

Lower Feather River Corridor Management Plan (CMP)

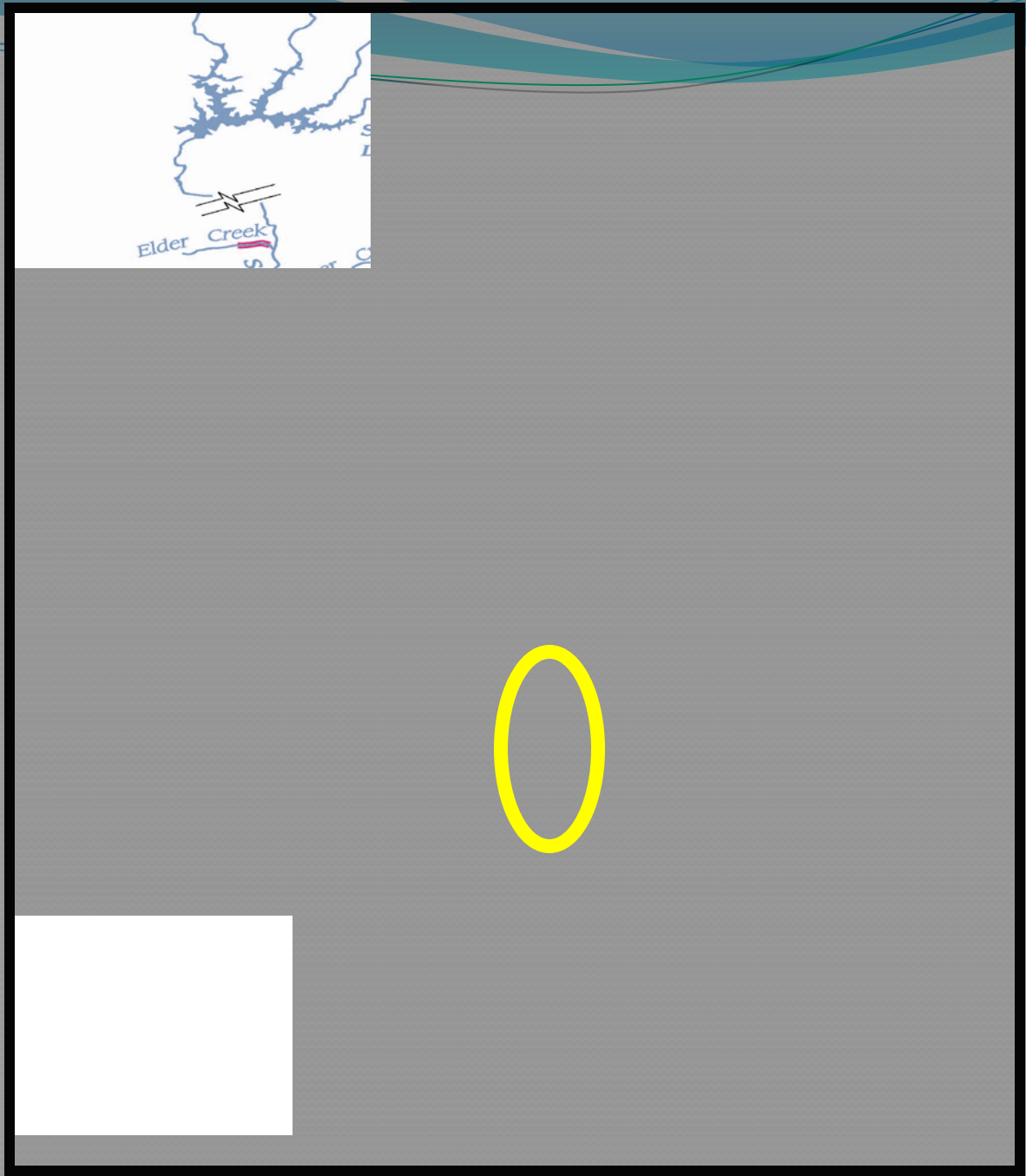


*A collaborative strategy
for optimizing
management of the river
corridor.*

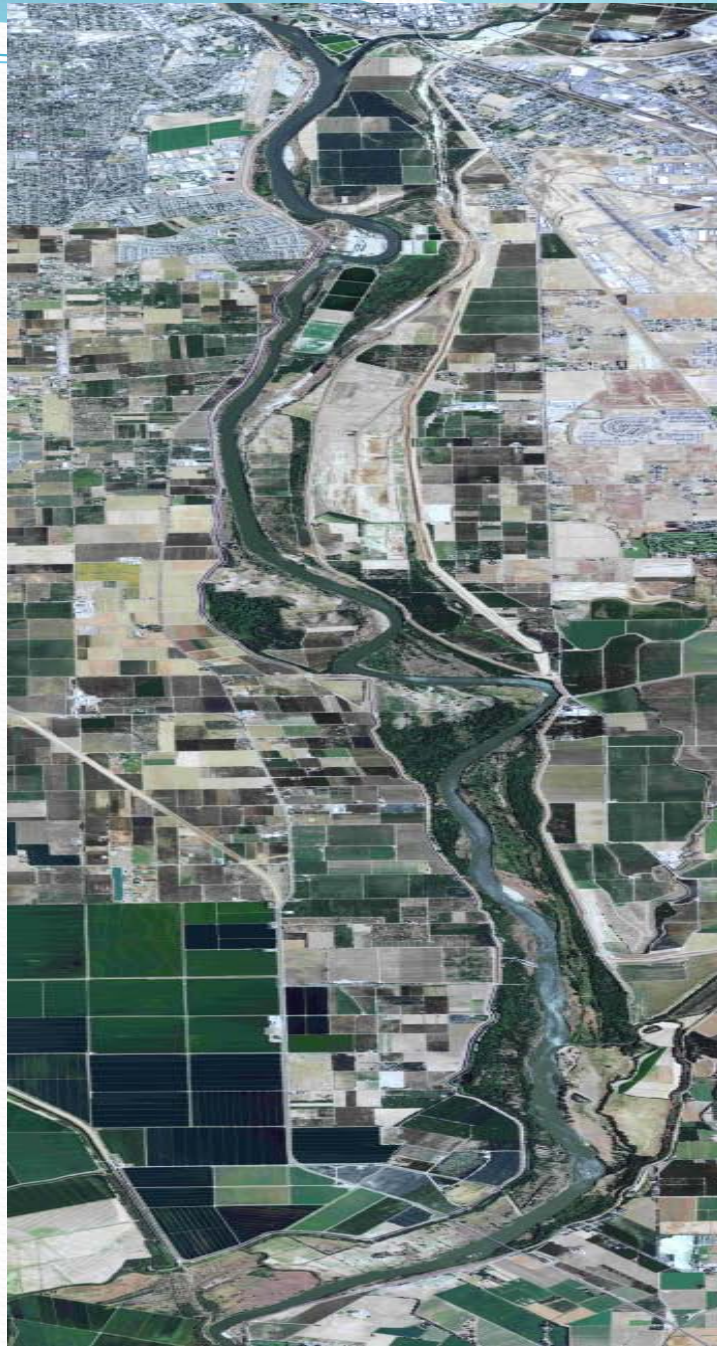
Wednesday,
June 2, 2010



Lower Feather River CMP Overview Map

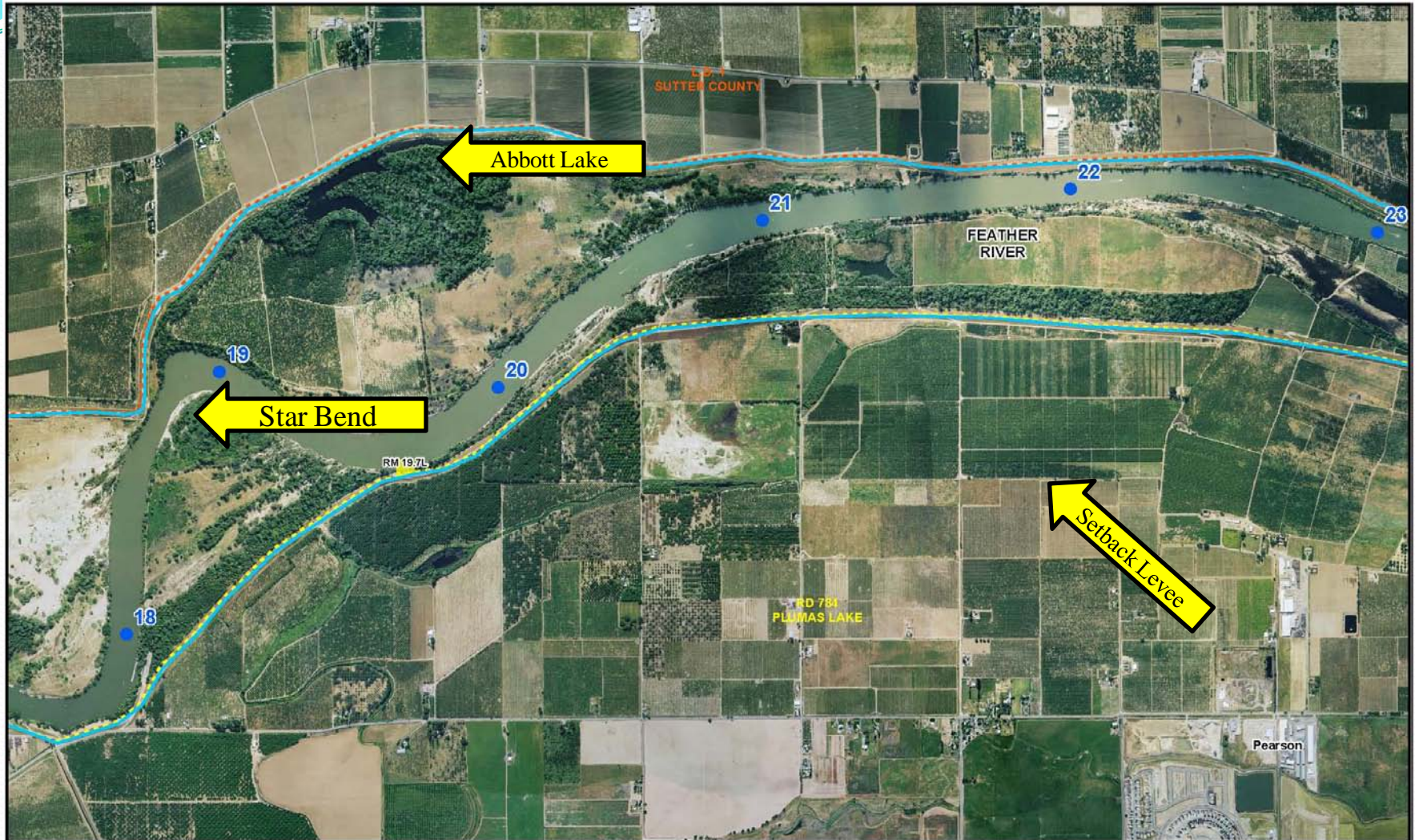


Aerial
Photo of
the entire
Lower
Feather
River CMP



The
Big
Picture

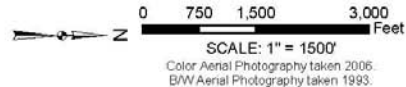
Feather River Mile Marker 17.5 to 23.25



AYRES
ASSOCIATES



- 2008 EROSION SITE
- 2008 CRITICAL EROSION SITE UNDER REPAIR
- RIVER MILE MARKERS w/ RIVER MILE



FEATHER RIVER, CALIFORNIA
MILE 17 TO MILE 23

PLATE 41

Lower Feather River Proposed CMP

➤ **A high level guide or vision for the future of this river corridor.**

- **Pilot project to demonstrate :**
- **A long-term, integrated operational model for management of flood control facilities & associated floodplains & upland areas.**



What is Corridor Management & Why is it Important?

- A Win - Win Approach
- Multi-Objective
- Lower Costs



Feather River Proposed CMP

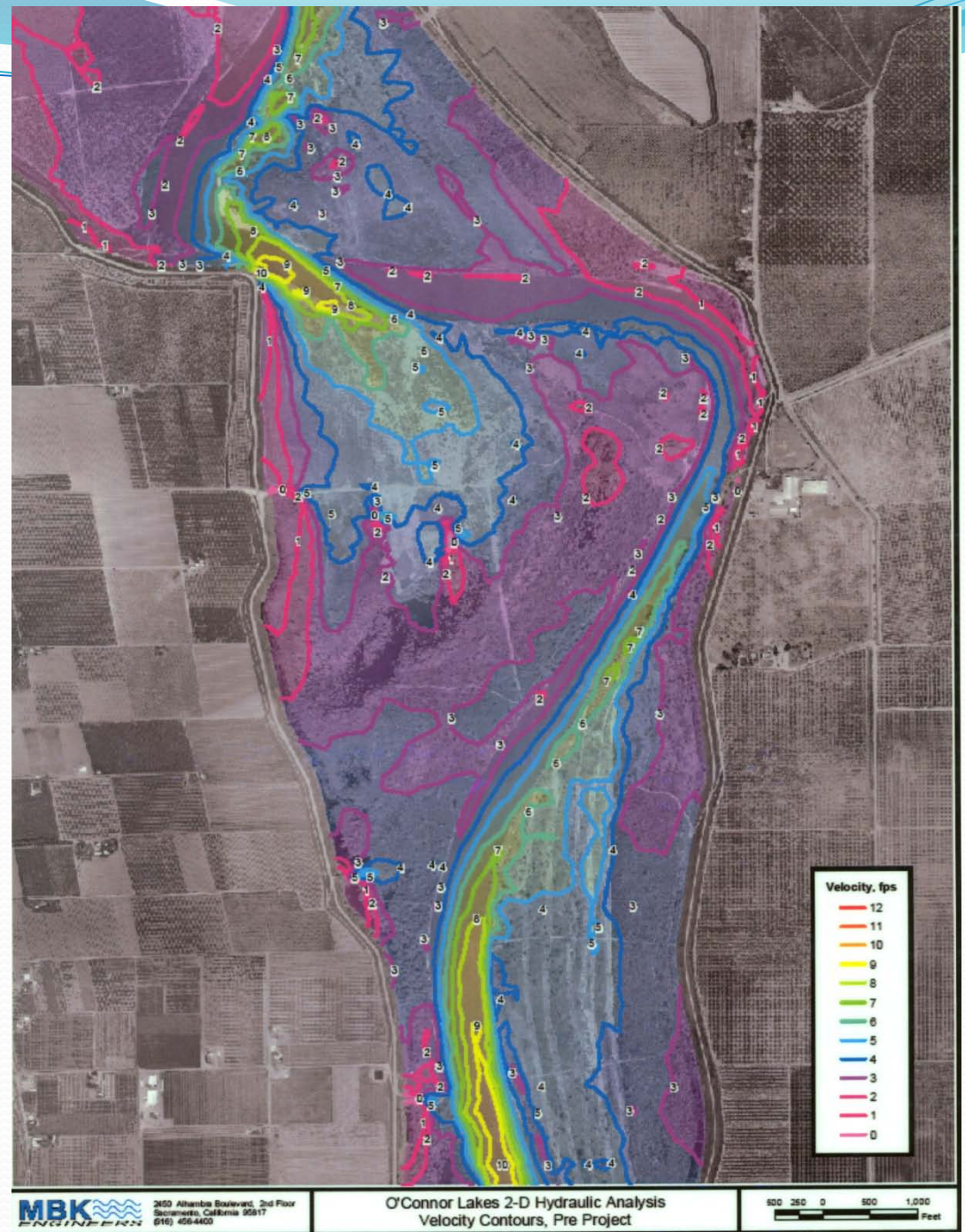
Past problems and erroneous practices

- **Single interest projects and activities**
- **Difficulty obtaining environmental clearance for maintenance**
- **Lack of habitat has led to decline of fish and wildlife populations**
- **Reduction in funding for maintenance**



Hydraulics

River Partners Model of Flow rates at O'Connor Lakes



Lower Feather River CMP

CMP Work Group

Earl Nelson, Project Manager

(DWR-Flood Projects Corridor Planning)

DWR- Flood Maintenance Office

DWR - Levee Repairs & Floodplain Mgmt Ofc

DWR-FloodSafe Environmental Stewardship & Statewide Resources Office

CA Department of Fish & Game

Central Valley Flood Protection Board

Levee Districts & Reclamation Districts

Three River Levee Improvement Authority

US Fish Wildlife Service

US Corps of Engineers

National Oceanic & Atmospheric Admin.

AECOM & River Partners - Consultants



Lower Feather River Proposed CMP

Lower Feather River Stakeholder interests & concerns:

➤ DWR Maintenance –

- Channel capacity, levee integrity, timing of maintenance work to meet environmental constraints, funding sources, maintenance cost, system design, ease in obtaining permits, & mitigation costs.

➤ USFWS, NMFS, and CA DFG –

- Max. endangered species habitat values, maintaining public safety, & admin. of environmental laws.

➤ Local levee maintenance districts –

- Flood risk from lack of channel capacity, levee integrity, ease of obtaining environmental permits, & mitigation costs.

➤ Other public agencies –

- Public safety, tax revenues, rural area security, educational & public recreational opportunities, & economic activity.

Corridor Management Planning Method

Integrated systems approach:

- Assess the existing channel habitat & geomorphology
- Consider all stakeholder interests
- Take advantage of synergies & optimize the mix of benefits for all (win-win)
- Enhance fish and wildlife habitat
- No compromise of public safety while doing habitat restoration
- Seek additional opportunities for setback levees & compatible uses such as recreation & agriculture

What is Corridor Management?

What elements of the corridor can be managed?

1. Flood facility maintenance
2. Levee size, configuration, location, & constituent materials
3. Plant cover
4. Floodplain elevation & topography
5. Vegetation maintenance
6. Land ownership
7. Amenities
8. Land use restrictions
9. Channel configuration



Corridor Management Planning Method

Configure channel and vegetation to:

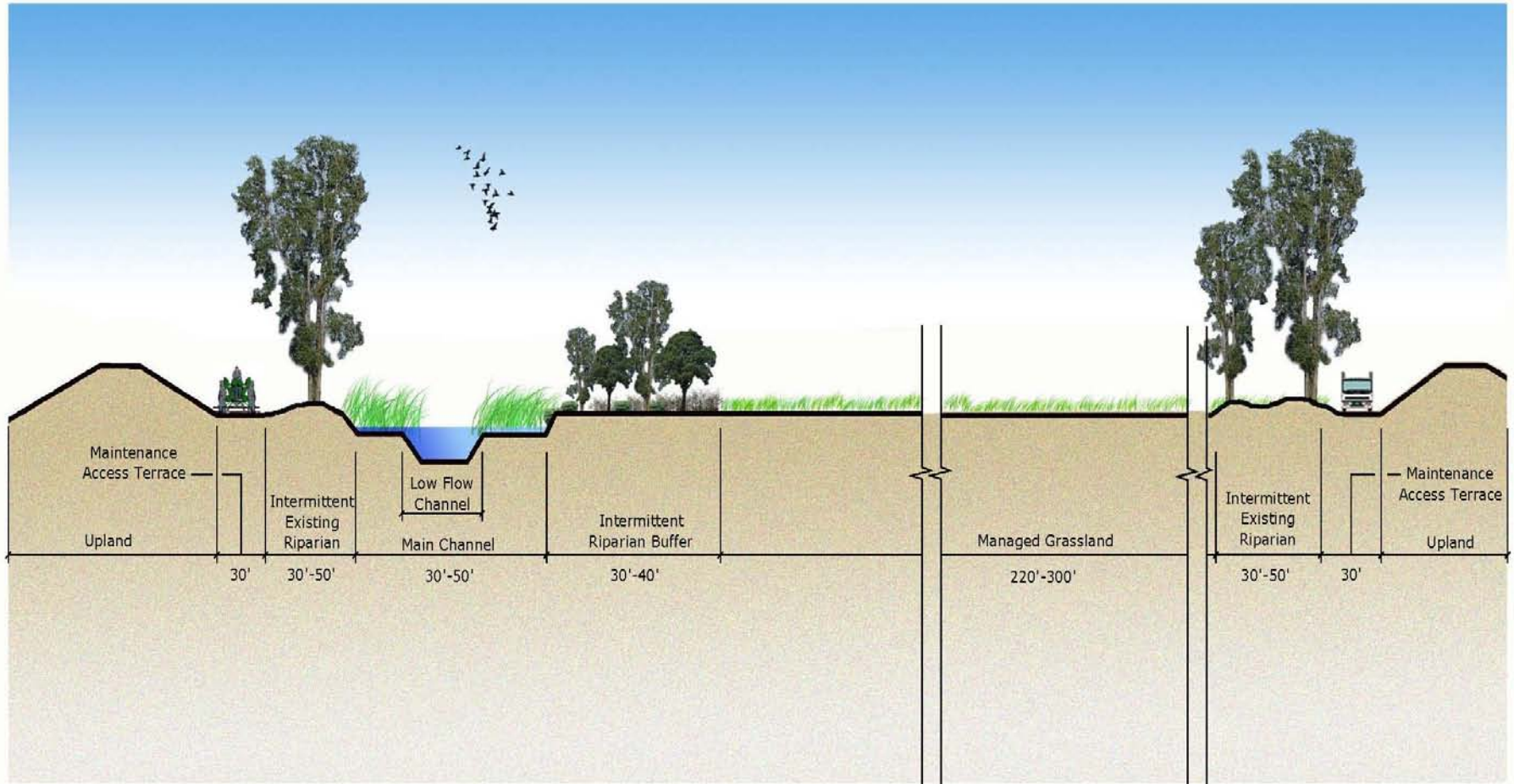
- Pass high flows safely
- Use wide swath of low resistance vegetation
- Use grassland or shrubby vegetation that lays down
- Create low-resistance channel entire length of the study area
- Locate low-resistance channel where flow velocities are high
- Some higher resistance vegetation is acceptable
- Allow recreation where compatible with habitat values
- Examine agricultural opportunities



Corridor Management Planning Method

- Create habitat diversity by contouring floodplains
 - Channels created to provide for fish & giant garter snake
 - Refugia mounds will provide safe areas for wildlife
- Re-contour floodplains to minimize maintenance
- Re-contouring floodplains to avoid fish stranding
- Wide channels result in lower flow velocities where
 - Sediment tends to drop out
 - Accumulated sediment can be easily removed
- Programmatic levee & channel maintenance permitting:
 - Individual permits are **not** needed
 - Mitigation done in advance
 - New permits and mitigation not required for each maintenance action

Vision Concept



NOTE: Schematic Section - Not to Scale

Example from Cherokee CMS pilot, Phase I

Lower Feather River Proposed CMP

Conclusions

❑ Identify how the River corridor could be better managed for:

- ❑ Flood Operations
- ❑ Flood Maintenance
- ❑ Ecosystem
- ❑ Other Economic Uses
 - ❑ Agriculture
 - ❑ Recreation



Lower Feather River CMP

Conclusions

- These items will be achieved by means of a long range integrated plan
- Which will:
 - Further public safety
 - Be cost effective
 - Achieve timely permitting and efficient mitigation
 - Provide enhanced environmental benefits
 - And allow other compatible uses
- Questions



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Questions?

