

CVFPB MEETING - April 25, 2014



AGENDA ITEM 8A

Application No. 18856

Capital Conservation and Mitigation Bank

Project: To create perennial marsh and upland habitat inside the Yolo Bypass suitable for the GGS

Applicants: Ronald D. and Clover A. Smith



BOARD ACTION

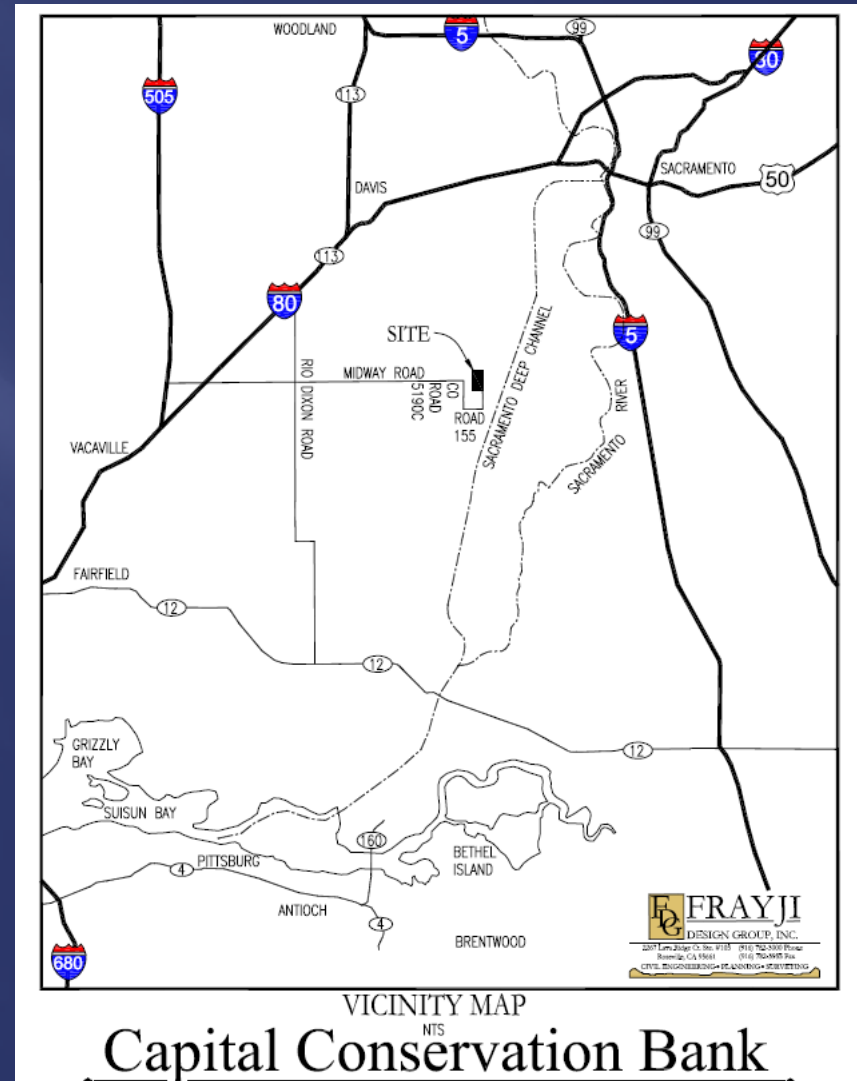
Consider Adoption of Resolution No. 2014-10 and Approval of Permit No. 18856 to:

- Create a 137-acre Mitigation Bank for the Giant Garter Snake (GGS) inside of the Yolo Bypass – Capital Conservation and Mitigation Bank (Capital Conservation Bank).
- 130-acres will consist of perennial marsh, upland habitat, water delivery channels, shallow wetlands, and upland areas (~3.8-acres) that will be above the Corps' design water surface elevation.

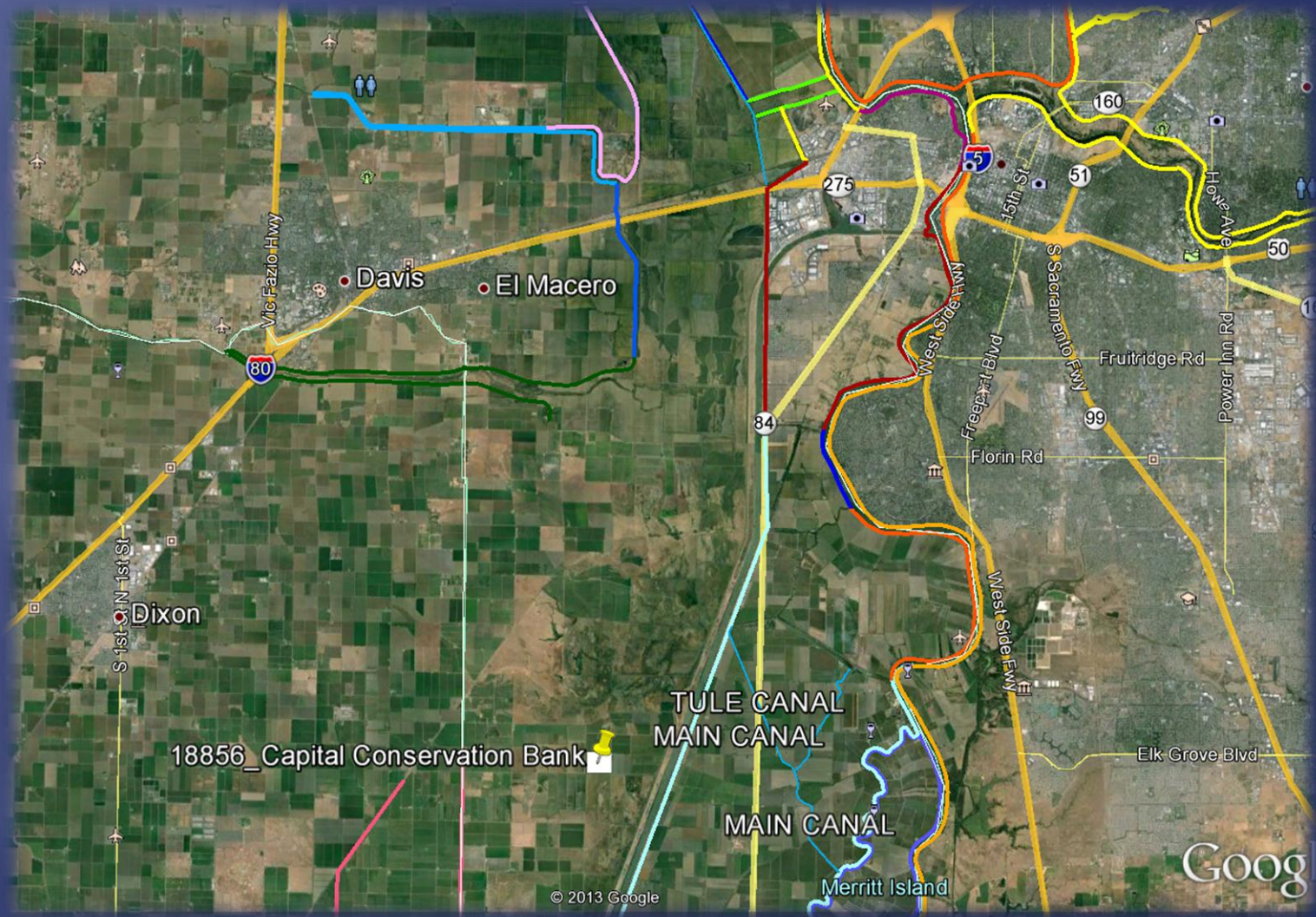
PROJECT VICINITY MAP



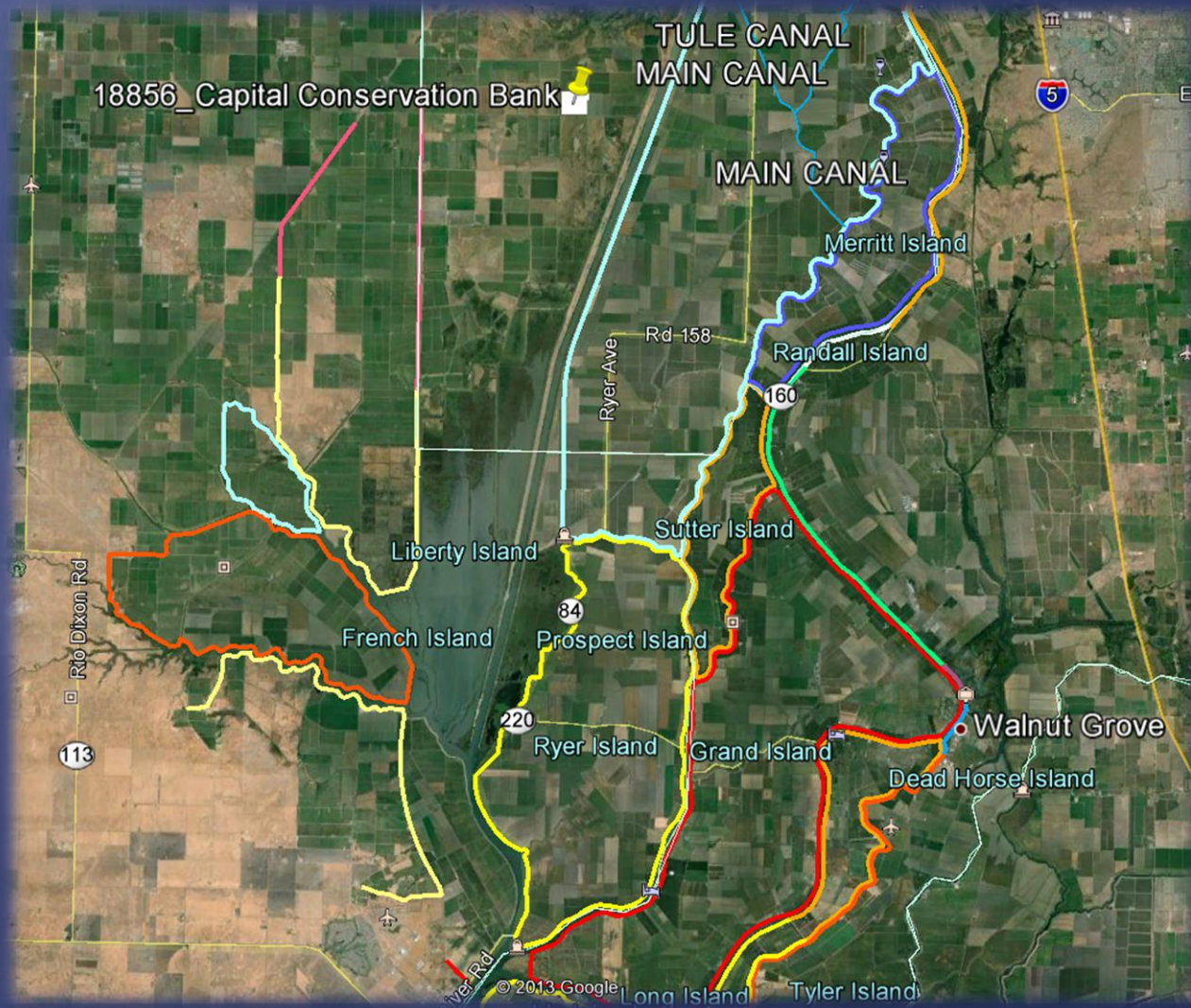
- Project site is located:
 - Approximately 1.7 miles south of I-80 and 6.5-miles west of the town of Clarksburg;
 - Approximately 1-mile west of the west levee of the Sacramento Deep Water Ship Channel (non-project levee).
 - Approximately 2.5-miles east of the west levee of the Yolo Bypass (Project Levee)



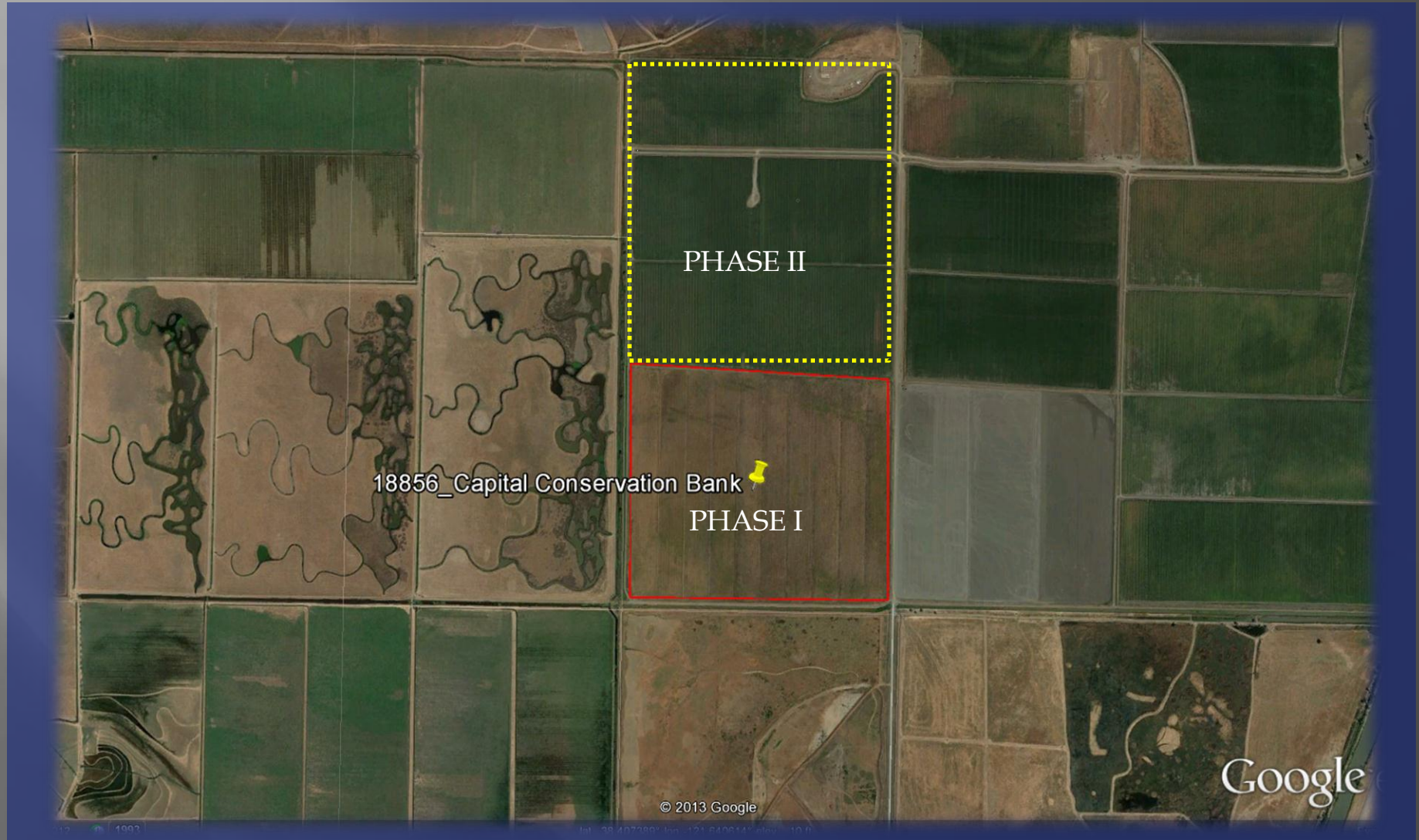
AERIAL VIEW



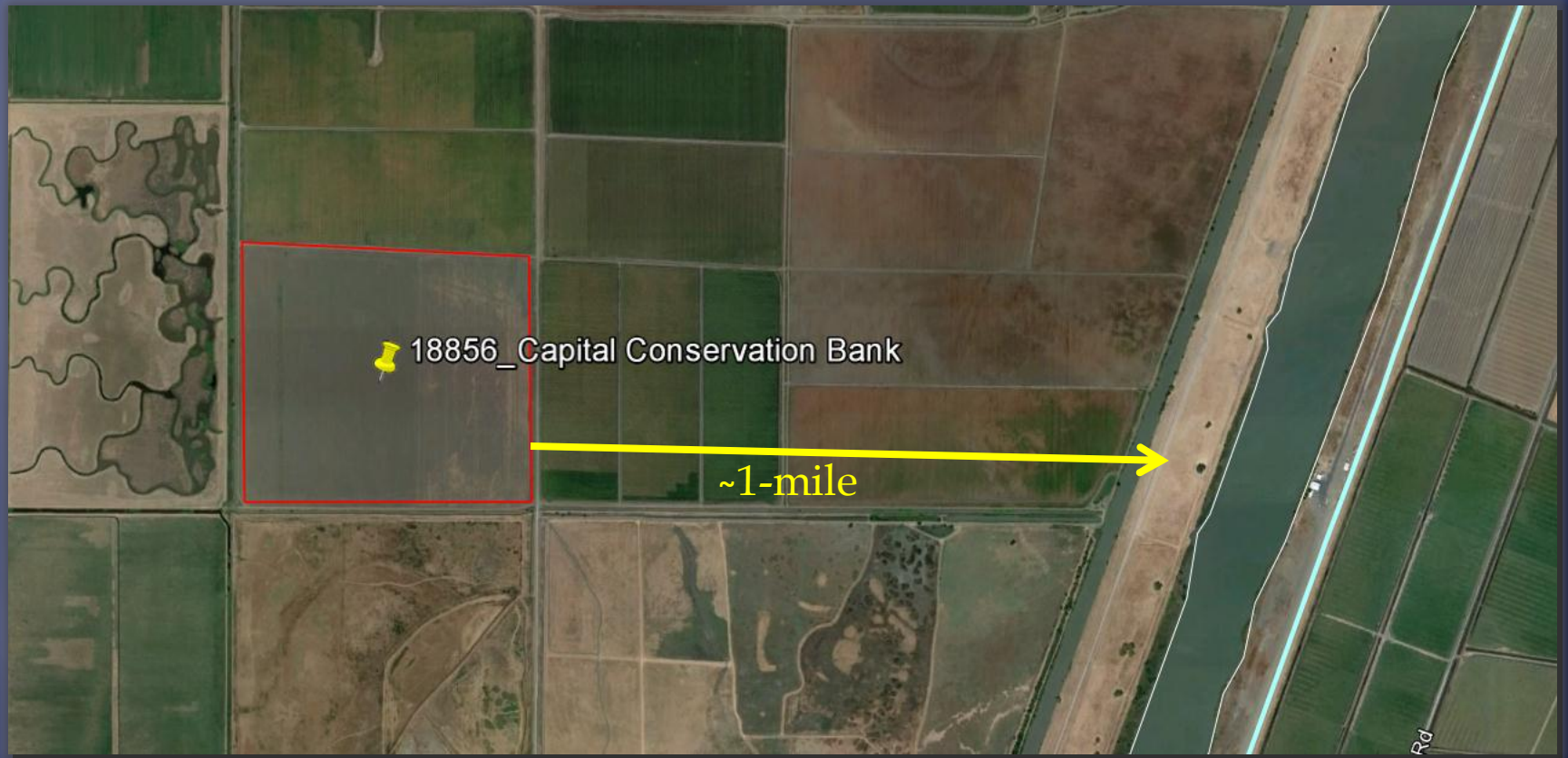
AERIAL VIEW



PROJECT LOCATION



PROJECT LOCATION



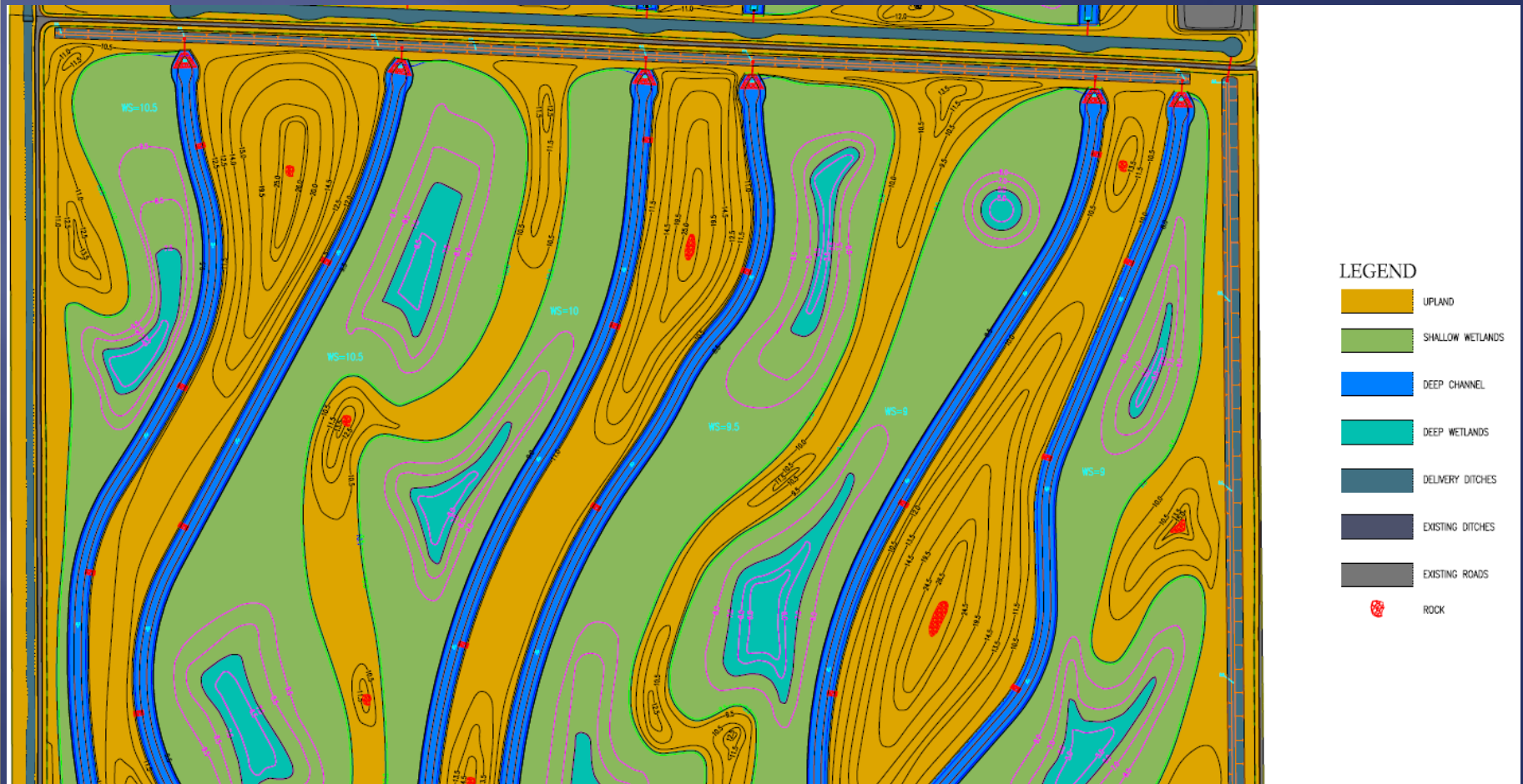
PROJECT SITE PHOTOGRAPH



PROJECT SITE PHOTOGRAPH




PROJECT GRAPHIC





PROJECT ANALYSIS

- Capital Conservation Bank (CCB) is potentially a two phase project;
- The 320-acre mitigation bank site is part of the 1,242-acre ranch owned by the Smith Family;
- Phase 2, if constructed (~185-acres), would be located adjacent to and immediately north of Phase 1 of the CCB Project;
- Application No. 18856 is for Phase 1 only (~137-acres), a new encroachment permit application will be submitted for Phase 2 if constructed;
- Located inside the Yolo Bypass approximately 1-mile from the Sacramento Deep Water Ship Channel's west levee (non-project) and about 2.5-miles from the west levee (project) of the Yolo Bypass;
- Will convert fallow agricultural land to a mixture of shallow to deep water wetlands (0.5 to 3-feet) and upland habitat (~57-acres), some of which will be constructed to be above the design water surface elevation (~3.8-acres) of the Yolo Bypass. 

PROJECT ANALYSIS



- No fill material will be brought into the Yolo Bypass;
- Excess material (~3,300 cubic yards) will be spread evenly on the applicants property to the north;
- Hydrology for the CCB will be supplied through a series of water supply channels managed with gates and flashboard risers;
- Vegetation will be limited to emergent plants (e.g. tule) and perennial grasses and forbs;
- The water delivery system will be designed to facilitate temporary de-watering of individual wetland cells to allow vegetation control and sediment removal;
- Approximately 1,500 cubic yards of rock will be placed to control channel erosion and provide GGS habitat;
- Special Condition No. THIRTY of Draft Permit No. 18856 requires that an equivalent amount of material be removed from the Yolo Bypass;


PROJECT ANALYSIS



- An Interim Management Plan has been developed that details how the CCB will be maintained prior to full funding (~5yrs) of the endowment fund;
- A Long-Term Management Plan (LTMP) has been developed that details how the CCB will be operated and maintained in perpetuity;
- Vegetation will be maintained within wetland habitats to provide GGS foraging and to ensure the project does not create an obstruction to flood flows within the Yolo Bypass;
- Methods to manage vegetation may include grazing and mowing, hand removal of invasive plants, herbicide application, and mechanical removal of vegetation using a hydraulic excavator;
- Funding for the maintenance of the project will be provided by a non-wasting, perpetual endowment fund that will be managed by the conservation easement holder, anticipated to be the Wildlife Heritage Foundation.

HYDRAULIC ANALYSIS



- A two dimensional hydraulic model (RMA2), developed by the USACE (2007) for use in permitting and planning within the Yolo Bypass, was used as a basis for assessing the potential flood conveyance impacts due to the CCB;
- Both Phase 1 and Phase 2 of the CCB were modeled to assess the potential cumulative flood conveyance impacts using a project design flow of 490,000-cfs;
- Modeling results:
 - Regional Impacts: 0.01-foot (~1/8 inch) increase in WSE with non-managed vegetation;
 - Localized Impacts: 0.02-foot (~1/4 inch) increase in WSE with managed vegetation (per the LTMP), no regional impacts;
 - Water Velocity Impacts: localized changes of ± 0.5 fps. 

GEOTECHNICAL ANALYSIS



- A geotechnical investigation was completed to develop geotechnical engineering recommendations for use in project design and construction;
- Fifteen (15) exploratory test pits were advanced to an approximate depth of 5 feet below the existing ground surface over the 320-acres;
- Field density tests were performed using a nuclear gauge at an approximate depth of 2-feet below the existing ground surface at each test pit.
- Soil samples were collected at depths of two-feet and five-feet at each test pit.
- Subsurface soils consisted of soft to medium stiff, fat clay (CH) with sand . The soils have a medium expansion potential.

AGENCY COMMENTS/ENDORSEMENTS



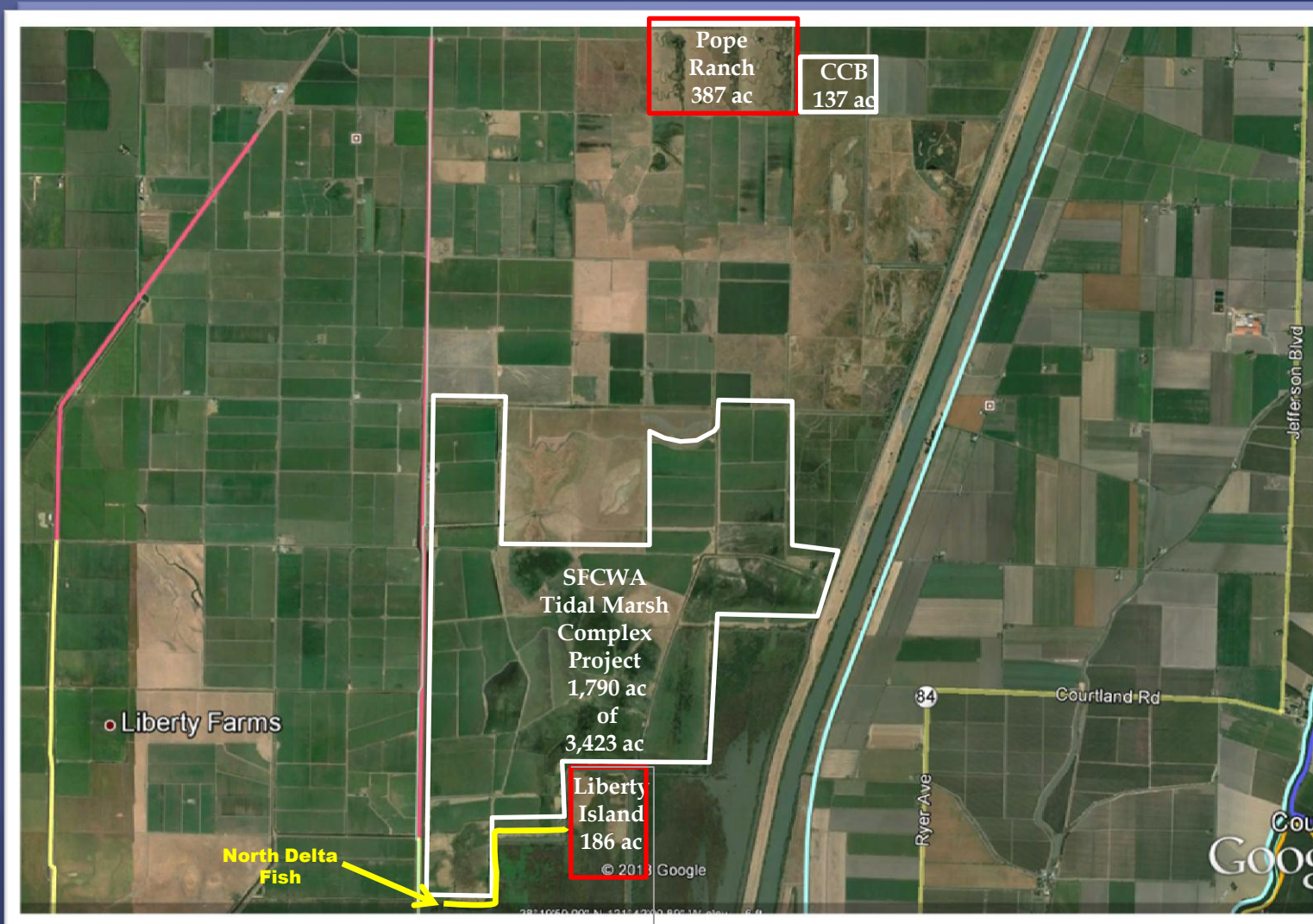
- The Department of Water Resources Flood Maintenance Office (FMO) has not provided a formal endorsement or denial of the proposed project. FMO has expressed concerns about mitigation bank projects, such as the proposed CCB project, and their potential impacts on FMO's ability to effectively carry out its maintenance responsibilities as specified under California Water Code Sections 8361 and 12878.
- The U.S. Army Corps of Engineers comment letter has been received for this application. The USACE District Engineer has no objection to the project, subject to conditions. The letter will be incorporated into the permit as Exhibit B.

PREVIOUSLY PERMITTED MITIGATION BANK PROJECTS INSIDE THE YOLO BY-PASS



- **Permit No. 17280** -Pope Ranch-Wildlands (2001): 387-acres of marsh habitat that includes berms, open channels, and access roads – benefits GGS;
- **Permit No. 18334** - Liberty Island-Wildlands (2010): Removal of approximately 1,700 linear feet of the east-west levee at the northern end of Liberty Island. Removal of approximately 2,390 linear feet of two smaller interior levees, tidal channels, native grasses, perennial marsh vegetation within the 186-acre Liberty Island Conservation Bank and Preserve – benefits fish.
- **Permit No. 18723** – Reclamation District 2093/Trust for Public Land (2012-not constructed yet): To degrade approximately 4,200 linear feet of the east-west private levee along Shag Slough, excavate minor breaches and small channels, widen and deepen the existing breach on the east-west levee, excavate a bench and plant tule plugs along a portion of the northern project boundary, and seed existing levee upland areas with native and naturalized species – North Delta Fish Conservation Bank - benefits fish.

PREVIOUSLY PERMITTED and PROPOSED MITIGATION BANK PROJECTS INSIDE THE YOLO BY-PASS



8610.5 CONSIDERATIONS



- **Admission of Records**
 - The Board will make its decision based on the evidence in the permit application and attachments, the staff report, and any other evidence presented by any individual or group.
- **Use of Best Available Science**
 - The accepted industry standards for the work proposed under this permit as regulated by Title 23 have been applied to the review of this permit.
- **Effects on the State Plan of Flood Control**
 - There will be no adverse effect on facilities of the State Plan of Flood Control as the hydrologic and geotechnical impacts from the proposed project are localized and considered to be insignificant. Although the proposed project is located within the Yolo Bypass it is compatible with the stated goals of the 2012 Central Valley Flood Protection Plan as the project may provide GGS mitigation credits for future projects.
- **Effects of Reasonable Projected Future Events**
 - The proposed project is located within the Yolo Bypass and habitat for the GGS is primarily perennial marsh. The proposed giant garter snake conservation mitigation bank is consistent with the Yolo County General Plan, the open space provisions of the Williamson Act, and the applicable County development regulations including the Yolo County ordinance regulating habitat mitigation projects and Flood Hazard Development ordinance. In addition, the project is not reasonably expected to significantly conflict with the Yolo Natural Heritage Program (HCP/NCCP).

STAFF RECOMMENDATION



- Staff recommends that the Board adopt (in substantially the form provided):
 - Board CEQA Findings
 - Resolution No. 2014-10 to conditionally approve Board Encroachment Permit No. 18856 subject to any additional conditions that may be warranted by testimony of the Department of Water Resources, Division of Flood Management, Flood Maintenance Office, or others, at the public hearing.
 - And direct the Executive Officer to take the necessary actions to prepare and execute the permit and any related documents and to file a Notice of Determination with the State Clearing House.

QUESTIONS



Presented by: Gary W. Lemon P.E.
CVFPB, Staff