

CONFLUENCE OF Main Canal & Fahrrens Creek

PROPOSED ACTIONS: Utilize the existing side gates on Main Canal to intercept high flood flows from the 9 square miles of Fahrrens Creek and divert into Lake Yosemite using the Main Canal during the wet season when canal flows and Lake Yosemite are lowered.



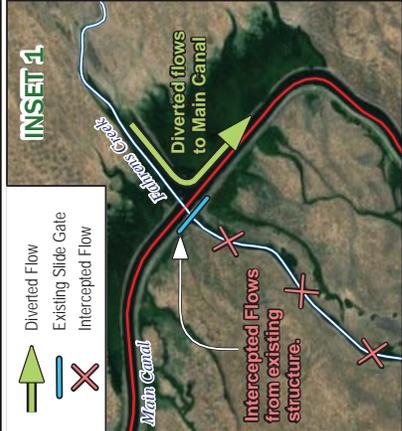
Existing Structure: Main Canal at Fahrrens Creek

Looking upstream (NE) towards the Main Canal from Fahrrens Creek (Fahrrens Creek flows directly into the Main Canal and is able to pass through the canal back into the downstream creek through the existing side gates)

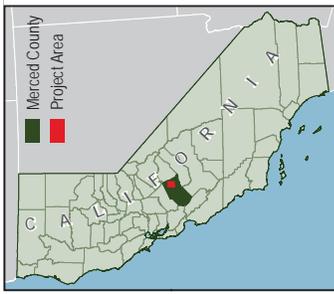


Fahrrens Creek inflows to be diverted to intercept flows from Fahrrens Lake Yosemite

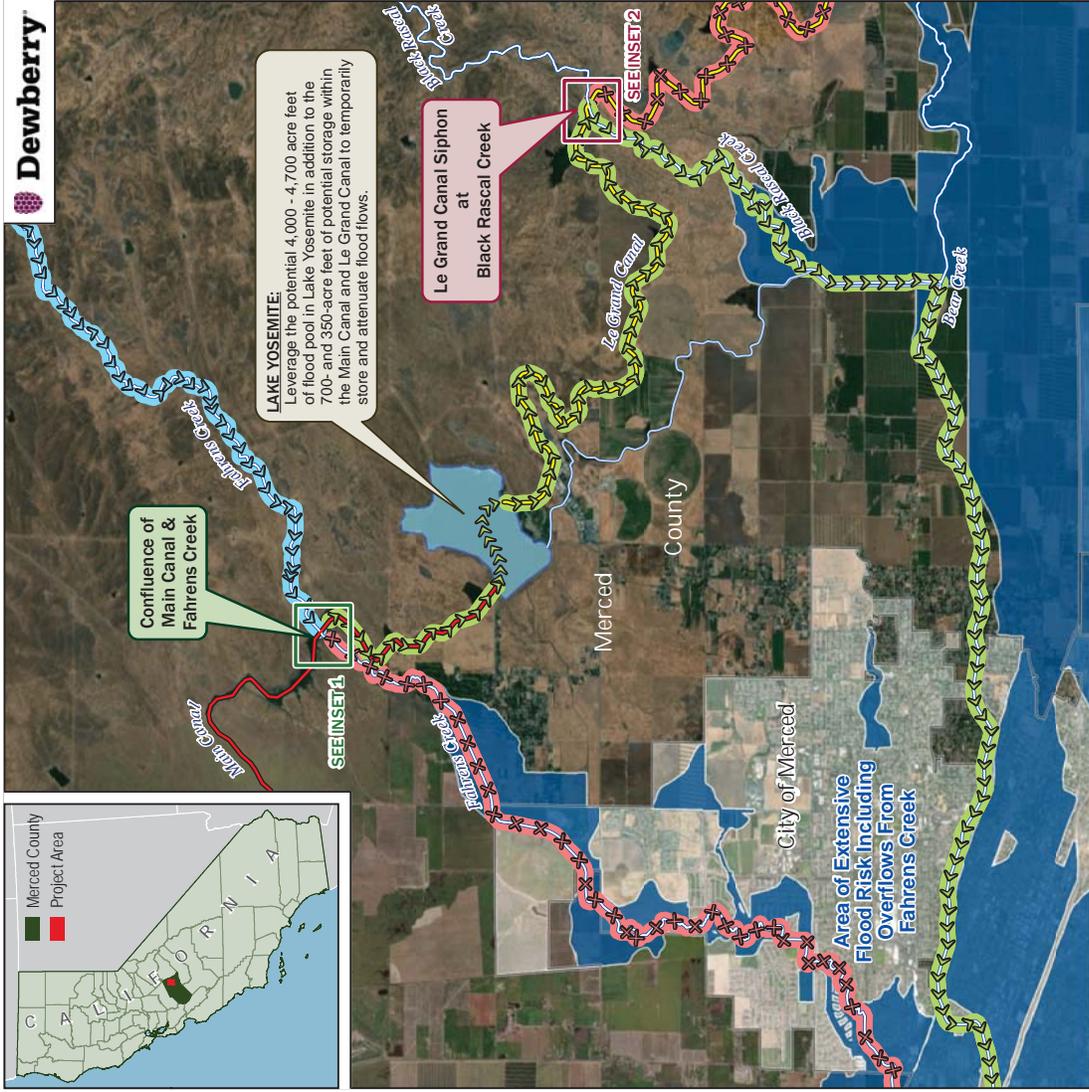
Looking (NW) along the Main Canal at the Fahrrens Creek Confluence (Fahrrens Creek flows directly into the Main Canal and is able to pass through the canal back into the downstream creek through the existing side gates, diverting them to Lake Yosemite)



INSET 1
Diverted Flow
Existing Slide Gate
Intercepted Flow



Merced County
Project Area



LAKE YOSEMITE:
Leverage the potential 4,000 - 4,700 acre feet of flood pool in Lake Yosemite in addition to the 700- and 350-acre feet of potential storage within the Main Canal and Le Grand Canal to temporarily store and attenuate flood flows.

Le Grand Canal Siphon at Black Rascal Creek

Merced County

City of Merced

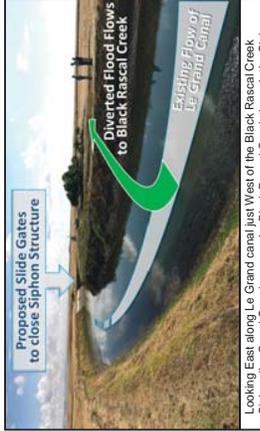
Area of Extensive Flood Risk Including Overflows From Fahrrens Creek

- Main Canal
- Le Grand Canal
- Streams
- Fairfield Canal
- Existing Flow
- Intercepted Flow
- Diverted Flow
- Effective Special Flood Hazard Area (SFHA)



Le Grand Canal Siphon at Black Rascal Creek (Existing)

PROPOSED ACTIONS: Construction of a remotely operated side gate on the south bank of Le Grand Canal and addition of side gates to the existing siphone structure to close of Le Grand Canal and divert intercepted flood flows from Fahrrens Creek into Black Rascal Creek after floods subside and flows can be released in a controlled manner from Lake Yosemite into the canal. This will delay timing and take attenuated flows around the high flood risk areas.



Proposed Slide Gates to close Siphon Structure

Diverted Flood Flows to Black Rascal Creek

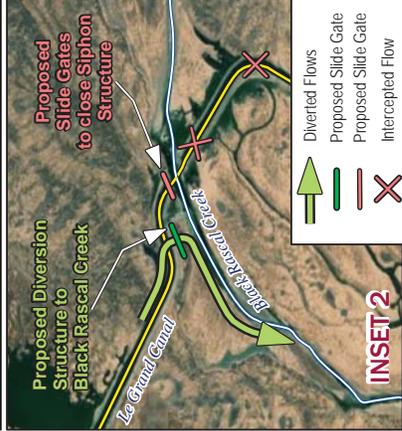
Looking East along Le Grand canal just West of the Black Rascal Creek Siphon (Le Grand Canal goes under Black Rascal Creek through the Siphon. The proposed project would allow the Siphon to be closed using new slide gates, backing up attenuated flood flows through the new side gates to Black Rascal Creek)



Proposed Diversion Structure to Black Rascal Creek

Diverted Flood Flows to Black Rascal Creek

Looking North towards the Main Canal from Black Rascal Creek (The proposed side gates for the diversion structure would release attenuated flood flows directly into Black Rascal Creek)



INSET 2
Proposed Diversion Structure to Black Rascal Creek
Proposed Slide Gates to close Siphon Structure

- Diverted Flows
- Proposed Slide Gate
- Proposed Slide Gate
- Intercepted Flow

Proposed Flood Flow Diversion & Storage Optimization to Reduce Flood Risk Primarily on Fahrrens Creek

Merced County * The City of Merced * Merced Irrigation District