

T

a

 \mathbf{e}

0

0

n

t

 \mathbf{e}

n

S

Plan Adoption (Signature Page)

Table of Contents

	•				
		Terms			
Prepa	arers ar	nd Sources of Information	x-xii		
1.0	INTR	ODUCTION	1-1		
	1.1	Background	1-2		
	1.2	Purpose of the IRWMP	1-2		
	1.3	Participating Agencies	1-3		
	1.4	Description of Region	1-6		
		1.4.1 Overview	1-6		
		1.4.2 Groundwater Supplies	1-8		
			1-11		
		1.4.4 Surface Water Supplies	1-13		
		1.4.5 Ecological Processes and Environmental Resources	1-14		
		1.4.6 Land Use	1-14		
		1.4.7 Demographics	1-16		
		1.4.8 Social Values	1-17		
	1.5	Environmental Compliance Process	1-17		
	1.6	IRWMP Adoption	1-18		
2.0	COA	LC AND OD JECTIVES	2-1		
2.0	2.1	LS AND OBJECTIVES Overview	2-1 2-1		
	۷.۱		2-1 2-1		
		2.1.1 Goals	2-1 2-2		
	2.2	Statewide Priorities	2-2		
	2.2	Water Management Strategies and Water Resource Management	Z -4		
	2.5	Categories	2-4		
		Odiogonos	2 7		
3.0	PLAN DEVELOPMENT				
	3.1	Overview	3-1		
	3.2	Community Outreach	3-1		
		3.2.1 Public Participation Program	3-1		
		3.2.2 Disadvantaged Communities and Environmental Justice	3-2		
	3.3	Community Workshops	3-2		
	3.4	Stakeholder Involvement	3-2		
	3.5	Stakeholder Involvement and Coordination Challenges	3-3		
	3.6	Identification of Issues and Potential Actions	3-4		
		3.6.1 Identification of Issues			
		3.6.2 Identification of Potential Actions	3-4		



T

a

b

e

o f

 \mathbf{C}

0

n t

e

n

t

S

	3.7 3.8 3.9	Action Integration	3-6 3-6 3-7 3-8 3-9
	3.10	3.9.4 Lake County Implementation Strategy Development	3-10 3-11
4.0	FINDI	NGS AND ISSUES	4-1
	4.1	Overview	4-1
	4.2	Water Supply and Drought Preparedness	4-1
		4.2.1 Findings	4-1
		4.2.2 Issues	4-1
	4.3	Water Quality	4-2
		4.3.1 Findings	4-2
		4.3.2 Issues	
	4.4	Flood Management and Storm Drainage	4-3
		4.4.1 Findings	4-3
		4.4.2 Issues	4-4
	4.5	Riparian and Aquatic Ecosystem Enhancement	4-5
		4.5.1 Findings	4-5
		4.5.2 Issues	4-6
	4.6	Recreation	
		4.6.1 Findings	4-6
		4.6.2 Issues	4-6
5.0	POTE	ENTIAL ACTIONS AND PRIORITIZATION	5-1
	5.1	Overview	5-1
	5.2	Foundational Actions	5-2
	5.3	Individual Actions	5-3
		5.3.1 Water Supply and Drought Preparedness	5-3
		5.3.2 Water Quality	5-3
		5.3.3 Flood Management and Storm Drainage	
		5.3.4 Aquatic and Riparian Ecosystem Enhancement	5-4
		5.3.5 Recreation	5-4
	5.4	Integrated Actions	5-4
		5.4.1 Davis-Woodland Water Supply Project5.4.2 Reclamation District No. 2035 (RD 2035) Sacramento River	5-5
		Diversion and Conveyance Project	5-8
		5.4.3 Cache Creek Flood Management Integrated Project	5-10
		5.4.4 Cache Creek Water Management Integrated Project	5-13
		5.4.5 Dunnigan Integrated Project	5-16
		5.4.6 Putah Creek Integrated Project	5-18



T

a

b

e

o f

 \mathbf{C}

0

n t

e

n

t

S

			,	5-20
			Sacramento River (West Bank) Integrated Project Yolo County Sloughs, Canals, and Creeks Management	5-27
			Program	5-30
	5.5		ation and Prioritization of Actions	5-32
				5-32
		5.5.2	Evaluation Based on Objectives and issues	5-32
		5.5.3	Evaluation Based on Statewide Priorities	5-33
	5.6	Selec	tion of Actions for Advanced Investigation and Development	5-36
6.0			TATION STRATEGY	
	6.1		se	
	6.2	Institu	tional Structure	
		6.2.1	3	6-2
		6.2.2	Functional Needs	6-3
			Proposed Institutional Structure	
			WRA Board of Directors	
			WRA Technical Committee	
		6.2.6	Foundational Actions	
		6.2.7	Integrated Actions	6-7
	6.3		ng Opportunities	
			State Bond Funds: Loans and Grants	6-8
		6.3.2	State Revolving Funds	6-11
		6.3.3	Local Financing	6-11
		6.3.4	Federal Emergency Management Agency	6-12
		6.3.5	United States Department of Agriculture/Natural Resource	
				6-13
			Community Development Block Grant Program	6-13
		6.3.7	"Pay-As-You-Go"	6-13
		6.3.8	Other	6-14
	6.4		· · · · · · · · · · · · · · · · · · ·	6-14
			Applicable Laws and Regulations	
		6.4.2	Streamlining Environmental Compliance	6-15
		6.4.3	Yolo County HCP/NCCP	6-17
	6.5	Public	Outreach	6-19
	6.6	Items	for Early Action	6-20
		6.6.1	Legal Structure of WRA	6-21
			Integrated Actions—Lead Partner and Partnership	
			Commitment	6-21
		6.6.3	WRA/Lead Partner Communications Protocol	6-22
		6.6.4	Work Plan Refinement	6-22
		6.6.5	Funding Opportunities	6-22



7.0	ACTIC	ON PROGRAM	7-1
	7.1	Foundational Actions	7-5 T
	7.2		7-12
			7-14 a
		IA2 Reclamation District No. 2035 Sacramento River Diversion	b
		And Conveyance Project	7-21
		IA3 Cache Creek Integrated Project	7-26 l
		IA4 Dunnigan Integrated Project	7-45 e
		IA5 Sacramento River West Bank Integrated Project	7-49
		IA6 Putah Creek Integrated Project	7-78
		IA7 Yolo Bypass Integrated Project	7-86
		IA8 Yolo County Sloughs, Canals, and Creeks Integrated Project	7-96
8.0	REFE	RENCES	8-1 ⁰
		Tables	1
		Tables	
Table	1-1	WRA Member Agencies Responsibilities Related to Water of the WRA	
		Member Agencies	1-3 C
Table		Surface Water Resources Shared with Neighboring Regions	1-6
Table			1-10
Table			1-13 n
Table			1-15 1-16 t
Table			1-10
Table			1-16 e
Table			1-17
Table	2-1	Water Management Strategies Considered by the WRA to Meet IRWMP Objectives	2-4 +
Table	2-2	Relationship Between Water Management Strategies Identified in	2-4 t
. 00.0		the Integrated Regional Water Management Grant Program	S
		Guidelines and the Water Management Categories in this IRWMP	2-6
Table	3-1	Stakeholder Organizations and Interests Interviewed by the WRA to	2 0
1 4510	•	Solicit Input on Potential Actions	3-3
Table	5-1	·	5-38
Table			5-42
Table			5-51
Table		· · · · · · · · · · · · · · · · · · ·	5-57
Table		<u> </u>	5-65
Table			5-74
Table			5-80
Table			5-82
Table		Proposition 1E Funding Programs	
Table		· ·	6-10
iabic	J	1 Toposition of Familiary Frogramo	J 10



Table 6-3	Proposition 84 Flood Control Funding	6-10	
Table 7-1	Summary of Supplemental Activities to Prioritize Actions	7-3	Г
Table 7-2	·	7-55	
Table 7-3	Relationship Between Proposition 50 Program Preferences and		a
	Prioritization Criteria	7-58	b
Table 7-4	Relationship Between Statewide Priorities and Prioritization Criteria.	7-59	
Table 7-5	Individual Actions Considered in the Sacramento River West Bank]	
	Integrated Project	7-62	0
Table 7-6	Individual Actions Not Carried Forward in the Sacramento River		е
		7-67	
Table 7-7	·	7-68	
Table 7-8		7-74	
Table 7-9			0
Table 7-10	· · · · · · · · · · · · · · · · · · ·	7_01	
		1	f
	Figures		
	i iguics		
Figure 1-1	Jurisdictional Boundaries of Member Agencies	1-4	
Figure 1-1	IRWMP Plan Formulation and Implementation Schematic		C
Figure 3-1	Geographic Subareas of Yolo County		
Figure 6-1	Yolo County IRWMP Implementation Structure		0
Figure 7-1	Davis-Woodland Water Supply Project: Interrelationship Between		-
rigule 1-1		7-16	n
Figure 7-2	Davis-Woodland Water Supply Project: Prerequisite Tasks	1-10	t
rigure 1-2		7-17	
Figure 7-3	Reclamation District No. 2035 Sacramento River Diversion and	7-17	e
rigate 7 o	Conveyance Integrated Project: Interrelationship Between	1	n
		7 00	
Figure 7-4	Reclamation District No. 2035 Sacramento River Diversion and	1 20	t
rigule 1-4	Conveyance Integrated Project: Prerequisite Tasks – Schedule and		S
		7-24	"
Figure 7-5	Cache Creek Integrated Project Interrelationship Between	7 24	
rigule 7-5	Prerequisite Tasks and Component Actions	7-29	
Figure 7-6	Cache Creek Integrated Project Interrelationship Between	1-23	
rigure 7-0		7-30	
Figure 7-7	Dunnigan Integrated Project – Interrelationship Between	7-30	
rigule 1-1		7-47	
Figure 7-8	Dunnigan Integrated Project Prerequisite Tasks – Schedule	7-47	
rigule 1-6	and Budget	7-48	
Figure 7.0	Putah Creek Integrated Project – Interrelationship Between	1 -4 0	
Figure 7-9		7-80	
Figure 7 10	·	7-80	
Figure 7-10	Putah Creek Integrated Project Prerequisite Tasks – Schedule	7 01	
	and Budget	7-81	



J		Yolo County Sloughs, Canals, and Creeks Integrated Project – Interrelationship Between Prerequisite Tasks and Component Actions	T a b
		Appendices	l e
A B	Background Data and Information [Separate Document] Alternate Prioritization Method		
С			0
D	Comn	nunity Workshop Outcomes	f
E _		holder Meeting Summaries	
F	Comn	nents / Responses – Draft IRWMP, October 2006	
			C
			0
			n
			t
			e
			n
			t

S



	A
Best Management Practices	C
County Census Designation	r
Cache Creek Resource Management Plan	1
California Environmental Quality Act	0
California Water Code	72
California Department of Fish and Game	n
Center for Land-Based Learning	V
Delta Protection Commission	J
[California] Department of Water Resources	m
Federal Emergency Management Agency	S
Habitat Conservation Plan/Natural Communities Conservation Plan	S
	County Census Designation Cache Creek Resource Management Plan California Environmental Quality Act California Water Code California Department of Fish and Game Center for Land-Based Learning Delta Protection Commission [California] Department of Water Resources Federal Emergency Management Agency

Integrated Groundwater Surface Water Model

Integrated Regional Water Management Plan Low Impact Development LID Light Detection and Ranging LiDAR

IGSM

IRWMP

Lower Putah Creek Coordinating Committee **LPCCC** Northern California Water Association **NCWA** National Economic Development **NED** National Environmental Policy Act **NEPA** Natural Resources Conservation Service **NRCS**

RD **Reclamation District RWA** Regional Water Authority

Regional Water Quality Control Board **RWQCB SAFCA** Sacramento Area Flood Control Agency Supervisory Control and Data Acquisition **SCADA**

Solano County Water Agency **SCWA**

State Water Project **SWP**

State Water Resources Control Board **SWRCB** Technical Committee (of WRA) TC **TMDL** Total Maximum Daily Load University of California UC

Water Resources Association of Yolo County WRA Water Resources Information Database WRID

Yolo County Flood Control & Water Conservation District YCFCWCD



Glossary of Terms

Action – A *project*, *program*, or *policy* that addresses one or more issues articulated by the Water Resources Association of Yolo County (WRA).

G

0

S

S

a

r

y

0

f

Т

e

r

m

S

Component Action – Individual action included in an integrated action.

Foundational Action – *Project* or *program* that forms a foundation for resource management. Foundational actions may include planned or existing ongoing studies, modeling projects, or monitoring programs used to collect, simulate, or predict information.

Implementation Strategy – A coherent approach to implementing integrated and individual water management actions, based upon priority, readiness, funding opportunities, and other considerations.

Individual Action – An *action* that addresses one or more issues in one of five water resource management categories (see "Water Resource Management Category" definition).

Integrated Action – A combination of *actions* that are linked by resources, geographic location, or other attribute, to address in a comprehensive manner multiple issues in more than one water resource management category (see "Water Resource Management Category" definition).

Issue – A water resource management problem or need affecting the citizens or resources of Yolo County, articulated by WRA.

Partner – An entity collaborating with other entities in implementing an integrated action.

Policy – A type of *action* taken by a WRA agency, which guides acceptable procedures with a specific goal or objective.

Prerequisite Task – Study or other activity that must be conducted before a particular action can be implemented.

Prioritization – A quantitative or qualitative method to compare the relative importance and timeliness of desired actions.

Project – A type of *action* taken by a WRA agency, which results in a direct physical change.

Program – A type of *action* taken by a WRA agency, which consists of an activity or set of activities, such as a resource management plan.

Water Resource Management Category – Five separate but related resource management areas considered essential elements in a region or watershed, and designated for evaluation and improvement by an integrated, regional watershed management plan.

WATER RESOURCES ASSOCIATION

Integrated Regional Water Management Plan April 2007

Preparers and Sources of Information

This IRWMP was prepared under the direction of the Board of the Water Resources Association of Yolo County (WRA) by the WRA Technical Committee, with the support of a consultant team and the California Department of Water Resources (DWR).

P

p

a

a

n

u

2006-2007 WRA Board of Directors

WRA Board Members

David Scheuring Yolo County Flood Control & Water Conservation District, WRA Chair

Sid England University of California, Davis, WRA Vice-Chair

Sue Greenwald City of Davis

Bill Marble City of Woodland

Tom Stone City of Winters

Wes Beers City of West Sacramento

Duane Chamberlain Yolo County

Gary Schaad Dunnigan Water District

Regina Cherovsky Reclamation District No. 2035

WRA Board Alternate Members

Kurt Balasek City of Winters, WRA Treasurer

Jacques DeBra & Stephen Souza City of Davis

Jeff Monroe & Doug Baxter City of Woodland

Dan Mount City of West Sacramento

Helen Thomson & Petrea Marchand Yolo County

Tim O'Halloran Yolo County Flood Control & Water Conservation

District

Donita Hendrix Dunnigan Water District

Chuck Dudley Reclamation District No. 2035 Marjorie Dickinson University of California, Davis

WATER RESOURCES ASSOCIATION

Integrated Regional Water Management Plan April 2007

P

p

a

a

n

u

WRA Technical Committee

Jacques DeBra City of Davis, Technical Committee Chair

Doug Baxter City of Woodland

Regina Cherovsky Reclamation District 2035

Mark Cocke City of Woodland

Sid England University of California, Davis

Donita Hendrix Dunnigan Water District

Petrea Marchand County of Yolo

Dan Mount City of West Sacramento

Tim O'Halloran Yolo County Flood Control & Water Conservation District

Charlie Simpson City of Winters

Max Stevenson Yolo County Flood Control & Water Conservation District

Donna Gentile WRA Administrative Coordinator

California Department of Water Resources

Bill Brewster DWR
Tasmin Eusuff DWR

Consultant Team

Francis Borcalli Wood Rodgers, Inc., Project Manager

Dave Anderson West Yost & Associates

Rob Beggs Brown and Caldwell

Steve Chainey Moore Iacofano Goltsman

Grant Davids Davids Engineering

Steve Macauley West Yost & Associates
Gerrit Platenkamp Moore Iacofano Goltsman

Jim Yost West Yost & Associates



P

r

 \mathbf{e}

p

a

r

 \mathbf{e}

r

S

a

n d

S

u

Sources of Information

Information used for this IRWMP include existing published reports and other documents, WRA member agency staff, and outside experts (see Section 8 "References", and references cited at the end of each chapter in Appendix A).

xii