18 October 2018
- American River Common Features – WRDA 2016
- Folsom Dam Raise
- Yuba River Basin – Marysville Ring Levee (MRL)
- Tule River Basin – (Success Dam)
- Isabella Dam

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AGENDA

• Supplemental Program Objectives

• Supplemental Program Overview
  ➢ Project Locations
  ➢ Integrated Master Schedule

• Overview of Projects

• What’s Next

• Questions/Comments
Program:
Public Law 115-123 - Bipartisan Budget Act of 2018 (BBA FY18)
or
Long Term Disaster Recovery Investment Program (LTDRIP)
or
“Supplemental Program”

Objectives:
1. Fully fund projects to completion with the intent to reduce risk of future disasters
2. Complete projects
3. Expedite delivery
PROGRAM & OBJECTIVES

$17.3 Billion Nationally

$2.1 Billion to the Sacramento District
Yuba River Basin – (Marysville Ring Levee)  
Ongoing  
Supp. = $13.5M ~8%  
Total = $160M

ARCF – WRDA 2016  
New Start  
Supp. = $1.57B ~87%  
Total = $1.8B

Folsom Dam Raise  
Ongoing  
Supp. = $216M ~ 59%  
Total = $373M

Isabella Dam  
Ongoing  
Supp. = $258M ~ 43%  
Total = $601M

Tule River  
(Success Dam)  
Ongoing  
Supp. = $74M ~100%  
Total = $74M
AMERICAN RIVER COMMON FEATURES – WRDA 2016

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# American River Common Features (ARCF)

### Authorized Plan

<table>
<thead>
<tr>
<th>Features</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutoff walls</td>
<td>13 miles</td>
</tr>
<tr>
<td>Bank protection</td>
<td>21 miles</td>
</tr>
<tr>
<td>Levee stabilization</td>
<td>5 miles</td>
</tr>
<tr>
<td>Levee raises</td>
<td>5 miles</td>
</tr>
<tr>
<td>Widen Sacramento Weir and Bypass</td>
<td>1500 feet</td>
</tr>
<tr>
<td>Environmental Mitigation</td>
<td>680 acres</td>
</tr>
<tr>
<td>Replant Shaded Riverine Habitat</td>
<td>15.5 miles</td>
</tr>
<tr>
<td>Reduces Risk</td>
<td>500,000 people</td>
</tr>
<tr>
<td></td>
<td>125,000 structures</td>
</tr>
<tr>
<td></td>
<td>$62 billion</td>
</tr>
</tbody>
</table>
PARTNERS - ARCF WRDA 2016

• Non – Federal Partners:
  ➢ State of California - Central Valley Flood Protection Board (CVFPB)
  ➢ Sacramento Area Flood Control Agency (SAFCA)
  ➢ Department of Water Resources (DWR)
    ✓ Cost shares 35% of the Project with USACE

• Maintaining Agencies:
  ➢ MA-9 (Bypass and Levee Maintenance)
  ➢ City of Sacramento, ARFCD (Access Roads and Levee Maintenance)

• Congressional Interests:
  ➢ Senators Feinstein and Harris
  ➢ Representatives Bera, Matsui, McClintock

• Stakeholders:
  ➢ Population at risk
  ➢ City of Sacramento, CA
  ➢ Recreation and Environmental Groups
  ➢ Railroad Owners
SPECIFICS - WHAT IS THE SOLUTION?

Typical levee improvement cross section
FOLSOM DAM RAISE PROJECT

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What is the Dam Raise?

- The Dam Raise is a Flood Risk Management Project implemented jointly by the US Army Corps of Engineers (USACE), the State of California and the Sacramento Area Flood Control Agency (SAFCA) in cooperation with US Bureau of Reclamation (USBR).

The authorized Folsom Dam Raise per the PACR:

- Add a top seal bulkhead to the Main Dam’s eight (8) Emergency Tainter Gates
- Add extension of all nine (9) piers supporting the motors and gate hoists
- Raise left and right wings of Main Dam by 3.5 feet
- Raise eight (8) reservoir dikes and Mormon Island Auxiliary Dike (MIAD) by 3.5 feet
- Construct a bridge (Completed) downstream from Folsom Dam
- Implement lower American River Ecosystem Restoration features (automated temperature control shutters and active habitat restoration at two sites along the lower American River)
Folsom Dam Raise – Partners

- **Facility Owner and Federal Partner** – USBR

- **Non-Federal Partners:**
  - Central Valley Flood Protection Board (CVFPB)
  - Department of Water Resources (DWR)
  - Sacramento Area Flood Control Agency (SAFCA)

- **Congressional Interests:**
  - Senators Feinstein and Harris
  - Representatives Bera, Garamendi, Matsui and McClintock

- **Stakeholders:**
  - City of Folsom, CA
  - Water and Power Contractors
  - Recreation and Environmental Groups
  - Population at risk

- **Partner Commitments:**
  - Non-Federal Partners prioritize regional flood risk management projects based on risk management provided
  - Continue to seek acceleration opportunities if/when opportunities arise and stay within funding limits
### Authorized Plan

<table>
<thead>
<tr>
<th>Features</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dike Raises</td>
<td>5 miles</td>
</tr>
<tr>
<td>Wing Dam Raises</td>
<td>3 miles</td>
</tr>
<tr>
<td>Auxiliary Dam Raise</td>
<td>2 miles</td>
</tr>
<tr>
<td>Main Dam Gates</td>
<td>8</td>
</tr>
<tr>
<td>Ecosystem Restoration</td>
<td>Not supplemental funded</td>
</tr>
<tr>
<td>- Temperature Control Shutters</td>
<td></td>
</tr>
<tr>
<td>- Off-site Mitigation</td>
<td></td>
</tr>
<tr>
<td>Reduces Risk</td>
<td>440,000 people</td>
</tr>
<tr>
<td></td>
<td>125,000 structures</td>
</tr>
<tr>
<td></td>
<td>$58 billion</td>
</tr>
</tbody>
</table>
MARYSVILLE RING LEVEE

YUBA RIVER BASIN, CA

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Marysville Ring Levee – Project Location

**Yuba River Basin Project:**
- Design water surface elevation is 200 year + 2 feet
- MRL classified as a “separable element” of the Project in 2008
Marysville Levee District – Project Status

Phase 1
Phase 2A-North
Phase 2A-South
Phase 2C
Phase 4A
Phase 4B
Phase 1 (Completed)

Construction Year
Phase 2A North = 2018
Phase 2A South = 2019
Phase 2C = 2020
Phase 2B = 2022, 2023
Phase 3 = 2020, 2021

07/06/18 KJC
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Tule River – Project Location
Tule River – Partnerships

• **Non – Federal Sponsors:**
  - State of California - Central Valley Flood Protection Board (CVFPB)
  - Department of Water Resources (DWR)
    - Cost shares 35% of the Project with USACE
  - Lower Tule River Irrigation District (LTRID)

• **Congressional Interests:**
  - Senators Feinstein and Harris
  - Representative McCarthy

• **Stakeholders:**
  - Population at Risk
  - Recreation and Environmental Groups
  - Irrigation Districts
  - State / Federal Agencies
Tule River – Success Dam Current Condition

- **Constructed:** 1961
- **Gross Pool:** 655.11 (NAVD88)
- **Storage Capacity:** 82,300 AF
- **PMF:** 157,500 CFS
Gross Pool: 665.11 (NAVD88) (~10 Feet)
Storage Capacity: 110,300 AF (+28,000 AF)

Ogee Weir Design
- 400 Feet long
- 10 Feet High
- 100 Foot Slab
- Rock bolts
- Fraizer Dike rip rap
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What is the Isabella Dam Safety Modification Project (DSMP)?

- The Isabella DSMP is a Dam Safety project at Lake Isabella, CA to mitigate serious hydraulic, seismic, and erosion concerns associated with the existing dams and spillway.
- Classified as a Dam Safety Action Classification (DSAC) 1 in 2008.
- Key project features are:
  - Full height filter and drain on the Main Dam with a 16 foot crest raise.
  - Modifications to the existing service spillway.
  - Construction of a new emergency spillway.
  - Construction of a downstream buttress including full height filter and drains on the Auxiliary Dam with a 16 foot crest raise and shallow foundation treatment.
  - Abandonment of Borel canal outlet works.
  - Modifications to the Main Dam Control Tower to accommodate the 16 foot Main Dam crest raise.
  - Modifications to State Route 155.

Note: The watershed is approximately the size of Delaware.
ISABELLA DAM

**Phase I: Relocation**
- Utility Relocation
- USFS/USACE Facilities

**Phase II: Dams and Spillways**
- 16’ Main Dam Raise/Control Tower
- 16’ Aux Dam Raise/Seal Borel Conduit
- Downstream Filters/Drainage/Buttress
- Service Spillway Modifications
- New Emergency Spillway/Labyrinth Weir

**Borel Canal**
- Original Plan - Replacement of canal
- Revised Plan – Acquire canal easement and remove canal

SUPPLEMENTAL TARGET OCT 2022
WHAT’S NEXT

• Looking for Industry Feedback
• Industry Day or Reverse Industry Day planned for early November
  - November 13th - AGC & Building Trades Informational Session
  - TBD – Industry Day

• Expect Design Contracts in the next several months
• Expect Construction Contracts beginning in FY19
## WHAT’S NEXT

<table>
<thead>
<tr>
<th>Project</th>
<th>Anticipated Construction Schedule</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Natomas</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reach H</td>
<td>2019-2020</td>
<td>~ 4 miles Levee Improvements - Cut-Off Wall</td>
</tr>
<tr>
<td>Reach B</td>
<td>2020-2021</td>
<td>~ 2 miles Levee Improvements - Seepage berm</td>
</tr>
<tr>
<td>Reach E</td>
<td>2021-2022</td>
<td>~ 3 miles Levee Improvements – possible cut-off wall</td>
</tr>
<tr>
<td>Reach A</td>
<td>2022-2023</td>
<td>~ 4 miles Levee Improvements – possible cut-off wall</td>
</tr>
<tr>
<td>Reach F&amp;G</td>
<td>2023-2024</td>
<td>~ 4 miles Levee Improvements – possible cut-off wall</td>
</tr>
<tr>
<td>Windows</td>
<td>2019-2024</td>
<td>Various contracts for berms, jet grout, pump stations, etc. at windows left by other contracts</td>
</tr>
<tr>
<td>Mitigation</td>
<td>Ongoing</td>
<td>Tree cutting, planting, maintenance, etc.</td>
</tr>
<tr>
<td><strong>Folsom Dam</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dike Raise</td>
<td>2019-2024</td>
<td>~ 5 miles of 3.5’ Dike Raise and related work in various packages</td>
</tr>
<tr>
<td>Main Dam</td>
<td>2022-2026</td>
<td>Retrofit of up to 8 gates on the Main Dam</td>
</tr>
<tr>
<td><strong>Hamilton City</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tule River</td>
<td>2019-2020</td>
<td>Mitigation and Planting</td>
</tr>
<tr>
<td><strong>ARCF-WRDA2016</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sac River Levees</td>
<td>2019-2024</td>
<td>Up to 9 miles of cut-off wall and other seepage control features</td>
</tr>
<tr>
<td>Sac River Erosion</td>
<td>2022-2026</td>
<td>Up to 10 miles of bank protection work</td>
</tr>
<tr>
<td>Amr Rvr Erosion</td>
<td>2020-2024</td>
<td>Up to 11 miles of bank protection work</td>
</tr>
<tr>
<td>Sac Weir/Bypass</td>
<td>2022-2026</td>
<td>1,500 lf expansion of existing gated weir at Sac Bypass</td>
</tr>
<tr>
<td>Mitigation</td>
<td>2019-2024</td>
<td>Tree cutting, planting, maintenance, etc.</td>
</tr>
<tr>
<td><strong>Isabella</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Restoration</td>
<td>2020-2022</td>
<td>Construction of permanent operations building, site restoration and misc. construction</td>
</tr>
<tr>
<td><strong>Yuba River Basin</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase 2C</td>
<td>2019-2020</td>
<td>~ 1,000 lf DSM wall construction</td>
</tr>
<tr>
<td>Phase 2B/3</td>
<td>2020-2023</td>
<td>~ 13,000 LF Cut-off wall construction</td>
</tr>
<tr>
<td>Phase 4B</td>
<td>2022-2023</td>
<td>Rock Slope Protection installation</td>
</tr>
<tr>
<td>PL 84-99</td>
<td>2018-2020</td>
<td>Various repairs in response to 2017 Flood Event</td>
</tr>
<tr>
<td>Sutter Basin</td>
<td>2019-2020</td>
<td>~ 5 miles of Levee Improvements including cut-off wall</td>
</tr>
<tr>
<td>Lower San Joaquin River</td>
<td>Unknown</td>
<td>Project is entering design phase and may have a contract as early as 2020</td>
</tr>
<tr>
<td>West Sacramento</td>
<td>Unknown</td>
<td>Project is seeking to enter design phase and may have a contract as early as 2020</td>
</tr>
</tbody>
</table>