

RECLAMATION

Managing Water in the West

Refuge Water Supply Program

2011 Annual Work Plan

CVPIA 3406 (b)(3) & (d)(1)(2)(5)



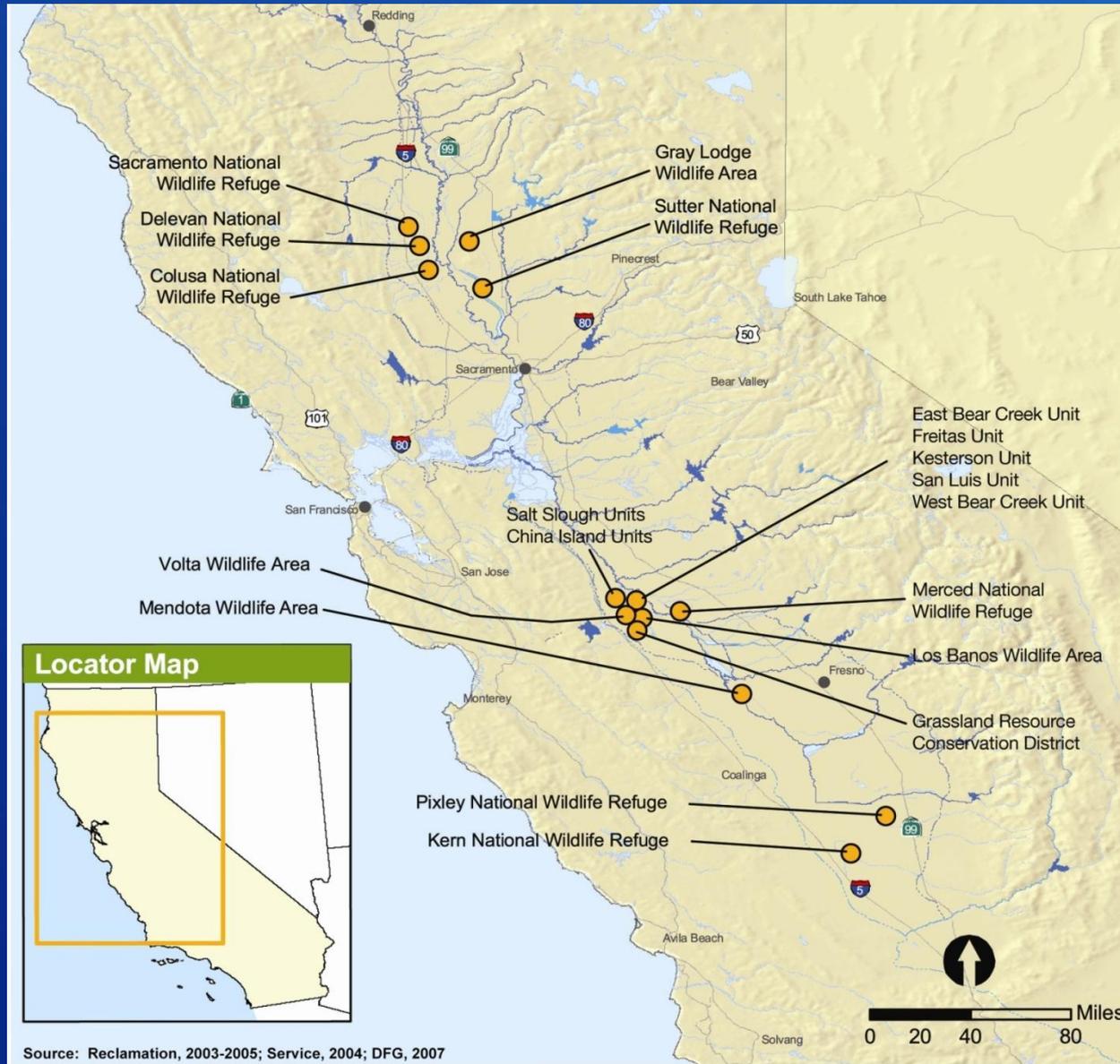
U.S. Department of the Interior
Bureau of Reclamation

Refuge Water Supply Program (RWSP)



GOAL:

Provide firm water supplies of suitable quality to maintain and improve wetland habitat areas on certain Central Valley wildlife refuges



RWSP Partners

Bureau of Reclamation

U.S. Fish & Wildlife Service

California Department of Fish & Game

Grassland Resource Conservation District

Central Valley Habitat Joint Venture



RWSP Interagency Management Team

Bureau of Reclamation

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Fish & Wildlife Program Manager

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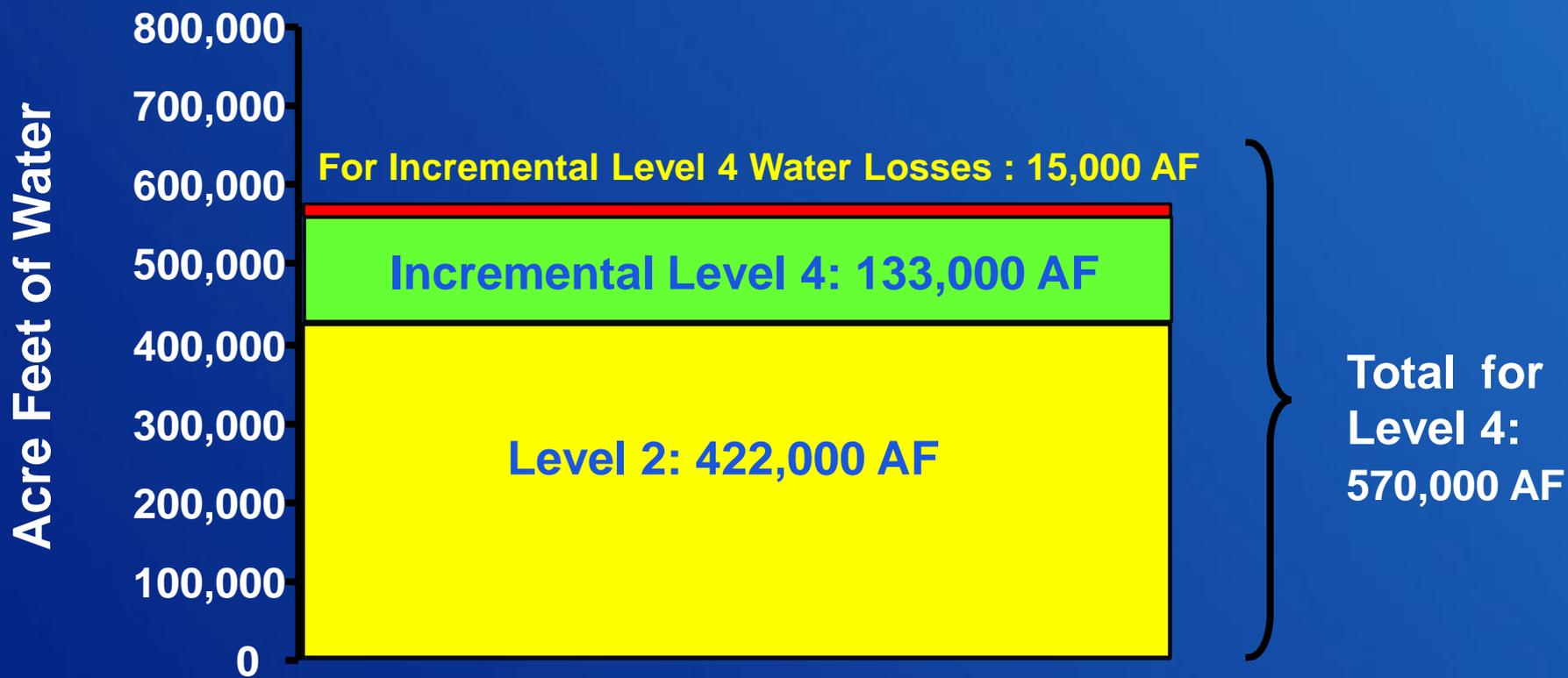
David Widell

General Manager

Central Valley Habitat Joint Venture

Greg Yarris

Defining Level 2, Incremental Level 4, and Level 4 Refuge Water Supply



RWSP Status

- 14 of 19 refuges are able to receive full Level 4
- 32 of 46 construction projects completed
- Biggs-West Gridley Water District design & construction activities ongoing
- 9 long-term conveyance agreements
- Incremental Level 4 water purchased annually
- Gray Lodge and Volta Wildlife Areas (WA) and Pixley National Wildlife Refuge (NWR) new groundwater wells under construction

RWS Status

Refuges Not Able to Receive Full Level 4 Water:

- Gray Lodge WA
- Mendota WA
- Pixley NWR
- Sutter NWR
- East Bear Creek NWR
(Phase II)



RWSP 2010 Accomplishments

Facilities Construction

- **East Bear Creek Phase 1 Pumping Plant/Pipeline**
 - Completed testing and additional training
 - Completed emergency repairs to pumping plant damaged by lightning
- **Volta WA**
 - Initiated construction of 2 wells (ARRA funding)
- **Gray Lodge WA and Pixley NWR**
 - Awarded construction contracts for 5 groundwater wells (ARRA funding)



RWSP 2010 Accomplishments

Water Acquisitions – Incremental Level 4

Contractor	Source	Quantity (AF)	Unit Cost	Total Cost
San Joaquin River Exchange Contractors	Surface Water	35,714	7,500 AF @ 150/AF 9,750 AF @ 175/AF 18,464 AF @ 215/AF	\$6,805,441
Grassland Water District	Groundwater	4,944	\$75/AF	\$370,800
Kern-Tulare Water District	Surface Water	7,000	\$150/AF	\$1,050,000
Panoche Water District	Surface Water	10,000	\$60/AF	\$600,000
Merced Irrigation District	Surface Water	500	\$100/AF	\$50,000
Stevinson Water District	Surface Water	4,080	\$100/AF	\$408,000
TOTALS		62,238		\$9,284,241

RWSP 2010 Accomplishments

Refuge Conveyance

- **Delivered 390,546 AF Level 2 Water**
 - **334,524 AF -- Central Valley Project (CVP) Yield:**
 - **56,022 AF -- Diverse (Non-CVP) Sources**
- **Delivered 58,021 AF Incremental Level 4 Water**
- **Continued water quality monitoring at Gray Lodge WA and Grasslands Ecological Area**
- **Awarded cooperative agreement for the North Grasslands Water Conservation & Water Quality Control Project**
- **Awarded contract for installation of flow meters in Bear Creek to determine conveyance losses**

RWSP 2011

Construction Activities

- North Grasslands Water Conservation & Water Quality Control Project Value Engineering Study
- East Bear Creek Phase II Planning Activities
- Pilot Aquifer Pump Testing South of Delta
- Gray Lodge WA Wells (ARRA funded)
- Pixley NWR Wells (ARRA funded)
- Volta WA Wells (ARRA funded)



RWSP 2011

Water Acquisition Activities

Acquire Incremental Level 4 Water from:

- San Joaquin River Exchange Contractors
- Grassland Water District
- Eastside Canal & Irrigation Company
- Merced Irrigation District
- Willing Sellers



RWSP 2011

Conveyance Activities



- Convey approximately 400,000 AF Level 2
- Convey approximately 46,000 AF Incremental Level 4
- Evaluate flow data at East Bear Creek NWR to determine losses in Bear Creek
- Complete Phase I (feasibility) of North Grasslands Water Conservation & Water Quality Control Project

RWSP Monitoring Projects

- **Gray Lodge Wildlife Area**
 - Quality of delivered groundwater and surface water
- **Grassland Ecological Area (GEA)**
 - Real-time water quality
 - Measuring volume and salt load of sources entering and draining the GEA



RWSP FY2011 Budget

- Reclamation and U.S. Fish & Wildlife Service Labor = \$1,868,767
 - Facilities Construction = \$1,856,569
 - Water Acquisition = \$7,004,840
 - Water Conveyance = \$8,705,481
 - Water Quality Monitoring = \$514,343
- Total \$19,950,000**



RWSP Three-Year Budget

(\$ amounts in thousands)

	<u>2012</u>	<u>2013</u>	<u>2014</u>
Labor	2,280	2,331	2,385
Water Acquisition	20,253	22,500	25,000
Planning	1,804	608	1,112
Construction	3,000	10,500	25,200
Monitoring	541	543	565
Conveyance	<u>8,662</u>	<u>9,008</u>	<u>9,369</u>
Total	\$36,540	\$45,490	\$63,631

QUESTIONS?



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