for Individual Alternatives (b) + (c) + (d)		
2012					1.000	
2013					0.943	
2014					0.899	
2015					0.839	
...					...	
Last Year of Project Life					...	
Total Present Value of Discounted Costs (Sum of column (g))						
(% Avoided Cost Claimed by Project)						
Total Present Value of Discounted Avoided Project Costs Claimed by Alternative Project (Total Present Value of Discounted Costs x % Avoided Cost Claimed by Project)						
Comments:						

Section D4. Flood Damage Reduction Benefit Analysis

This section provides methods and formats for estimating and presenting the FDR benefits of the project in Attachment 8. FDR benefits may include, but are not limited to, the following general benefit types:

- ↻ Avoided physical damage, valued at replacement cost, including buildings, contents, infrastructure, landscaping, vehicles, equipment, crops, and ecosystems.
- ↻ Avoided costs associated with loss of function, including: lost business net income, lost rental income, and loss of wages, as long as these costs are not re-captured elsewhere in the State. Loss of public transportation and utility services may also be an avoided cost.
- ↻ Avoided emergency response and clean-up costs, including displacement, evacuation and rescue costs, security costs, and dewatering, debris removal and cleanup costs.
- ↻ Avoided, but unquantifiable, public safety and health impacts will generally be discussed in Section D2, Non-Monetized Benefit Analysis.

PROJECT COSTS

This section provides guidance for describing all costs that will be incurred to implement and operate the project and to achieve benefits from the project. This includes costs funded by local, State, and federal agencies, non-profit organizations, and other entities. All costs, both initial investments and operational costs, associated with the project necessary to accomplish full implementation of the project and achievement of the stated benefits, must be included. All costs must be clearly documented to allow a reviewer to assess the accuracy and reasonableness of the analysis. If the reviewers find that some project costs are not included in the analysis, applicants risk losing points.

Guidelines and Assumptions:

- ↻ *Consistency* – The analysis must be completed for the entire project and must be consistent with other data and information provided in the project.
- ↻ *Without-Project and With-Project Comparison* – The analysis should be based on a comparison of expected conditions without- and with-project over the period of analysis.
- ↻ *Period of Analysis* – The analysis will be based on a project life cycle specified by the applicant which shall include the construction period and operational life.
- ↻ *Economic Cost* – Any costs associated with the project, regardless of who bears the cost and regardless of the funding source is considered an economic cost. Opportunity costs should be included, but sunk costs should be excluded.
- ↻ *Sunk Costs* – Sunk costs are costs spent in the past that have no salvage value; therefore, they cannot be recovered and should not be counted.
- ↻ *Opportunity Costs* – Opportunity cost is the benefit that a resource could provide in the without-project condition and should be counted. For example, land already purchased for use in a project could be used for other purposes; therefore, a reasonable estimate of the market value of that land should be included as a cost. Note that any expenditure paid for an asset before September 30, 2008 cannot be included in Table 7 presented in Attachment 4, because it is not eligible for reimbursement. However, the current value of the asset should be included here as an economic cost.
- ↻ *Discount Rate and Dollar Value Base Year* – Please refer to Tables 13 and 14 in Exhibit D for guidance and the appropriate factors.

PROJECT BENEFITS

This section provides guidance for displaying and describing the physical and economic FDR benefits of the project.

BENEFITS ANALYSIS

The estimation of FDR benefits for IRWM Implementation projects is similar to methods used for other flood risk management programs; namely, the estimation of potential flood damage expected to occur over an analysis period for without-project conditions which is compared to consequences expected to occur with a proposed project. The reduction in flood losses attributable to a project are its benefits, which can then be compared to project costs to determine if the project is economically justified. Flood damage and other flood-related losses can be expressed as either *event* or *expected annual damage (EAD)*. EAD is the average damage that could be expected to occur in any given year taking into account all types of flood events (for example, 10-, 20-, 50-, and 100-year). Differences in the total present value of EAD between without- and with-project conditions over the project life cycle provide an estimate of the benefits which are then compared to the total present value of costs of the proposed project to determine net benefits or a benefit-cost ratio.

STEPS TO DETERMINE FLOOD DAMAGE REDUCTION BENEFITS

The general steps for determining FDR benefits for proposed IRWM Implementation projects are:

- ↗ Identify at least three flood events for which flood conditions and associated flood damage will be different for without- and with-project conditions. More than three flood events are recommended to provide a better estimate of benefits. The size of the smallest, most frequent event should be the largest one in which no damage occurs either without- or with- project. The size of the largest, most infrequent event should be the smallest one in which damages will be the same without- or with-project.
- ↗ Identify without-project conditions:
 - ◆ Determine area affected by flooding for the identified flood events
 - ◆ Estimate number and values of structures affected by flooding by each event
 - ◆ If flood management structures are present (such as levees, culverts, etc.), determine probability of failure by event
 - ◆ Estimate flood damage for without-project conditions for each event. This normally requires use of depth-percent damage functions
- ↗ Identify with-project conditions by following the same steps as without-project conditions
- ↗ Calculate the without- and with-project EADs using interval probabilities as described below.

CALCULATING EXPECTED ANNUAL DAMAGE (TABLE 17)

EAD is a function of three variables:

- ↗ The exceedance probabilities of events that could result in flooding
- ↗ The probability that, if present, any flood management structures (such as a levee or culvert) failing given the event's occurrence
- ↗ The resulting damage if the flood management structural protection fails

Table 17 below provides an example of how to estimate EAD. Table 17 identifies five hydrologic events that could result in flooding for an area with some form of structural flood protection (levee, culvert, etc.). The probability of an event resulting in flooding depends on the without- and with-project level of protection provided by flood protection structures (if present). For example, column (d) of Table 17 shows a 50% chance that a 10-year event will result in flooding without the project because of structural failure. With the project, the structure is improved (or replaced) and the probability of structural failure for all events through the 20-year event is reduced to zero. Expected event damage equals the monetary damage if the structure fails multiplied by the probability that the structure will fail.

To calculate EAD, the probability of events in the range of probabilities between the specified exceedance probabilities must be calculated. The *interval probability* is the event exceedance probability in each row subtracted from the event exceedance probability in the preceding row. Next, the average damage level for events within that probability interval is calculated as the average of damage in each row and in the preceding row. Next, each interval probability is multiplied by the average damage in that interval and summed over all intervals. In Table 17, the EAD without project is \$26.25, and with project, \$4.00, so the benefit of the project in EAD terms is \$22.25.

The estimation of EAD requires significant hydrologic, hydraulic, engineering/geotechnical (if levees or other structures are involved) and economic data which must be analyzed. Computer models are available to assist with these calculations, which range in complexity from the U.S. Army Corps of Engineers' (USACE) HEC-Flood Damage Assessment which incorporates risk and uncertainty, as well as simpler spreadsheet tools such as the Flood Rapid Assessment Model (F-RAM)¹ developed for DWR and the Benefit Cost Analysis (BCA) software developed by the Federal Emergency Management Agency for its own mitigation programs. These models are described in DWR's *Draft Economic Analysis Guidelines for Flood Risk Management*. To obtain the F-RAM, contact DWR as listed in the Foreword.

Table 17 – Example Calculation of Expected Annual Damage

Hydro-logic Event (a)	Event Exceedance Probability (b)	Event Damage if Flood Structures Fail (c)	Probability Structural Failure		Expected Event Damage		Interval Probability (i)	Average Damage in Interval		Average Damage in Interval times Interval Probability	
			Without Project (d)	With Project (e)	Without Project (f)	With Project (g)		Without Project (j)	With Project (k)	Without Project (l)	With Project (m)
					(c) x (d)	(c) x (e)	from (b)	from (f)	from (g)	(i) x (j)	(i) x (k)
5-year	0.2	\$100	0	0	\$0	\$0					
10-Year	0.1	\$200	0.5	0	\$100	\$0	0.1	\$50	\$0	\$5	\$0
15-Year	0.067	\$400	0.75	0	\$300	\$0	0.033	\$200	\$0	\$7	\$0
20-Year	0.05	\$600	1	0	\$600	\$0	0.017	\$450	\$0	\$8	\$0
25-Year	0.04	\$800	1	1	\$800	\$800	0.01	\$700	\$400	\$7	\$4
Expected Annual Damages, Without and With Project										\$26.25	\$4.00

¹ F-RAM can provide a different result for this example because F-RAM includes a 25 percent indirect damage factor. Also, FRAM will calculate and include EAD for events less frequent than the largest specified event. This increment of EAD will be the same with or without project, so the difference is unaffected.

CALCULATING TOTAL PRESENT VALUE OF EXPECTED ANNUAL DAMAGE REDUCTION BENEFITS

The expected annual benefit of the IRWM Implementation project equals the difference between EAD without- and with-project. Table 18 illustrates how to determine the total present value of EAD over the lifecycle of the project. Continuing with the above example, EAD without the project is \$26.25 and with the project is \$4.00; therefore the expected annual benefit is \$22.25. This value is multiplied by the appropriate present value coefficient for the project's life cycle at a 6% discount rate (this example uses 15.76 which assumes a 50 year period) which results in a total present value of \$350.66. This value is transferred to Section D5, Table 20, column (e), Proposal Costs and Benefits Summary.

Table 18 – Present Value of Expected Annual Damage Reduction Benefits			
Project: _____			
(a)	Expected Annual Damage Without Project ⁽¹⁾		\$26.25
(b)	Expected Annual Damage With Project ⁽¹⁾		\$4.00
(c)	Expected Annual Benefit	(a) – (b)	\$22.25
(d)	Present Value Coefficient ⁽²⁾		15.76
(e)	Total Present Value of Future Benefits Transfer to Table 20, column (e).	(c) x (d)	\$350.66

(1) This program assumes no land use changes in the floodplain. So, EAD will be constant over analysis period.

(2) 6% discount rate; 50-year analysis period (could vary depending upon lifecycle of project).

OTHER FLOOD DAMAGE REDUCTION BENEFITS

The above discussion of FDR benefits focused upon physical tangible assets (such as structures) that can be monetarily valued. However, the IRWM Implementation Grant may also result in other types of FDR benefits that are just as important but cannot easily be quantified and/or valued monetarily (for example, reductions in the loss of life and other injuries associated with flooding). These types of benefits can be qualitatively described in Section D2. Also, if a flood project will cause another project to be avoided, delayed, or reduced in size, use Table 16.

RESOURCES

Further information concerning how to conduct flood risk management benefit-cost analyses can be found by using the following resources:

- ↗ Department of Water Resources *Draft Economic Analysis Guidelines for Flood Risk Management* (<http://www.water.ca.gov/economics/guidance.cfm>)
- ↗ USACE National Economic Development Manuals: <http://www.iwr.usace.army.mil/ned/>

Section D5. Project Benefits and Cost Summary

Annual Costs of Project (Table 19) must be completed for each project; and Proposal Benefits and Costs Summary (Table 20) must be completed for the entire proposal, regardless of method used to complete the benefit-cost analysis.

PROJECT COSTS

This section provides guidance for describing and tabulating all costs that will be required to implement and operate the project over its expected life. All costs must be clearly documented to allow a reviewer to assess the accuracy and reasonableness of the analysis. The general principles for benefits and guidelines for documentation are generally applicable to costs.

A separate Table 19 must be completed for each project in the proposal.

To complete Table 19, the applicant should use the following steps:

- ↻ Modify the number of rows to match the estimated project life, i.e. how long are the projects intended to operate and provide benefits.
- ↻ Column (a) is the project costs that are consistent with the project budget
- ↻ Column (b) provides a space to adjust costs for sunk costs, opportunity costs, and associated costs. Any entries in column (b) should be explained in the text.
- ↻ Columns (a) through (g): Enter costs for each applicable cost category in each year of the project's lifecycle. Enter costs beginning in the first year of expenditure, not the first year of operation.
- ↻ Column (h): Enter the sum of all costs for the year (columns (a) through (g)).
- ↻ Column (i): These are the discount factors provided in Table 13.
- ↻ Column (j): Enter the result of multiplying Column (h) by the discount factor in Column (i) for each year (each row).
- ↻ Bottom of Column (j), Total Present Value of Discounted Costs: Enter the sum of the Column (j) entries in the last row at the bottom of the table. This is the total present value of all costs discounted at 6%. For each project, these costs must be transferred to column (c) in Proposal Benefits and Costs Summary (Table 20).
- ↻ Comment Box: Enter any sources and references; include page numbers, supporting the numbers used.

PROPOSAL BENEFITS AND COSTS SUMMARY

The benefits and costs for all projects in a proposal must be summarized in a format similar to Table 20 below.

- ↻ *Project* – list all projects in column (a)
- ↻ *Project Proponent* – list the project's sponsor agency/organization in column (b)
- ↻ *Costs* – list the project's total present value of costs from Table 19 in column (c)
- ↻ *Benefits* – list the present value of all benefits for each project in columns (d) and (e). Include a total in column (f). If cost savings can be attributed to a project from Section D1 – Cost Effectiveness Analysis, report in column (g) and summarize non-monetized benefits in column (h).

Table 19 – Annual Costs of Project

(All costs should be in 2012 Dollars)

Project: _____

	Initial Costs Grand Total Cost from Table 7 (row (i), column (d))	Adjusted Grant Total Cost ⁽¹⁾	Annual Costs ⁽²⁾						Discounting Calculations	
			Admin	Operation	Maintenance	Replacement	Other	Total Costs (a) + ... + (g)	Discount Factor	Discounted Project Costs (h) x (i)
Year	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
2012									1.000	
2013									0.943	
2014									0.890	
2015									0.840	
...									...	
...									...	
Last Year of Project Life									...	
Total Present Value of Discounted Costs (Sum of column (j))										
Transfer to Table 20, column (c), Proposal Benefits and Costs Summary										
Comments:										

*(1) If any, based on opportunity costs, sunk costs and associated costs**(2) The incremental change in O&M costs attributable to the project*

Table 20 – Proposal Benefits and Costs Summary

Proposal: _____

Agency: _____

Project	Project Proponent	Total Present Value Project Costs ⁽¹⁾	Total Present Value Project Benefits			From Section D1 – Cost-Effectiveness Analysis, Cost Savings	From Section D2 – Briefly describe the main Non-monetized benefits
			From Section D3 – Monetized ⁽²⁾	From Section D4 – Flood Damage Reduction ⁽³⁾	Total		
(a)	(b)	(c)	(d)	(e)	(f) = (d) + (e)	(g)	(h)

(1) From Table 19, or RWMG method

(2) From Table 15 or RWMG method

(3) From Table 18 or RWMG method

EXHIBIT E

DISADVANTAGED COMMUNITY ASSISTANCE

Purpose

The purpose of this Exhibit is to provide guidance to applicants submitting Attachment 10 to document information regarding a project that addresses a need in a DAC. Along with the information provided in Attachment 10, the applicant must also provide relevant DAC project information in the work plan, schedule, and budget exhibits of this PSP.

Assistance to DACs comes in several forms:

- ↪ *DAC Program Preference* –PRC §75026.(b)(6) – See Section II.F of the 2012 Guidelines. Meeting program preferences yields additional points for an applicant in the application ranking process.
- ↪ *DAC Funding Target* – See Section III, 10% of the appropriated funding will be used to support projects that address critical water supply or water quality needs of DACs.
- ↪ *Expanded Project Eligibility* – See Section II.C, the types of eligible projects to address critical water supply or water quality needs may include studies needed to help identify a specific project that may lead to a construction project to address DAC needs.
- ↪ *Funding Match Waiver* – See Section III.B. The required 25% cost share may be waived for projects that meet the needs of a DAC.

For assistance on any portion of this exhibit, please contact the DWR point of contact listed in the foreword.

Documentation of the Presence and Needs of a DAC

DWR strongly recommends that applicants consult Appendix G of the 2012 Guidelines to determine if the project area includes a DAC using the most recent data available. Applicants should ensure the description of the DAC is adequate for DWR to determine whether the communities meet the definitions of this Exhibit.

- ↪ Include information that supports the determination of DACs in the region, such as a map or shapefile that shows the project service area is congruent with a DAC as shown using the MHI data.
- ↪ Where the lack of representative census data that adequately represents the community can be documented, income surveys may be substituted.
- ↪ In determining the MHI for DACs, applicants may use a single type of census geography or combinations of census geographies that best represent the DAC.
- ↪ For the applicants with GIS capability, the GIS data files used within the DAC mapping tool are available to download and use (Appendix A of 2012 Guidelines). These GIS files will allow applicants to combine project area shape files with DAC data layers. This will help applicants show the extent of overlap or project areas with DACs.
- ↪ A letter of support from a DAC's representative indicating their support for the Proposal or portion of the Proposal designed to provide targeted benefits to the DACs.
- ↪ Describe the critical water supply and or water quality needs of the DACs you have identified. Please consult the 2012 Guidelines to determine if the project qualifies. DWR will consider regional projects as meeting a need of DACs in proportion to the extent the project serves DACs and is verified to meet

a critical water supply or water quality need as detailed in the 2012 Guidelines. The intent of DAC assistance is to provide targeted benefits therefore, presenting the entire county as a DAC is discouraged. There may be census geographies (i.e., places, tracts, and block group) contained in areas of a county that have an MHI greater than the 80% of the statewide MHI and thus would not meet the definition of a DAC. It may also be difficult in demonstrating how a specific project would have targeted water supply and or water quality benefits on a county-wide scale.

EXHIBIT F

CONSENT FORM

The Consent Form must be signed and submitted if the RWMG is utilizing an IRWM Plan that was adopted on or before September 30, 2008.

Consent Form IRWM Plan Update

Applicant: <Enter Name>

IRWM Region: <Enter Name>

RWMG: <Enter Name>

Date of Adoption: <Enter Date>

As the authorized representative of the above-referenced RWMG, I acknowledge and affirm that the RWMG is utilizing an IRWM Plan that was adopted on or before September 30, 2008, to meet part of the grant Eligibility Criteria for the Round 2, Proposition 84 IRWM Grant Program, Implementation Grant solicitation.

I also acknowledge that the RWMG understands that it must enter into a binding agreement with DWR to update, within two years of the execution date of the agreement, the IRWM Plan to meet the IRWM Plan standards contained in the 2012 Guidelines; and to undertake all reasonable and feasible efforts to take into account water-related needs of disadvantaged communities in the area within the IRWM region.

I further acknowledge that the RWMG understands that failure to meet the condition listed above may result in termination of the grant agreement by DWR and that DWR may demand the immediate repayment to State of an amount equal to the amount of grant funds disbursed to Grantee prior to such termination.

Name of Authorized Representative

Signature

Title of Authorized Representative

Date

THE NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
DIVISION OF INTEGRATED REGIONAL WATER MANAGEMENT