Sacramento River General Reevaluation Study

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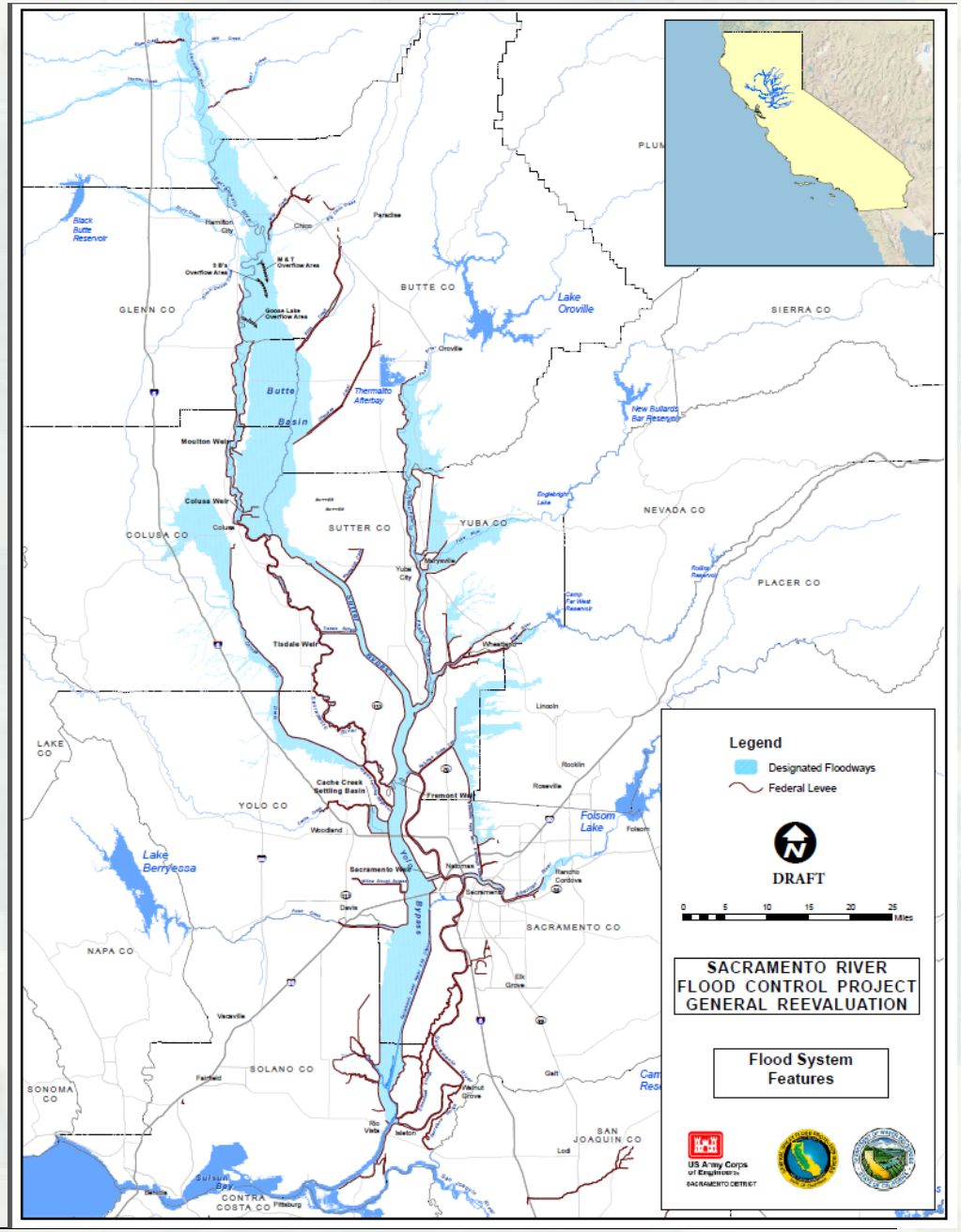
Presentation Overview

- What is the Sac River GRR?
- Project Area
- Schedule
- Agency Scoping Charette
- Public Scoping Process
- Requested Public Input
- Overview of Problems, Opportunities, Objectives, Constraints, Measures
- Closing Comments and Questions
- Open House

What is the Sac River GRR?

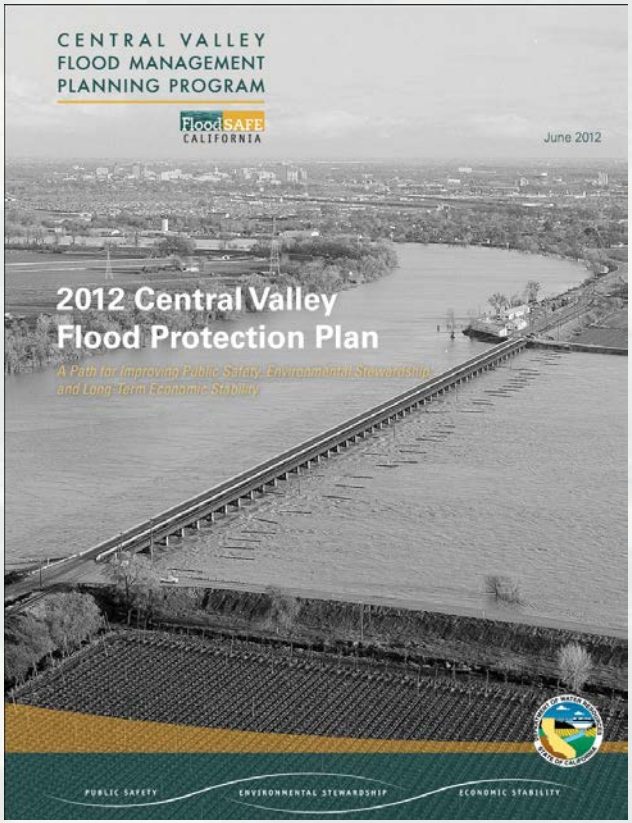
- General reevaluation of design and operation of Sacramento River Flood Control Project authorized in 1917
- Systemwide, flood risk management and ecosystem restoration feasibility study
- Develop a Chief's Report recommending project for authorization by Congress

Project Area

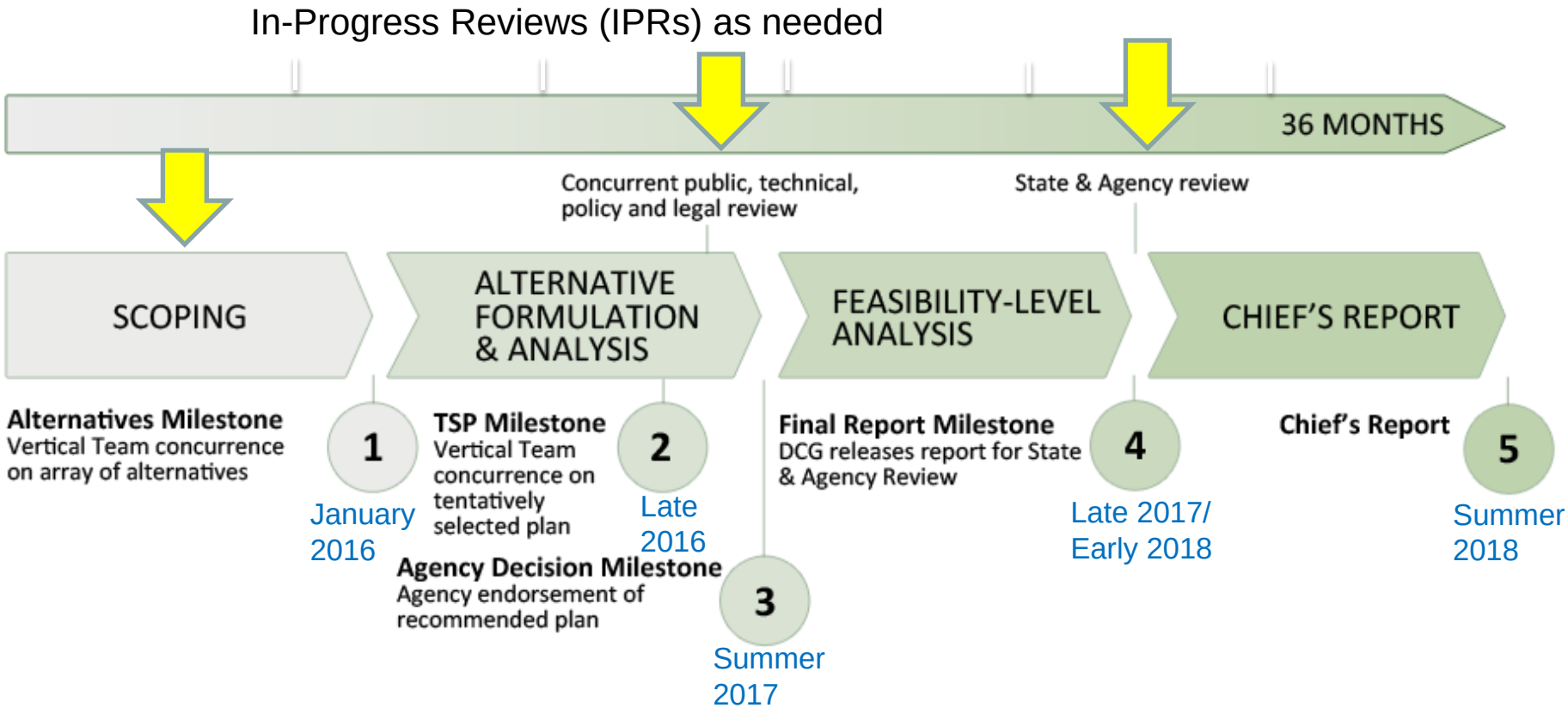


Leveraging Existing Efforts

- Central Valley Flood Protection Plan
  - Sacramento River Basin-wide Feasibility Study
  - Regional Flood Management Plans
  - Conservation Strategy
- Central Valley Integrated Flood Management Study (Sac Basin)
- Other USACE Studies



SMART Feasibility Study Process



Agency Scoping Charrette

- Purpose of the Scoping Charrette
- Multi-Agency Participation
  - Federal – U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration Fisheries
  - State – California Natural Resources Agency, Central Valley Flood Protection Board, Department of Water Resources, California Department of Fish and Wildlife

Agency Scoping Charrette

- Draft Scoping Recommendations
  - Purposes: Flood Risk Management and Ecosystem Restoration
  - Potential Study Area: Initially focus on Lower Sacramento Basin (with Upper Basin to follow)
  - Long-term O&M Considerations

Public Scoping

- NOI/NOP – EIS/EIR
  - ► NOI posting in Federal Register October 23
  - ► NOP to State Clearinghouse October 23
  - ► 30-day Scoping period from October 23 – November 23, 2015
- Two public scoping meetings

City of West Sacramento
1110 W. Capitol Avenue
West Sacramento, CA 95691
November 3rd, 2015
3 - 5 pm
5 - 7 pm

Yuba County Board of Supervisors
915 Eighth Street
Marysville, CA 95901
November 9th, 2015
3 - 5 pm
5 - 7 pm

Requested Public Input

- Geographic planning area
- Revisions/Additions/Deletions to:
  - Problems and Opportunities
  - Objectives
  - Constraints
  - Plan Formulation Considerations
  - Measures
- Environmental Impact Statement / Environmental Impact Report (EIS/EIR) Scope and Content

EIS/EIR Scope and Content

- Preliminary Environmental Effects Analysis:
  - Hydrology and Hydraulics
  - Water Quality
  - Air Quality
  - Biological Resources
  - Cultural Resources
  - Agricultural and Forestry Resources
  - Geology, Soils and Seismicity
  - Recreation
  - Transportation
  - Noise
  - Aesthetics
  - Land Use and Planning
  - Hazards and Hazardous Materials
  - Utilities and Service Systems
  - Climate Change
- Any other input on project scope

Preliminary Problems

- High risk of flooding threatens life and public safety, property and critical infrastructure throughout study area
- Existing Sacramento River Flood Control Project levees are highly susceptible to erosion, which will significantly increase future flood risk
- Loss of 95% of historical riparian and associated floodplain habitats and impaired natural riverine processes, have reduced native species populations

Preliminary Problems Continued

- Obstacles to fish passage and a loss of 95% of historical rearing habitat have greatly reduced native fish populations
- Long-term operations, maintenance, repair, replacement and rehabilitation are difficult, costly and unsustainable

Preliminary Opportunities

- Improve water supply in conjunction with any recommended project feature(s)
- Improve recreation in conjunction with any recommended project feature(s)
- Reduce need for continuous erosion protection program and other long-term costs of Sacramento River Flood Control Project, while restoring ecosystems that have been degraded by that project

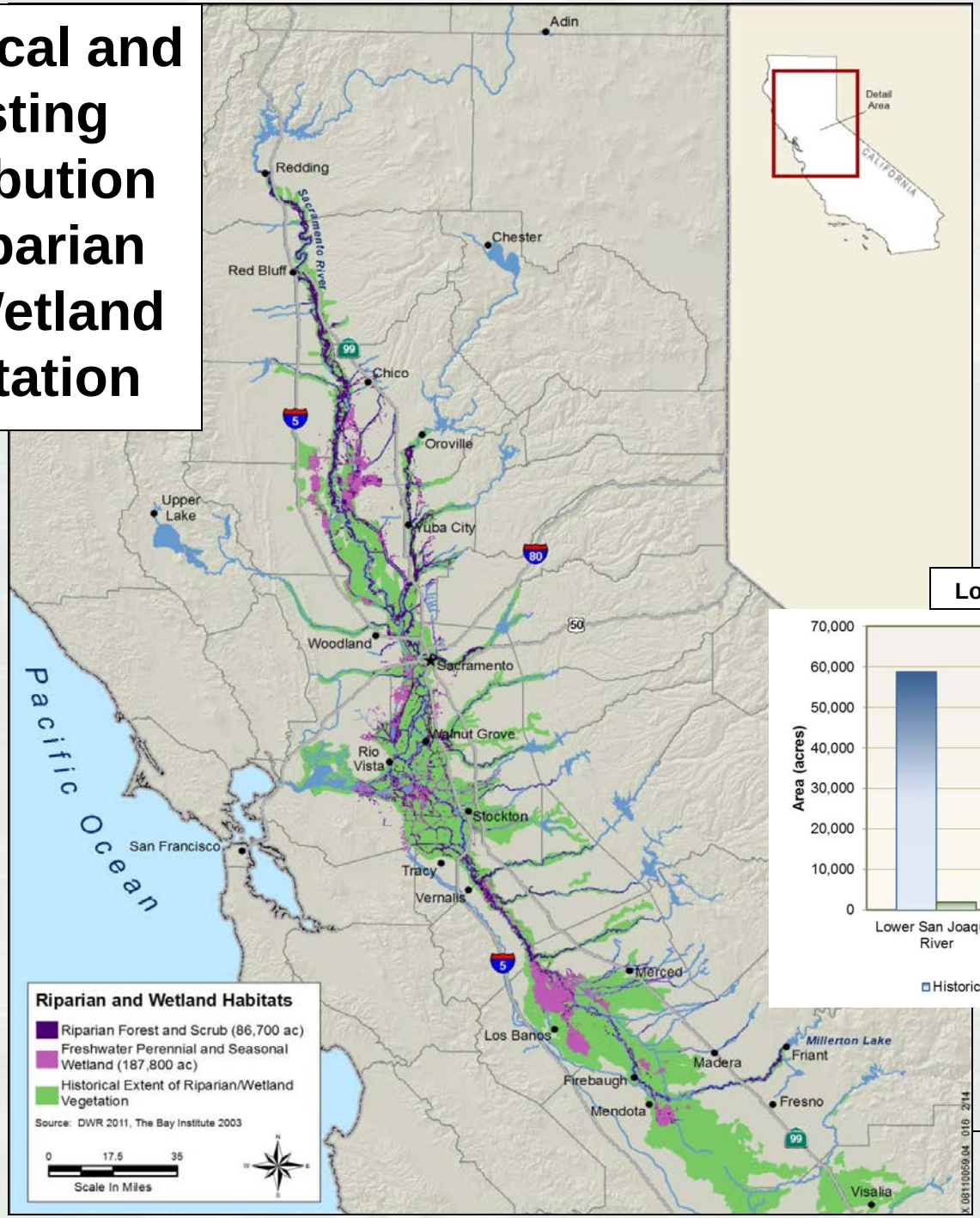
Preliminary Flood Risk Management Objectives

- Reduce risks to life, public safety and critical infrastructure
- Reduce economic consequences associated with flood risk
- Increase system resiliency to adapt to future variability such as climate change and development patterns

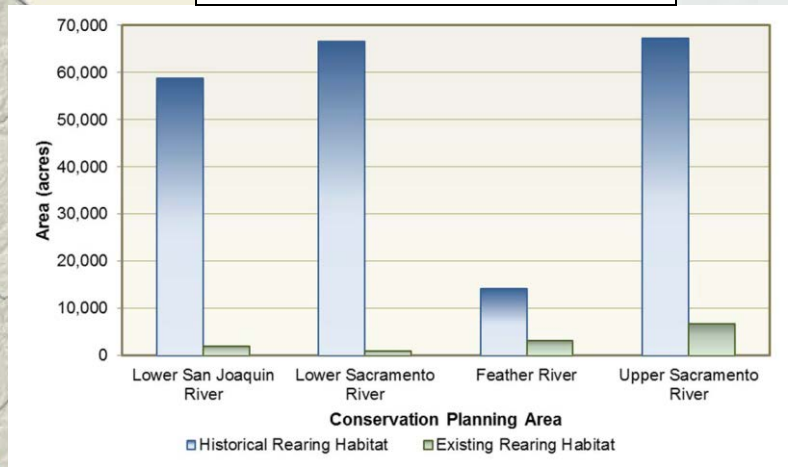
Preliminary Ecosystem Restoration Objectives

- Improve dynamic hydrologic (flow) and geomorphic processes
- Increase and improve quantity, diversity, quality and connectivity of riverine and floodplain habitats
- Contribute to recovery and sustainability of native species populations and overall biotic community diversity
- Increase and improve quantity, diversity, quality and connectivity of native fisheries rearing habitats

Historical and Existing Distribution of Riparian and Wetland Vegetation



Loss of Fisheries Rearing Habitat



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Preliminary Multi-Benefit Objectives

- Enhance existing regulatory framework and/or approaches to better support long-term, integrated management of dynamic systems of public infrastructure that deliver broad public values
- Increase water supply availability and reliability in conjunction with other objectives
- Provide high-quality recreational and open space opportunities in conjunction with other objectives

Preliminary Planning Constraints

- Comply with all applicable Federal and State laws, regulations and policies
- Proposed actions must be maintainable and environmentally sustainable
- Avoid increasing bird strikes near airports in study area

Preliminary Plan Formulation Considerations

- Take operation and maintenance resourcing and accessibility needs into account as part of plan formulation
- Aim for self-sustainability of ecosystem features
- Align with other planning efforts in study area

Preliminary Flood Risk Management Measures

1. Widen bypass	14. Purchase flowage easements
2. New bypass	15. Raise existing dams
3. New levees	16. Forecast-based reservoir operations
4. Setback levees	17. Raise/strengthen existing levees
5. Modify weirs	18. Construct new dams
6. Optimize operation of weirs	19. Re-allocate storage in reservoirs
7. Automate weir operations	20. Flowage or agricultural conservation easements
8. Remove/modify obstructions	21. Relocation
9. Coordinated emergency response plans	22. Ring levees
10. Floodplain management plan	23. Floodproof structures
11. Flood recovery plan	24. Elevate structures
12. Re-operate reservoirs	
13. New floodplain storage	

Preliminary Ecosystem Restoration Measures

1. Increase shaded riverine aquatic habitat	13. Extend floodplains/expand floodway
2. Increase riparian habitat	14. Screen pump diversions
3. Increase perennial marsh habitat	15. Re-contour floodway
4. Restore natural bank habitat	16. Impoundments for wetlands
5. Remove barriers to channel migration	17. Reservoir re-operation
6. Lay back banks to connect with floodplain	18. Low flow channel in bypasses
7. Remove barriers to fish passage	19. Increase riverine aquatic habitat
8. Set back levees	20. Provide high-ground refugia
9. Notch weirs	21. Reconnect oxbows
10. Terrace floodplains	22. Abandon or decommission levees
11. Remove non-native species	23. Increase seasonal wetland/grassland complex
12. Re-create channel meanders	

Contacts

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Closing Questions/Comments

Open House – Opportunity to talk with team members at specific topic stations and submit comments (oral or written)