A WATER YEAR TO REMEMBER -
2017 COSUMNES RIVER FLOODING AND HIGHWATERS

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COUNTY OF SACRAMENTO
DEPARTMENT OF WATER RESOURCES
Background - Watersheds

Mokelumne River Watershed = 1,250 mi²

Cosumnes River Watershed = 950 mi²

Morrison Creek Watershed = 125 mi²
FRANKLIN POND INTO POINT PLEASANT
FRANKLIN POND INTO POINT PLEASANT (CONT.)
FRANKLIN POND INTO POINT PLEASANT (CONT.)
HEC-RAS VIDEO SIMULATION
COSUMNES RIVER OVERTOPPING LEVEE
FLOOD FIGHT – SHEET PILES
FLOOD FIGHT – BOIL RINGS
BACK UP SLIDES
POINT PLEASANT - SOURCES OF FLOODING

Flood Area 1
- Source of Flooding:
  - Morrison Creek
  - Snodgrass Slough

Flood Area 2
- Source of Flooding:
  - Cosumnes River

Source of Flooding:
- Cosumnes River
POINT PLEASANT – FLOOD AREA 1
RAILROAD BRIDGE

FEB 2017
NO FLOOD FIGHT
PEAK FLOW = 620 CFS
TOTAL VOLUME = 4,600 AC-FT
WITH FLOOD FIGHT
PEAK FLOW = 620 CFS
TOTAL VOLUME = 4,600 AC-FT
POINT PLEASANT – FLOOD AREA 2
LAMBERT ROAD & MORRISON CREEK

FEB 2017 (MORRISON CREEK)
PEAK FLOW = 2,950 CFS
TOTAL VOLUME = 18,400 AC-FT

FEB 2017 (LAMBERT ROAD)
NO FLOOD FIGHT
PEAK FLOW = 4,800 CFS
TOTAL VOLUME = 11,560 AC-FT
WITH FLOOD FIGHT
PEAK FLOW = 50 CFS
TOTAL VOLUME = 23 AC-FT
POINT PLEASANT – FEBRUARY 2017
FLOODED STRUCTURE IMPACT ANALYSIS

No Flood Fight - February 2017
TOTAL GARAGES = 7
TOTAL HOUSES = 3

With Flood Fight February 2017
TOTAL GARAGES = 5
TOTAL HOUSES = 2

- 🟠 Garage Flooding
- 🔴 Garage and House Flooding
FEBRUARY 2017 FLOOD FIGHT - OFFSITE IMPACTS

Example
Existing WSEL = 20.0
Proposed WSEL = 20.8
Diff. WSEL = 0.8
Proposed Projects

1. Flood Fight Lambert Road Br.
2. Weir and Levee Cut Project
PROJECT 1 – LAMBERT ROAD BRIDGE
FLOOD FIGHT AT SNODGRASS SLOUGH

EXISTING 4’x6”x16’-0” FLAP GATES (10 TOTAL)
EXISTING 48” DIA. IRRIGATION GATES
(7 TOTAL)

TOP OF TYPE K RAILINGS
EXISTING LAMBERT ROAD PROFILE
EXISTING GATE STRUCTURE
PROJECT 2 – MCCORMACK WILLIAMSON TRACT WEIR LEVEE REPAIRS
PRESENTATION OVERVIEW

• Proposed Projects
  – Flood Fight on Lambert Road over Snodgrass Slough
  – McCormack Williamson Tract Levee Improvements

• February 2017 Storm
  – Existing Conditions
  – Proposed Flood Fight on Lambert Road

• 100-Year Storm
  – No Flood Fight, No MWT Levee Improvements
  – With Flood Fight, No MWT Levee Improvements
  – No Flood Fight, With MWT Levee Improvements
  – With Flood Fight and Levee Improvements
100-YEAR FLOOD FIGHT EVALUATION
100-YEAR FLOOD FIGHT - FLOOD AREA 1
RAILROAD BRIDGE

100-YEAR
NO FLOOD FIGHT
PEAK FLOW = 780 CFS
TOTAL VOLUME = 6,800 AC-FT
WITH FLOOD FIGHT
PEAK FLOW = 780 CFS
TOTAL VOLUME = 6,800 AC-FT
100-YEAR FLOOD FIGHT - FLOOD AREA 2
LAMBERT ROAD & MORRISON CREEK

100-YEAR (MORRISON CREEK)
PEAK FLOW = 10,700 CFS
TOTAL VOLUME = 32,300 AC-FT

100-YEAR (LAMBERT ROAD)
NO FLOOD FIGHT
PEAK FLOW = 6,300 CFS
TOTAL VOLUME = 12,300 AC-FT
WITH FLOOD FIGHT
PEAK FLOW = 965 CFS
TOTAL VOLUME = 1,440 AC-FT
100-YEAR FLOOD FIGHT – FLOODPLAIN COMPARISON
POINT PLEASANT – 100-YEAR FLOODED STRUCTURE IMPACT ANALYSIS

100-Year

16 – Flooded Structures

100-Year with Flood Fight

12 – Flooded Structures
100-YEAR FLOOD FIGHT - OFFSITE IMPACTS

Example

Existing WSEL = 20.0
Proposed WSEL = 20.8
Diff. WSEL = 0.8
100-YEAR
MCCORMACK WILLIAMSON TRACT
LEVEE REPAIR EVALUATION
100-YEAR MWT REPAIRS - FLOOD AREA 1
RAILROAD BRIDGE

100-YEAR
NO FLOOD FIGHT
PEAK FLOW = 780 CFS
TOTAL VOLUME = 6,800 AC-FT
WITH MWT REPAIRS
PEAK FLOW = 750 CFS
TOTAL VOLUME = 6,400 AC-FT
100-YEAR MWT REPAIRS - FLOOD AREA 2
LAMBERT ROAD & MORRISON CREEK

100-YEAR (MORRISON CREEK)
PEAK FLOW = 10,700 CFS
TOTAL VOLUME = 32,300 AC-FT

100-YEAR (LAMBERT ROAD)
NO FLOOD FIGHT
PEAK FLOW = 6,300 CFS
TOTAL VOLUME = 12,300 AC-FT
NO FLOOD FIGHT
PEAK FLOW = 6,400 CFS
TOTAL VOLUME = 13,100 AC-FT
100-YEAR MWT REPAIRS – FLOODPLAIN COMPARISON
POINT PLEASANT – 100-YEAR FLOODED STRUCTURE IMPACT ANALYSIS

100-Year

16 – Flooded Structures

100-Year with MWT Repair

16 - Flooded Structures
100-YEAR MWT REPAIR - OFFSITE IMPACTS

Example

Existing  WSEL = 20.0
Proposed WSEL = 20.8
Diff. WSEL = 0.8
100-YEAR
FLOOD FIGHT AND MWT REPAIR EVALUATION
100-YEAR BOTH PROJECTS - FLOOD AREA
1 RAILROAD BRIDGE

100-YEAR
NO FLOOD FIGHT
PEAK FLOW = 780 CFS
TOTAL VOLUME = 6,800 AC-FT

WITH FLOOD FIGHT AND MWT REPAIRS
PEAK FLOW = 750 CFS
TOTAL VOLUME = 6,450 AC-FT
100-YEAR FLOOD FIGHT - FLOOD AREA 2
LAMBERT ROAD & MORRISON CREEK

100-YEAR (MORRISON CREEK)
PEAK FLOW = 10,700 CFS
TOTAL VOLUME = 32,300 AC-FT

100-YEAR (LAMBERT ROAD)
NO FLOOD FIGHT
PEAK FLOW = 6,300 CFS
TOTAL VOLUME = 12,300 AC-FT
WITH FLOOD FIGHT
PEAK FLOW = 1,500 CFS
TOTAL VOLUME = 2,300 AC-FT
100-YEAR BOTH PROJECTS – FLOODPLAIN COMPARISON

- **100-Year**
- **100-Year with Both Projects**
POINT PLEASANT – 100-YEAR FLOODED STRUCTURE IMPACT ANALYSIS

100-Year

16 – Flooded Structures

100-Year with Both Projects

12 – Flooded Structures
100-YEAR BOTH PROJECTS - OFFSITE IMPACTS

Example
Existing WSEL = 20.0
Proposed WSEL = 20.8
Diff. WSEL = 0.8
# 100-YEAR PROJECT SUMMARY

<table>
<thead>
<tr>
<th>Locations</th>
<th>No FF, No MWT</th>
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<tbody>
<tr>
<td>Lambert Rd.</td>
<td>16.2</td>
</tr>
<tr>
<td>Pierson District</td>
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<td>McCormack Williamson</td>
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**FF** – Flood Fight  
**MWT** – McCormack Williamson Tract Levee Repair
# 100-Year Project Summary

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FF – Flood Fight
MWT – McCormack Williamson Tract Levee Repair
100-YEAR PROJECT SUMMARY

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FF – Flood Fight
MWT – McCormack Williamson Tract Levee Repair
# 100-Year Project Summary

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FF – Flood Fight
MWT – McCormack Williamson Tract Levee Repair
## 100-YEAR PROJECT SUMMARY

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Franklin Pond Decrease Water Surface</th>
<th>Point Pleasant Decrease Flooded Structures</th>
<th>North Delta Flood Surge Mitigation</th>
<th>North Delta Increase Water Surface</th>
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FF – Flood Fight  
MWT – McCormack Williamson Tract Levee Repair
QUESTIONS