



# DEPARTMENT OF WATER RESOURCES

## Draft Agricultural Water Management Plan Guidebook Webinar

*Discussion of AWMP Guidebook to Meet New SBx7-7 Agricultural  
Water Management Planning Requirements*

September 20, 2012

Sponsored by the  
Department of Water Resources

# Topics of the Presentation

- Background
- Who must prepare an AWMP
- Options for AWMC-MOU members and federal water suppliers
- Guidebook Organization

# Guidebook History

Timeline	Action	Outcome
August, 2011	Draft Guidebook outline presented to ASC	No comments received
February 1, 2012	Draft Guidebook workshop	Some clarification comments received. Substantive comment from NRDC regarding the need for a process to determine technical feasibility for conditional EWMPs
March 21, 2012	Informed California Water Commission: GB to include guidance for CVPIA contractors on supplemental water measurement information	
August 2012	Summary of the Guidebook presented at five public workshops	Received feedback
Current (September 2012)	Revised GB based upon DWR's determination that additional details and information were necessary	

# Who Must Prepare an AWMP? (SBX7-7)

- *Required for ALL agricultural water supplier providing water to 25,000 or more irrigated acres, excluding recycled water.*
- *Required for ALL agricultural water supplier 10,000 to 25,000 irrigated acres, excluding recycled water, if sufficient funding has specifically been provided.*
- AWMC-MOU and federal water suppliers alternative submittal allowed

# Compliance Options

## Option 1

- **SBX7-7 AWMP**

## Option 2

- **AWMC-MOU** water management plan + additional documentation for EWMPs and Ag. Water Measurement Regulation

## Option 3

- **USBR CVPIA/RRA** water conservation plan + additional documentation for Ag. Water Measurement Regulation

- 
- ❑ Coordinate with public and other entities in accordance with §10821(a) and Article 3. Adoption and Implementation of Plans
    - Option 1 and 2: State public or private equivalent process
    - Option 3: USBR Federal Register Process

**December 31, 2012**

- Submit 2012 Plan to DWR

**December 31, 2015**

- Complete corrective action plans for agricultural water measurement devices

**December 31, 2015**

- Submit 2015 Plan to DWR

**December 31 every  
5 years thereafter**

- Submit 5-year Cycle Plan to DWR

# Guidebook Organization

## Chapter 1

- Introduction

## Chapter 2

- SBX7-7 AWMP Preparation Guidance

## Chapter 3

- AWMC-MOU Process Guidance

## Chapter 4

- USBR CVPIA/RRA Process Guidance

## Chapter 5

- Water Measurement Documentation

## Chapter 6

- Supporting Information

## Appendix A

- AWMP Template

# Guidebook Chapter 2 and AWMP Template

## SB X7-7 Agricultural Water Management Plan Outline

AWMP Template Section	GB Chapter 2	Information
I	2.1	Plan Preparation and Adoption
II	2.2	Description of the Agricultural Water Supplier and Service Area
III	2.3	Description of the Quantity of Water Uses of the Agricultural Water Supplier (Demands)
IV	2.4	Description of Quantity and Quality of the Water Resources of the Agricultural Water Supplier
V	2.5	Water Accounting and Water Supply Reliability
VI	2.6	Climate Change
VII	2.7	Water Use Efficiency Information
VIII	2.8	Supporting Documentation

# Contents of Plan

## **Section I: Plan Preparation and Adoption (Chapter 2.1)**

- A. Description of Previous Water Management Activities
- B. Coordination Activities
- C. Plan Adoption and Submittal
- D. Plan Implementation

# Appendix A: AWMP Template

## **Section I: Plan Preparation and Adoption** (pg 118 and 119)

### **A. Description of Previous Water Management Activities**

Insert description.

### **B. Coordination Activities**

#### 1. Notification of AWMP Preparation

A copy of the notification may be attached and/or Recommended Table 1 filled in.

# Appendix A: AWMP Template

**Recommended Table 1: Summary of Coordination, Adoption, and Submittal Activities**

Potential Interested Parties <i>[Provide names(s)]</i>	Notified of Plan Preparation	Requested Copy of Draft <i>(Optional)</i>	Commented on Draft/Action Taken by Supplier <i>(Optional)</i>	Notified of Public Meetings	Attended Public Meetings <i>(Optional)</i>	Copy of Adopted Plan/ Amendment Sent
Local City(s)	[Insert Date]					[Insert Date]
Local County(s)	[Insert Date]					[Insert Date]
Groundwater Management Entity						[Insert Date]
Urban Water Supplier(s)						[Insert Date]
City or County Library						[Insert Date]
Local Agency Formation Commission						[Insert Date]
DWR						[Insert Date]
Local Newspaper/ Equivalent Process [Identify which]				[Insert Dates]		

# Contents of Plan

## **Section II: Description of the Agricultural Water Supplier and Service Area** ([Chapter 2.2](#))

### A. Physical Characteristics

1. Service area size
2. Location of the service area and water management facilities
3. Terrain and soils
4. Climate

# Appendix A: AWMP Template

## Section II: Description of the Agricultural Water Supplier and Service Area (pg 120)

### A. Physical Characteristics

#### 1. Size of the service area

Insert description. Recommended Tables 2 and 3 or similar tables can also be used.

<b>Recommended Table 2. Water Supplier History and Size</b>	
<b>Date of Formation</b>	<b>Date:</b>
<b>Source of Water</b>	<b>Check applicable sources</b>
Local Surface Water	
Local Groundwater	
Wholesaler	
USBR	
SWP	
<b>Service Area Gross Acreage</b>	_____ acres
<b>Service Area Irrigated Acreage</b>	_____ irrigated acres
Note: Additional rows/columns can be added as applicable.	

# Guidebook Example Explanation

(Chapter 2.2, pg 26)

## A. Physical Characteristics

### 1. Size of the service area (§10826 (a)(1))

While the water supplier **is required** to describe the size of the service area in the AWMP, details regarding how to describe the size are not specified in the CWC requirements. To facilitate planning and analysis, **it is suggested that, at a minimum**, the water supplier include a calculation of:

#### a) **Gross acreage within the service area boundary -**

Expected changes to the service area size or boundaries **should** also be identified. **If there are special management or usage areas**, reporting the sizes of each area would also assist the agricultural water supplier in water use efficiency determination, management, and planning. For instance, special management or usage areas might be identified if water supplies are typically distributed on a rotational basis. Reporting the acreage of each sub-area within the service area would assist in water use calculations and efficient management.

# Appendix A: AWMP Template

## 2. Location of the service area and water management facilities (pg 121)

Insert description (text or maps). Recommended Tables 4 to 6 or similar tables can also be used.

<b>Recommended Table 4. Water Conveyance and Delivery System</b>	
<b>System Used</b>	<b>Number of Miles</b>
<b>Unlined Canal</b>	
<b>Lined Canal</b>	
<b>Pipelines</b>	
<b>Drains</b>	
Note: Additional rows/columns can be added as applicable.	

## Contents of Plan: Section II cont.

### B. Operational Characteristics

1. Operating rules and regulations
2. Water delivery measurements or calculations
3. Water rate schedules and billing
4. Water shortage allocation policies

### C. Basis for Reporting Water Quantities

## Contents of Plan

### **Section III: Description of the **Quantity** of Water Uses of the Agricultural Water Supplier (Demands) (Chapter 2.3)**

- A. Agricultural Water Use
- B. Environmental Water Use
- C. Recreational Water Use
- D. Municipal and industrial Use
- E. Groundwater recharge Use
- F. Transfers and exchanges Use
- G. Other Water Uses
- H. Optional – Projected Water Use

# Appendix A: AWMP Template

## **Section III: Description of Quantity of Water Uses of the Agricultural Water Supplier** (pg 128-129)

### **A. Agriculture Water Use**

Insert description of quantity. You may complete Recommended Tables 20 and 23 or similar tables, if applicable.

**Recommended Table 20. Annual Agricultural Water Use (AF)**

Source	Representative Year	Planning Cycle				
		1 <sup>st</sup> Year [Insert Year]	2 <sup>nd</sup> Year [Insert Year]	3 <sup>rd</sup> Year [Insert Year]	4 <sup>th</sup> Year [Insert Year]	5 <sup>th</sup> Year [Insert Year]
<b>Agricultural Water Supplier Delivered</b>						
<b>Surface Water</b>						
<b>Groundwater</b>						
<b>Other (define)</b>						
<b>Other Water Supplies Used</b>						
<b>Surface Water</b>						
<b>Groundwater</b>						
<b>Other (define)</b>						

Notes: Insert data if available. If data is not available, columns, rows, or cells can be left blank or alternatively they can be deleted. Alternatively, additional rows/columns can be added as applicable. A minimum of one year should be reported.

## Contents of Plan

### **Section IV: Description of Quantity and Quality of the Water Resources of the Agricultural Water Supplier** (Chapter 2.4)

#### A. Water Supply Quantity

1. Surface water supply
2. Groundwater supply
3. Other water supplies
4. Drainage from the water supplier's service area

# Appendix A: AWMP Template

## **Section IV: Description of Quantity and Quality of the Water Resources of the Agricultural Water Supplier**

### **A. Water Supply Quantity (pg 134)**

#### 1. Surface Water Supply

Insert description of quantity. You may complete Recommended Tables 30 and 31 or similar tables and provide calculations.

**Recommended Table 30. Surface Water Supplies (AF)**

Source	Diversion Restriction	Rep. Year	Planning Cycle					Anticipated Changes
			1 <sup>st</sup> Year [Insert Year]	2 <sup>nd</sup> Year [Insert Year]	3 <sup>rd</sup> Year [Insert Year]	4 <sup>th</sup> Year [Insert Year]	5 <sup>th</sup> Year [Insert Year]	
Pre-1914 water rights								
CVP class I water contract								
SWP water contract								
Other imported water surface water								
Local surface water [Identify]								
Upslope drain water								
Transfers /Exchanges								
<b>TOTAL</b>								

**Notes:**

Insert data if available. If data is not available, columns, rows, or cells can be left blank or alternatively they can be deleted. Alternatively, additional rows/columns can be added as applicable. A minimum of one year should be reported.

## Contents of Plan

### B. Water Supply Quality

1. Surface water supply
2. Groundwater supply
3. Other water supplies
4. Drainage from the water supplier's service area

### C. Water Quality Monitoring Practices

1. Source Water
2. Optional - Non-Source Water Drainage water

# Appendix A: AWMP Template

**Recommended Table 36. [Insert Source\*] Water Supply Quality\*\* (pg 137)**

Parameter	Units	Rep. Year	Planning Cycle				
			1 <sup>st</sup> Year [Insert Year]	2 <sup>nd</sup> Year [Insert Year]	3 <sup>rd</sup> Year [Insert Year]	4 <sup>th</sup> Year [Insert Year]	5 <sup>th</sup> Year [Insert Year]
TDS							
Se							
B							
Mo							
As							
Na							
Cl							
Pesticide							
Herbicide							
Fertilizer(NO <sub>3</sub> )							
Other [Identify]							
Other [Identify]							

**Notes:**

Insert data if available. A minimum of one year should be reported. If data is not available, columns, rows, or cells can be left blank or alternatively they can be deleted. Alternatively, additional rows/columns can be added as applicable.

\* Identify supply source, for example, surface water, groundwater, or other water. If 'Other' water source is used, specify what the 'Other' water source is.

\*\* Report average value and the range of values in parenthesis. For example, 10 (2 – 14), where 10 units is the yearly average and measurements ranged from 2 to 14 units. Units are specified in the 'Units' column.

## Contents of Plan

### **Section V: Water Accounting and Water Supply Reliability** (Chapter 2.5)

- A. Quantifying the Water Supplier's Water Supplies
  - 1. Agricultural Water Supplier Water Quantities
  - 2. Other Water Sources Quantities
- B. Quantification of Water Uses
- C. Overall Water Budget
- D. Water Supply Reliability
- E. Optional – Future Water Supply

# Appendix A: AWMP Template

**Recommended Table 47. Quantify Water Supplies (AF) (pg 145)**

Water Supplies	Rep. Year	Planning Cycle				
		1 <sup>st</sup> Year [Insert Year]	2 <sup>nd</sup> Year [Insert Year]	3 <sup>rd</sup> Year [Insert Year]	4 <sup>th</sup> Year [Insert Year]	5 <sup>th</sup> Year [Insert Year]
1 Surface Water* (summary total from Table 40)						
2 Groundwater (summary total from Table 41)						
3 Annual Effective Precipitation (summary total from Table 42)						
4 Water purchases						
<b>Subtotal</b>						

**Notes:**

Insert data if available. A minimum of one year should be reported. If data is not available, columns, rows, or cells can be left blank. Alternatively, additional rows/columns can be added as applicable.

\*Subtract water purchases if included in totals; water purchases will be included on line 4.

## Contents of Plan

**Section VI: Climate Change** (Chapter 2.6)

**Section VII: Water Use Efficiency Information** (Chapter 2.7)

A. EWMP Implementation and Reporting

- Which EWMPs have been implemented, planned to be implemented, an estimate of the water use efficiency improvements that have occurred since the last report, and an estimate of the water use efficiency improvements estimated to occur five to 10 years in the future
- Schedule, budget and finance plan to Implement EWMPs

B. Documentation For Non-Implemented EWMPs

## Contents of Plan

### **Section VIII: Supporting Documentation** (Chapter 2.8)

- Agricultural Water Measurement Regulation Documentation (as applicable)
  - A. Legal Certification and Apportionment Required for Water Measurement Schedule, budget and finance plan to Implement EWMPs
  - B. Engineer Certification and Apportionment Required for Water Measurement
  - C. Description of Water Measurement Best Professional Practices
  - D. Documentation of Water Measurement Conversion to Volume
  - E. Device Corrective Action Plan Required for Water Measurement
  - F. Farm-gate Measurement and Device Accuracy Compliance (Optional)

## Contents of Plan

### **Section VIII: Supporting Documentation cont.**

- Other Documents (as applicable)
  1. Coordination documentation, as applicable
  2. Resolution of Plan Adoption
  3. Water supplier maps
  4. Water Supplier Operating Rules and Regulations
  5. Additional Agriculture Water Measurement Regulation compliance documentation
  6. Water Shortage Allocation Policy
  7. Water Shortage Contingency Plan
  8. Agricultural supplier groundwater wells and recharge locations maps
  9. Groundwater Management Plan
  10. Detailed water quality information
  11. Cost-benefit analysis/ technical infeasibility documentation
  12. Additional information/data as applicable.

# Guideook Chapter 3

## AWMC MOU Process Guidance

- 3.1 AWMC- Approved Water Management Plan
- 3.2 Additional Documentation
  - A. EWMPs Documentation
  - B. Agriculture Water Measurement Regulation Documentation (as applicable)

# Guidebook Chapter 4

## USBR CVPIA/RRA Process Guidance

- 4.1 USBR- Accepted CVPIA/RRA Water Conservation Plan
- 4.2 Additional Documentation
  - A. Agriculture Water Measurement Regulation Documentation (as applicable)
  - B. Optional Documentation

# Guidebook Chapter 5

## Water Measurement Documentation

- 5.1 Water Measurement Documentation needed for SB X7-7 Submittals
  - A. Legal Certification and Apportionment Required for Water Measurement
  - B. Engineer Certification and Apportionment Required for Water Measurement
  - C. Description of Water Measurement Best Professional Practices
  - D. Documentation of Water Measurement Conversion to Volume
  - E. Device Corrective Action Plan Required for Water Measurement
  - F. Farm-gate Measurement and Device Accuracy Compliance (Optional)
  
- 5.2 Optional Water Measurement Documentation for SB X7-7 Submittals

## Table i. Additional Documentation

Required by	Requirement details	SBX7-7 Plan (Option 1)	AWMC MOU Plan (Option 2)	CVPIA/RRA Plan (Option 3)
<b>Documentation Required as a Part of the Plan</b>				
<b>Required by SBX7-7</b>	Table VII.1- Report of EWMPs	Required	These suppliers may meet this requirement by submitting CVPIA/RRA Plan	
	Table VII.2- Non-Implemented EWMPs	Required		
<b>Required by Regulation, where applicable</b>	Attachment A- Legal Certification	Required		
	Attachment B- Engineer Certification	Required		
	Attachment C- Description of BMPs	Required		
	Attachment D- Water Measurement Conversion	Required		
	Attachment E- Correction Action	Required		
<b>Documentation Required for Loan and Grant Eligibility (if all water supplier has not implemented all the EWMPs)</b>				
<b>Required by SBX7-7</b>	Table VII.2- Non-Implemented EWMPs	Required if any of the CWC 10608.48(c) conditional EWMPs is not locally cost effective or technically feasible.		
	Table VII.3- Schedule to Implement 10608.48 EWMPs	Required if all the CWC 10608.48 EWMPs have not been implemented.		

# Guidebook Chapter 6

## Supporting Information

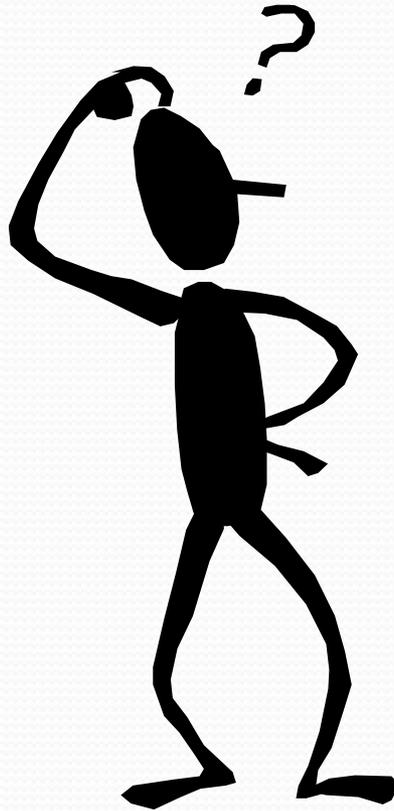
- 6.1 Checklist
- 6.2 Plan Submittal
- 6.3 Guidance on Climate Change for Agricultural Water Management Plans
- 6.4 AWMP and Ag Water Measurement Compliance Flow Charts
- 6.5 Detailed Comparison of SB X7-7, AWMC MOU and USBR CVPIA Processes
- 6.6 Annual Aggregated Farm-Gate Delivery Report
- 6.7 Legislative History, Current Legislation and Regulations, and Related Programs
- 6.8 Text of CWC (SBX 7-7) Pertaining to Agricultural Water Suppliers
- 6.9 California Code of Regulations, Title 23, §597 et seq. Agricultural Water Measurement

## 6.1 Checklist

AWMP* Location	Guidebook Location	Description	SB X7-7 Section (or other, as identified)
	1.2	AWMP Required?	10820, 10608.12
	1.2	At least 25,000 irrigated acres or	10853
	1.2	Less than 25,000 acres and available funding specified	10853
	1.1, 1.2	Initial AWMP prepared and adopted by December 31, 2012?	10820 (a)
	1.1, 1.2	December 31, 2015 update?	10820 (a)
	1.2	5-year cycle update?	10820 (a)
	1.2	New agricultural water supplier after December 31, 2012 - AWMP prepared and adopted within 1 year?	10820 (b)
	1.3	AWC 1999 MOU: Report on EWMP implemented or scheduled for implementation included?	10827
	1.3	USBR water conservation plan:	10828(a)
	1.3	Adopted and submitted to the United States Bureau of Reclamation within the previous four years? AND	10828(a)(1)
	1.3	The United States Bureau of Reclamation has accepted the water conservation plan as adequate?	10828(a)(2)

Thank you;

Questions?



[AgWUE@water.ca.gov](mailto:AgWUE@water.ca.gov)