

**DEPARTMENT OF DEFENSE****Department of the Army; Army Corps of Engineers****Notice of Intent To Prepare an Environmental Impact Statement for 408 Permission and 404 Permit to Three Rivers Levee Improvement Authority for the Feather River Levee Repair Project, California, Segment 2**

**AGENCY:** Department of the Army, U.S. Army Corps of Engineers, DoD.

**ACTION:** Notice of intent.

**SUMMARY:** The action being taken is the preparation of an Environmental Impact Statement (EIS) for the issuance of both the 408 permission to the Central Valley Flood Protection Board and 404 Permit to Three Rivers Levee Improvement Authority (TRLIA) for their work on the Feather River Levee Repair Project (FRLRP). Under 33 U.S.C. 408, the Chief of Engineers grants permission to alter an existing flood control structure if it is not injurious to the public interest and does not impair the usefulness of such work. Under section 404 of the Clean Water Act, the District Engineer permits the discharge of dredged or fill material into waters of the United States if the discharge meets the requirements of the Environmental Protection Agency's 404(b)(1) guidelines and is not contrary to the public interest. The FRLRP is located in Yuba County, CA. TRLIA is requesting this permission and permit in order to complete construction along the east levee of the Feather River.

**DATES:** A public scoping meeting will be held March 10, 2008, 6:30 to 8:30 at the Yuba County Government Center, 915 8th Street, Marysville, CA. Send written comments by April 9, 2008 to the address below.

**ADDRESSES:** Send written comments and suggestions concerning this study to Mr. John Suazo, U.S. Army Corps of Engineers, Sacramento District, Attn: Planning Division (CESPK-PD-R), 1325 J Street, Sacramento, CA 95814.

Requests to be placed on the mailing list should also be sent to this address.

**FOR FURTHER INFORMATION CONTACT:**

Questions about the proposed action and EIS should be addressed to John Suazo at (916) 557-6719, e-mail: [john.suazo@usace.army.mil](mailto:john.suazo@usace.army.mil) or by mail to (see **ADDRESSES**).

**SUPPLEMENTARY INFORMATION:**

1. *Proposed Action.* The U.S. Army Corps of Engineers is preparing an EIS to analyze the impacts of the work proposed by TRLIA from the implementation of the FRLRP, Segment 2. The FRLRP, Segment 2 is being

constructed by TRLIA to improve flood protection to portions of Yuba County and Reclamation District (RD) 784.

2. *Alternatives.* The EIS will address an array of flood control improvement alternatives along Segment 2. Alternatives analyzed during the investigation will include a combination of one or more flood protection measures. These measures include seepage berms, stability berms, setback levees, seepage cutoff walls, and relocation of a pump station.

3. *Scoping Process.* a. The Corps has initiated a process to involve concerned individuals, and local, State, and Federal agencies. A public scoping meeting will be held on March 10, 2008 to present information to the public and to receive comments from the public.

b. Significant issues to be analyzed in depth in the EIS include effects on hydraulic, wetlands and other waters of the U.S., vegetation and wildlife resources, special-status species, cultural resources, land use, fisheries, water quality, air quality, transportation, and socioeconomic; and cumulative effects of related projects in the study area.

c. The Corps is consulting with the State Historic Preservation Officer to comply with the National Historic Preservation Act, and the National Marine Fisheries Service and the U.S. Fish and Wildlife Service to comply with the Endangered Species Act. Coordination with the National Marine Fisheries Service has been completed; coordination with U.S. Fish and Wildlife Service is still ongoing.

d. A 45-day public review period will be provided for individuals and agencies to review and comment on the draft EIS. All interested parties are encouraged to respond to this notice and provide a current address if they wish to be notified of the draft EIS circulation.

4. *Availability.* The draft EIS is scheduled to be available for public review and comment in early 2008.

Dated: February 22, 2008.

**Thomas C. Chapman,**

*COL, EN, Commanding.*

[FR Doc. E8-3919 Filed 2-28-08; 8:45 am]

**BILLING CODE 3710-EZ-P**

**DEPARTMENT OF DEFENSE****Department of the Army; Army Corps of Engineers****Notice of Intent To Prepare an Environmental Impact Statement for the American River Common Features General Reevaluation Report, Sacramento, CA**

**AGENCY:** Department of the Army, U.S. Army Corps of Engineers; DOD.

**ACTION:** Notice of intent.

**SUMMARY:** The action being taken is the preparation of an environmental impact statement (EIS) for the American River Common Features General Reevaluation Report (GRR). The Common Features Project GRR will re-evaluate the currently authorized plan as well as develop and evaluate other viable alternatives, including a locally-preferred plan, with the goal of identifying a comprehensive plan that will lower the risk of flooding in and around the City of Sacramento. The Common Features Project GRR is located in Sacramento, Sutter and Yolo Counties, CA.

**DATES:** A series of public scoping meetings will be held as follows:

1. March 5, 2008, 5 to 7 p.m. at The Elk's Lodge.
2. March 6, 2008, 5 to 7 p.m. at Arden Park Community Center, Room A.
3. March 10, 2008, 3 to 6 p.m. at The Library Galleria East Meeting Room.
4. March 13, 2008, 5 to 7 p.m. at The Sierra Health Foundation.

Send written comments by April 11, 2008 to the address below.

**ADDRESSES:** Written comments and suggestions concerning this study may be submitted to Ms. Elizabeth Holland, U.S. Army Corps of Engineers, Sacramento District, Attn: Planning Division (CESPK-PD-R), 1325 J Street, Sacramento, CA 95814. Requests to be placed on the mailing list should also be sent to this address. The location of the public meetings is as follows; The Elks Lodge, 6446 Riverside Blvd., Sacramento, CA; Arden Park Community Center, 1000 La Sierra Drive, Sacramento, CA; Library Galleria, 828 "I" Street, Sacramento, CA; and Sierra Health Foundation, 1321 Garden Highway, Sacramento, CA.

**FOR FURTHER INFORMATION CONTACT:**

Questions about the proposed action and EIS should be addressed to Liz Holland at (916) 557-6763, e-mail [Elizabeth.g.holland@usace.army.mil](mailto:Elizabeth.g.holland@usace.army.mil) or by mail to (see **ADDRESSES**).

**SUPPLEMENTARY INFORMATION:**

1. *Proposed Action.* The U.S. Army Corps of Engineers is preparing an EIS

to analyze the impacts of a range of alternatives that would lessen the risk of flooding in and around the City of Sacramento.

2. *Alternatives.* The EIS will address an array of flood control improvement alternatives that are intended to reduce flood risk within the project area. Alternatives analyzed during the investigation will include a combination of one or more flood protection measures. These measures include levee improvements (e.g., seepage berms, adjacent setback levees, seepage wells, seepage cutoff walls), revisions to system hydraulics through setbacks, levee raises, and/or more diversion of flow into the bypass system, and possible use of upstream lands for detention.

3. *Scoping Process.* a. A series of public scoping meeting will be held in early March, 2008 to present information to the public and to receive comments from the public. These meetings are intended to initiate the process to involve concerned individuals, and local, State, and Federal agencies.

b. Significant issues to be analyzed in depth in the EIS include effects on hydraulics, wetlands and other waters of the U.S., vegetation and wildlife resources, special-status species, esthetics, cultural resources, recreation, land use, fisheries, water quality, air quality, transportation, and socioeconomics; and cumulative effects of related projects in the study area.

c. The Corps is consulting with the State Historic Preservation Officer to comply with the National Historic Preservation Act and the U.S. Fish and Wildlife Service and National Marine Fisheries Service to comply with the Endangered Species Act. The Corps is also coordinating with the U.S. Fish and Wildlife Service to comply with the Fish and Wildlife Coordination Act.

d. A 45-day public review period will be provided for individuals and agencies to review and comment on the draft EIS. All interested parties are encouraged to respond to this notice and provide a current address if they wish to be notified of the draft EIS circulation.

4. *Availability.* The draft EIS is scheduled to be available for public review and comment in spring 2010.

Dated: February 15, 2008.

**Thomas C. Chapman,**

*COL, EN, Commanding.*

[FR Doc. E8-3922 Filed 2-28-08; 8:45 am]

BILLING CODE 3710-EZ-P

## DEPARTMENT OF DEFENSE

### Department of the Navy

#### Meeting of the Ocean Research and Resources Advisory Panel

**AGENCY:** Department of the Navy, DoD.

**ACTION:** Notice.

**SUMMARY:** The Ocean Research and Resources Advisory Panel (ORRAP) will meet to discuss National Ocean Research Leadership Council (NORLC) and Interagency Committee on Ocean Science and Resource Management Integration (ICOSRMI) activities. All sessions of the meeting will be open to the public.

**DATES:** The meeting will be held on Tuesday, April 15, 2008 from 8 a.m. to 5:30 p.m. and Wednesday, April 16, 2008 from 8 a.m. to 1:30 p.m.

**ADDRESSES:** The meetings will be held at the Consortium for Ocean Leadership located at 1201 New York Ave, Suite 420, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Dr. Charles L. Vincent, Office of Naval Research, 875 North Randolph Street, Suite 1425, Arlington, VA 22203-1995, telephone: 703-696-4118.

**SUPPLEMENTARY INFORMATION:** This notice is provided in accordance with the provisions of the Federal Advisory Committee Act (5 U.S.C. App. 2). The meeting will include discussions on ocean research to applications, ocean observing, professional certification programs, and other current issues in the ocean science and resource management communities. In order to maintain the meeting time schedule, members of the public will be limited in their time to speak to the Panel. Members of the public should submit written comments at least one week prior to the meeting to Dr. Charles L. Vincent, Office of Naval Research, 875 North Randolph Street, Suite 1425, Arlington, VA 22203-1995, telephone: 703-696-4118.

Dated: February 22, 2008.

**T.M. Cruz,**

*Lieutenant, Office of the Judge Advocate General, U.S. Navy, Federal Register Liaison Officer.*

[FR Doc. E8-3893 Filed 2-28-08; 8:45 am]

BILLING CODE 3810-FF-P

## DEPARTMENT OF DEFENSE

### Department of the Navy

[USN-2008-0008]

#### Privacy Act of 1974; System of Records

**AGENCY:** Department of the Navy, DoD.  
**ACTION:** Notice to Amend a System of Records.

**SUMMARY:** The Department of the Navy is amending a system of records notice in its existing inventory of record systems subject to the Privacy Act of 1974, (5 U.S.C. 552a), as amended.

**DATES:** This proposed action will be effective without further notice on March 31, 2008 unless comments are received which result in a contrary determination.

**ADDRESSES:** Send comments to the Department of the Navy, PA/FOIA Policy Branch, Chief of Naval Operations (DNS-36), 2000 Navy Pentagon, Washington, DC 20350-2000.

**FOR FURTHER INFORMATION CONTACT:** Mrs. Doris Lama at (202) 685-6545.

**SUPPLEMENTARY INFORMATION:** The Department of the Navy systems of records notices subject to the Privacy Act of 1974, (5 U.S.C. 552a), as amended, have been published in the **Federal Register** and are available from the address above.

The specific changes to the record system being amended are set forth below followed by the notice, as amended, published in its entirety. The proposed amendments are not within the purview of subsection (r) of the Privacy Act of 1974, (5 U.S.C. 552a), as amended, which requires the submission of a new or altered system report.

Dated: February 25, 2008.

**L.M. Bynum,**

*Alternate OSD Federal Register Liaison Officer, Department of Defense.*

**N01000-3**

#### SYSTEM NAME:

Navy Individual Service Review Board (ISRB) Proceedings Application File (March 18, 1997, 62 FR 12806).

#### CHANGES:

#### SYSTEM NAME:

Delete entry and replace with "DoD Civilian/Military Service Review Board."

#### SYSTEM LOCATION:

Delete entry and replace with "Navy Personnel Command (PERS-312), 5720

**DEPARTMENT OF TRANSPORTATION**

DISTRICT 3 – SACRAMENTO AREA OFFICE

VENTURE OAKS, MS 15

P. O. BOX 942874

SACRAMENTO, CA 94274-0001

PHONE (916) 274-0614

FAX (916) 274-0648

TTY (530) 741-4509

*Flex your power!  
Be energy efficient!*

March 26, 2008

08SAC0046

03-SAC- 5 / 160 / 50 / 51 / 80

American River Common Features General Evaluation Report

Notice of Preparation

SCH# 2005072046

Ms. Annalena Bronson  
Central Valley Flood Protection Board  
3310 El Camino Avenue, Room LL-40  
Sacramento, CA 95821

Dear Ms. Bronson:

We have reviewed the American River Common Features General Re-evaluation Report Notice of Preparation documentation. Our comments are as follows:

- Caltrans' prior comments in our letters of July 27, 2005 and October 3, 2002 (copies enclosed) are still valid.
- In carrying out this project's levee improvement activities, it is very likely that truck haul routes used in transporting soil, rock, borrow and cleared vegetation disposal materials to and from the various proposed sites along the American and Sacramento Rivers and Natomas Cross Canal and Natomas East Main Drainage Canal could involve the use of Interstate 5, State Route (SR) 160, U.S. 50, SR51, and I-80. We note on page 2 in the "Study Area" discussion and on Page 6's map of the project levee areas that this "project's" scope is quite large. Clarification should be made regarding which of the multiple levee improvement areas will use trucks and which will use waterside barges to transport work materials.
- If off-site levee materials are being transported by truck to these work sites to modify levee bank areas and are using adjoining State roadway facilities, a project Traffic Management Plan (TMP) will be necessary. The TMP should be prepared for our review and include appropriate strategies to mitigate construction traffic impacts to the nearby roadway intersections, freeway interchanges, and mainlines. Truck haul routes and points of access to State roadway facilities used should be clarified in the plan. If Garden Highway will be used as an access to some of the improvement areas, the TMP should explain how Garden Highway is to be accessed, whether from I-5 or via a local road network. The project's individual levee site work plan dates should also be provided, if known, and the truck trip volumes. We recommend truck-hauling operations avoid peak traffic periods (6-10 AM and 3-7 PM) whenever possible. The Caltrans TMP Guidelines are enclosed for your use. For assistance, please contact Paul Wilkinson, the Caltrans District 3 Traffic Manager (DTM), at (916) 859-7978.

Ms. Annalena Bronson

March 26, 2008

Page 2

- If electronic warning signs are provided within State right-of-way at work sites to alert the traveling public of trucks entering or leaving State highways, an encroachment permit will be required. For permit assistance, please contact Julio Elvir at (530) 741-4204.
- Caltrans is interested in the work zone proximity of this project's planned levee improvements on the Sacramento River near the system of relief wells and piezometer installations near the downtown Sacramento I-5 freeway and within State property. Freeway Post Mile locations may have been established for these well and piezometer locations when they were installed to help prevent levee seepage near the subgrade section of Interstate 5 (more commonly called, "the Boat Section"). The distance of well locations from freeway bridge footings might have been specified as well to help locate where they are. We understand that Encroachment Permit # 0304-NMC-0918 was obtained from Caltrans District 3 in prior years when this installation work was done. Caltrans wishes to make sure that these wells and piezometer locations are not disturbed during the levee bank work. Preliminary planning installation maps, showing where the wells and piezometers were located in relation to our right-of-way lines and freeway facilities, and "As Built" maps, were prepared for Caltrans to update its right of way records of the Interstate 5 freeway corridor.

If you have any questions regarding these comments, please contact Ken Champion at (916) 274-0615.

Sincerely,



Dawn Cheser, Office Chief  
Office of Transportation Planning - South

Enclosure

c: Scott Morgan, State Clearinghouse

**DEPARTMENT OF TRANSPORTATION**

DISTRICT 3 – SACRAMENTO AREA OFFICE

VENTURE OAKS, MS 15

P. O. BOX 942874

SACRAMENTO, CA 94274-0001

PHONE (916) 274-0614

FAX (916) 274-0648

TTY (530) 741-4509

*Flex your power!  
Be energy efficient!*

July 27, 2005

05SAC0112

03-SAC- 99 PM 35.370

American River Watershed Project Common Features

Sacramento River East Levee &amp; Natomas Cross Canal Levee Modifications

Notice of Preparation

SCH# 2005072046

Ms. Annalena Bronson  
The Reclamation Board  
3310 El Camino Avenue, Room 110  
Sacramento, CA 95821

Dear Ms. Bronson:

We have reviewed the Sacramento River East and Natomas Cross Canal Levee Modifications Project Notice Of Preparation documentation. We look forward to reviewing the draft Environmental Impact Report. Our comments are as follows:

- Our comments provided in our letter of October 3, 2002 (copy enclosed) are still valid.
- The document map of the Sacramento River work site shows Elverta and Power Line Roads as potential access roadways. If off-site levee materials are being transported by truck to this work site to modify these levees and are using adjoining State roadway facilities, a project Traffic Management Plan (TMP) will be necessary. The TMP should be prepared for our review and include appropriate strategies to mitigate construction traffic impacts to the nearby State Route 99/Elverta Road intersection and other nearby freeway interchanges. The TMP should also clarify whether Interstate 5 would be used via Power Line Road. The Caltrans TMP Guidelines are enclosed for your use. Truck haul routes and points of access to State roadway facilities used should be clarified in the plan. The planned project initiation and completion dates should also be noted, as well as truck trip volumes, daily hours of operations, and whether electronic warning signs are provided to alert the traveling public. We recommend truck hauling operations during non-peak traffic periods.

Please provide our office with a copy of the draft TMP requested above. If you have any questions regarding these comments, please contact Ken Champion at (916) 274-0615.

Sincerely,

  
KATHERINE EASTHAM, Chief  
Office of Transportation Planning - Southwest

Ms. Annalena Bronson

July 27, 2005

Page 2

Enclosures

c: Scott Morgan, State Clearinghouse

Sutter County Community Services  
1130 Civic Center Boulevard, Suite E  
Yuba City, CA 95993

bc: John Holzhauser, Office of Traffic Operations – Sacramento  
Michelle Millette, District 3 – Sutter County LDR Coordinator  
Ken Champion, District 3 – Sacramento County LDR Coordinator

KC/ kc



*Flex your power!  
Be energy efficient!*

## DEPARTMENT OF TRANSPORTATION

DISTRICT 3 – Sacramento Area Office  
Venture Oaks, MS 15  
P.O. Box 942874  
Sacramento, CA 94274-0001  
PHONE (916) 274-0638  
FAX (916) 274-0648  
TTY (530) 741-4509

October 3, 2002

02SAC0114

03-SAC- 99

American River Watershed Project (Common Features)

California Sacramento River East Levee/Natomas Cross Canal Levee Modifications

Notice of Preparation

SCH#1999052026

Ms. Karen Enstrom  
Reclamation Board  
1416 Ninth Street, Room 1601  
Sacramento, CA 95814

Dear Ms. Enstrom:

Thank you for the opportunity to comment on the above mentioned project. Our comments are as follows:

- The project documentation should provide a map (s) describing the project “activity areas” and any nearby State highway facilities in order to clarify the scope of project and potential impacted highway and bridge structure areas.
- Any flood control improvements and protection measures located near State right-of-way should be identified and Caltrans should be notified. Any work conducted within State right-of-way will require an encroachment permit. For assistance, Bruce Capaul at (530) 741-4408 should be contacted.
- Haul routes for transporting soil and construction materials and any State highways used should be provided in the project discussion.

Please provide our office with the requested information, a copy of the DEIR, copies

*“Caltrans improves mobility across California”*

Ms. Karen Enstrom

October 3, 2002

Page 2

of draft mitigation measures, and any further action regarding this project. If you have any questions regarding these comments, please contact Ken Champion at (916) 274-0615.

Sincerely,

~~ORIGINAL SIGNED BY:~~

JEFFREY PULVERMAN, Chief  
Office of Regional Planning

bc: John Holzhauser, Office of Traffic Operations – Sacramento  
Karen Peneschi, Office of Advance and System Planning  
Steve Hetland, Special Funded - Sacramento  
Jim Adams, Office of Right of Way Engineering  
Tom Ganyon, Office of Right of Way-Local Assistance  
Dennis Jagoda, Hydraulics  
Bruce Capaul, Permits  
KenChampion, District 3 – Sacramento County LDR Coordinator

KC/ kc

---

Posters from March 2008 Scoping Meetings

## About the Re-evaluation Report

## American River Common Features General Re-evaluation Report

Flooding is a long-standing problem facing the Sacramento area. The recent floods of 1986 and 1997 devastated several communities, including homes, businesses, orchards and farmlands. In 1996 the Water Resources Development Act authorized the American River Common Features Project (CFP), designed to lessen flood risks in Sacramento. Since the authorization of the CFP 12 years ago, a great deal of progress has been made to improve the flood control system. However, new information and issues have been identified and new engineering standards have been instituted. As a result, there are continuing concerns about the integrity of Sacramento's flood control management system.

As a result, the U.S. Army Corps of Engineers plans to conduct a re-evaluation report called the American River Common Features General Re-evaluation Report (Common Features GRR) that will look at the existing CFP with the purpose of identifying alternatives to lower the risk of flooding to the City of Sacramento. The Common Features GRR will examine the City's flood management system as a whole, rather than on a site-by-site, project-by-project basis.

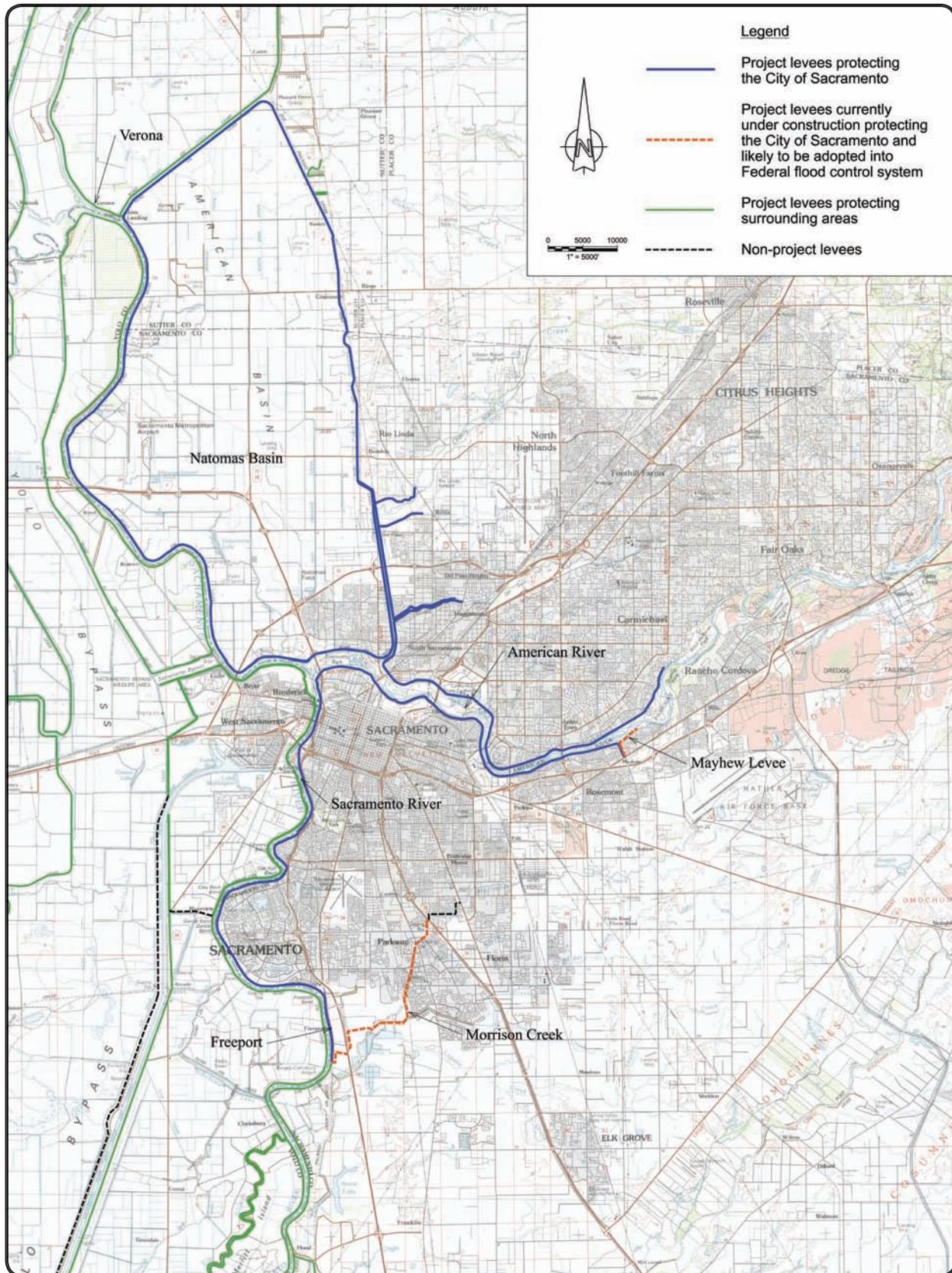
The purpose of the Common Features GRR is to review the CFP with the aim of making recommendations for changes or additions that will effectively and efficiently reduce flood risks within the American River Watershed. This includes the flood control features along the American and Sacramento Rivers that provide protection to the City of Sacramento and surrounding areas.

In a separate effort, the Sacramento Area Flood Control Agency (SAFCA) is currently working on a flood control program specific to Natomas to provide the area with 100-year flood protection as soon as possible, and ultimately, in cooperation with this study, 200-year protection. These improvements could be completed before the Common Features GRR is conducted because of the high risk of catastrophic flooding in Natomas. It is anticipated that SAFCA's program will eventually be incorporated into the Common Features GRR.



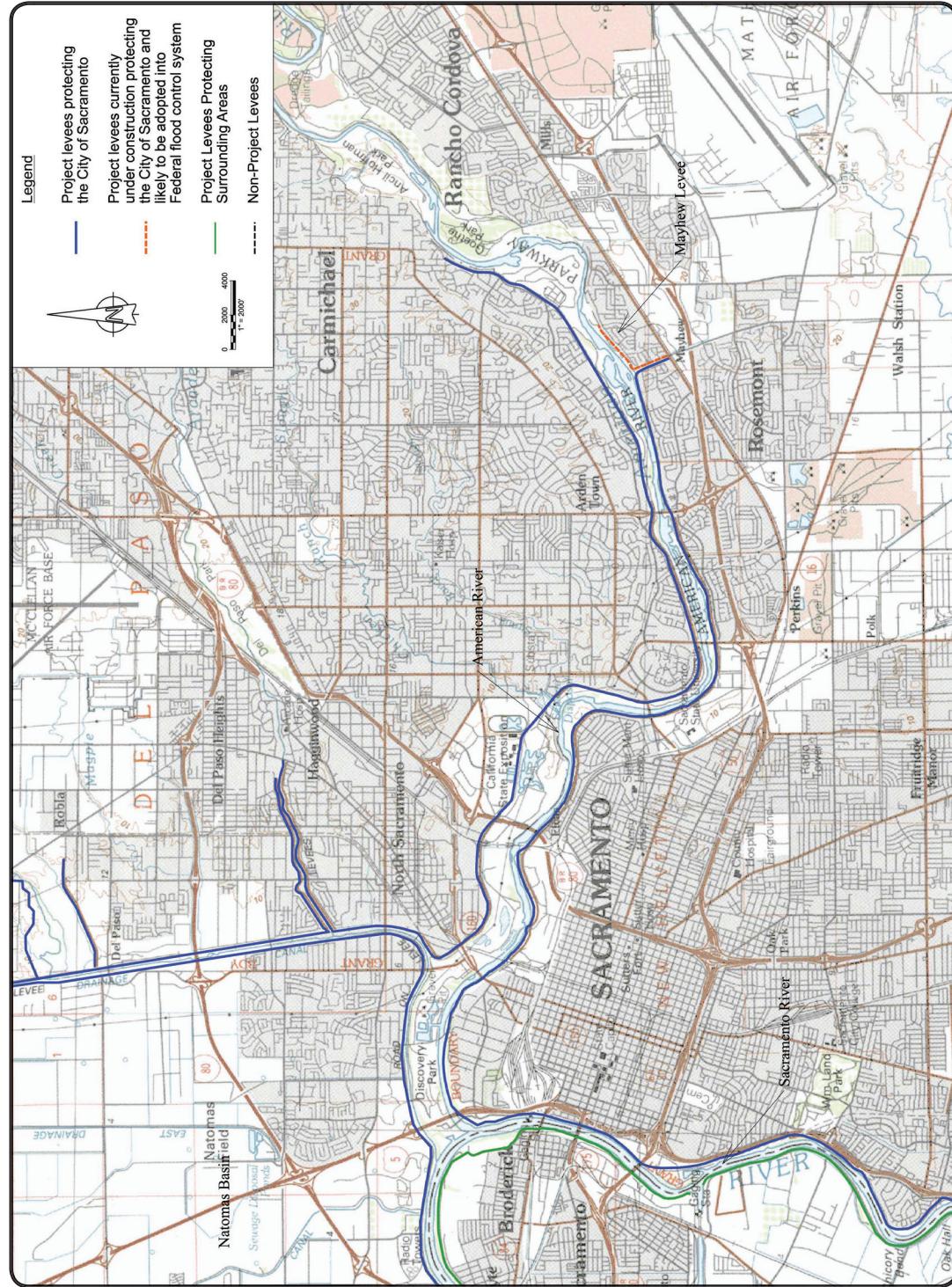
## Study Area

## American River Common Features General Re-evaluation Report

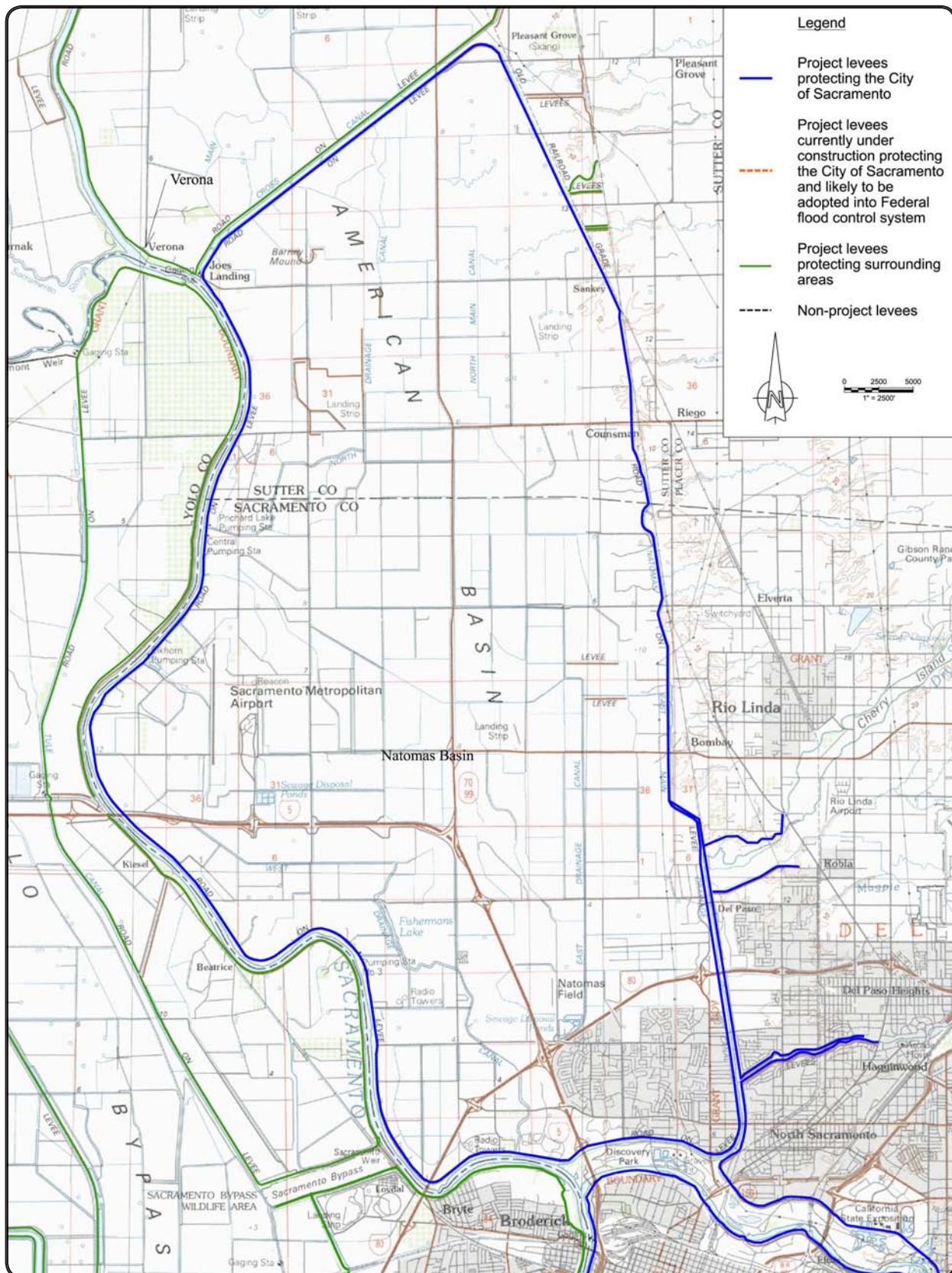


## Study Area Detail

### Lower American River



## Natomas Basin



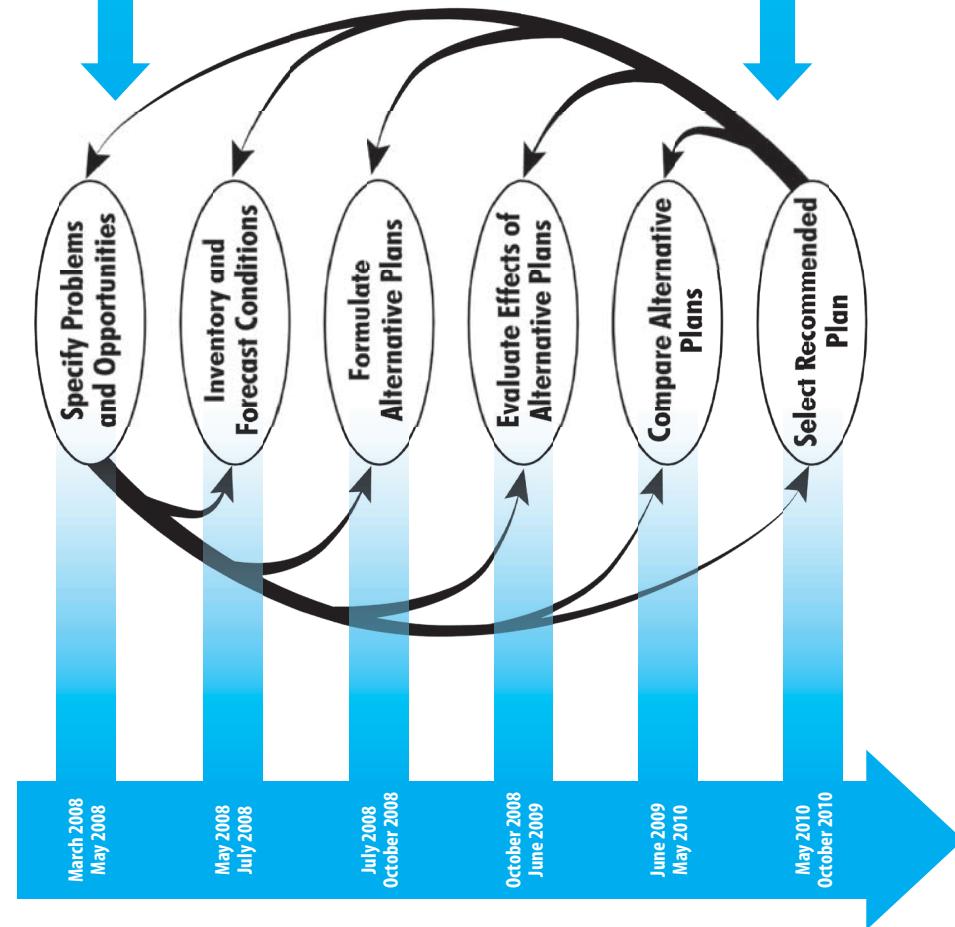
## Sacramento River from American River to Freeport



## Planning Process

The Corps' "Beehive" diagram represents the six planning steps and the iterative process of Corps project planning.

Corps decision making is generally based on the accomplishment and documentation of all of these steps. It is important to stress the iterative nature of this process. As more information is acquired and developed, it may be necessary to reiterate some of the previous steps. The six steps, though presented and discussed in a sequential manner for ease of understanding, usually occur iteratively and sometimes concurrently. Iterations of steps are conducted as necessary to formulate efficient, effective, complete and acceptable plans.



### Completed and Ongoing Projects

A great deal of progress has been made since the major flood events in 1986 and 1997. The projects listed below are examples of recent efforts to increase the level of flood protection in the Sacramento area. These efforts will inform and be coordinated with the Common Features GRR planning process.

#### American River Common Features Projects

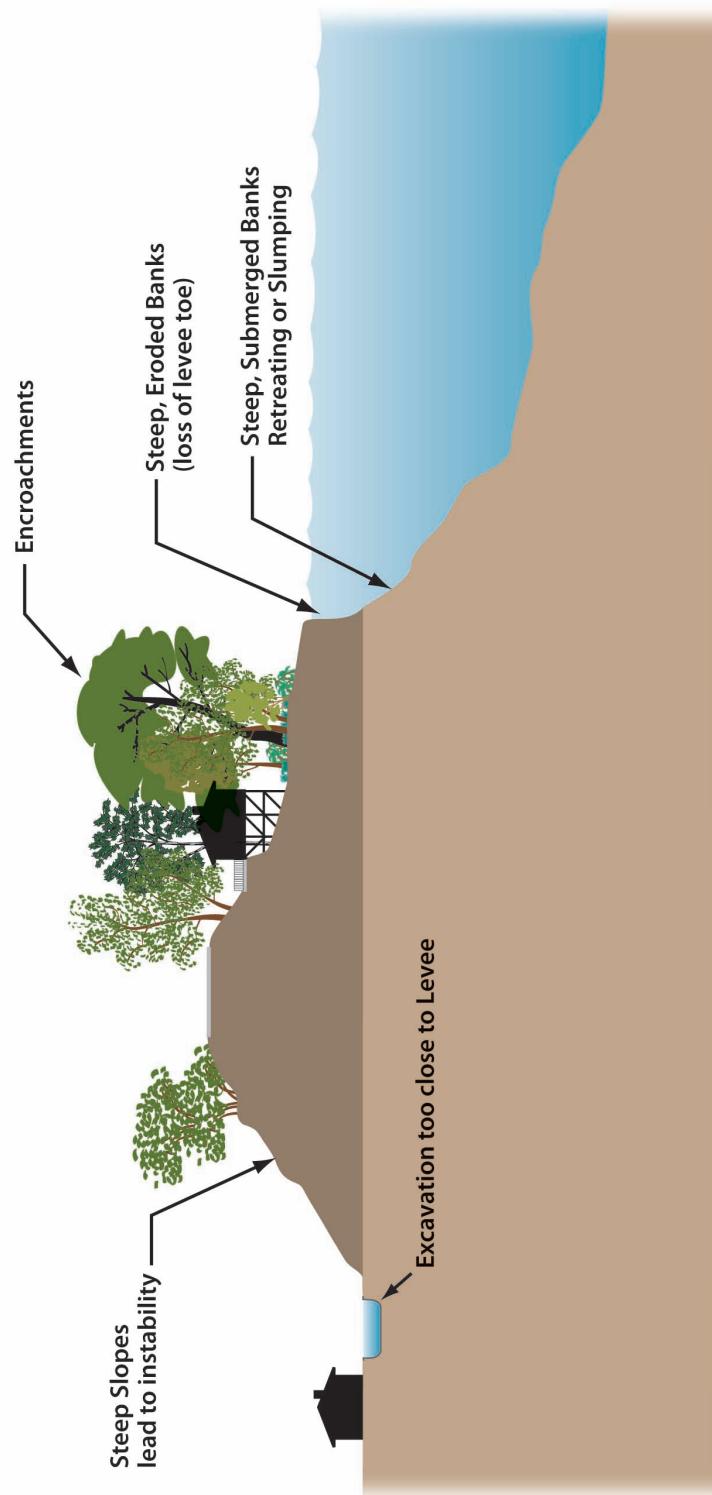
- Slurry Wall Construction along the Lower American River (24 miles completed)
- Upstream Telemetry Gauges (completed)
- Erosion Protection (4 sites completed)
- Jet Grouting/Alternative Methods (ongoing)
- Seepage Remediation along the Sacramento River (completed)
- Mayhew Levee Raise and Drain Closure (under construction)
- Levee Raising and Strengthening (various sites remaining)

#### Other Major Flood Protection Projects

- Folsom Dam Reoperation (ongoing)
- Natomas Levee Improvement Project (ongoing)
- Sacramento River Bank Protection Project (Corps/CVFPB) (ongoing)
- West Sacramento Levee Improvement Project (Corps/City of West Sacramento) (ongoing)
- South Sacramento Streams Group Project (Corps/SAFCA) (ongoing)
- Joint Federal Project at Folsom Dam (Corps/Bureau of Reclamation/CVFPB/SAFCA)

## Typical Levee Deficiencies

# Encroachments, Unstable Slopes, Erosion

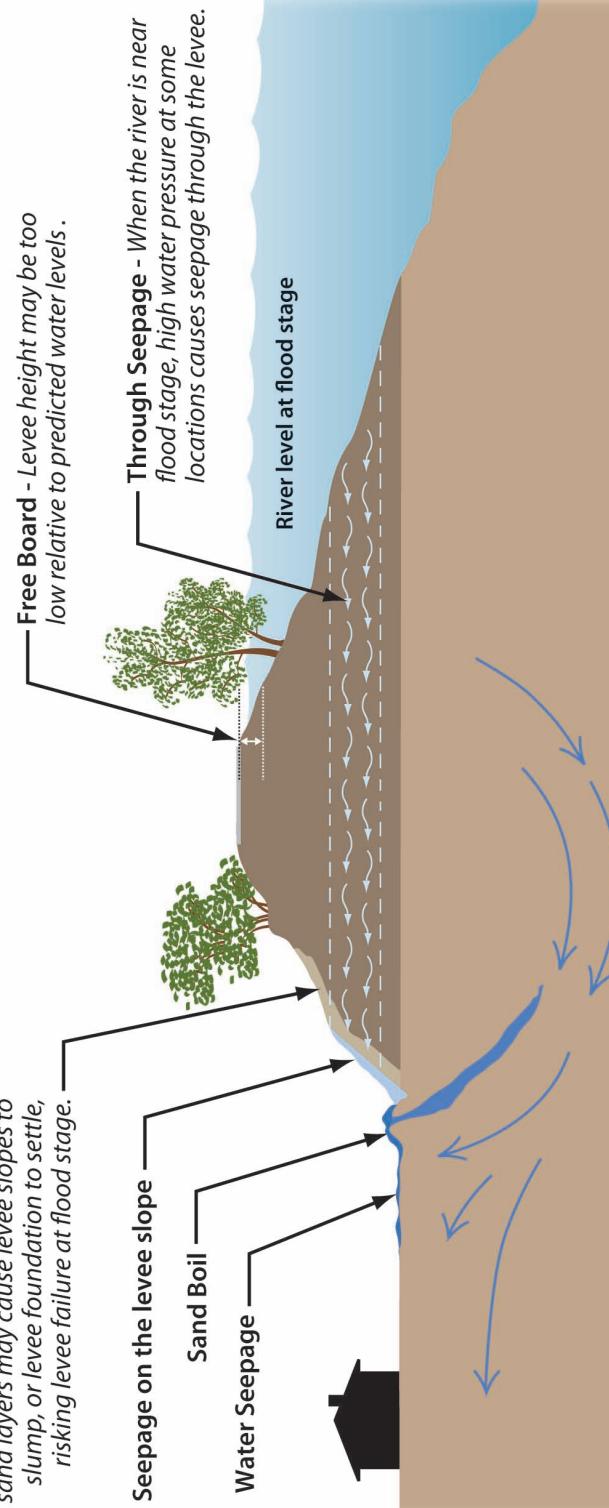


- Unstable Slopes - irregular or overly steep slopes compromise the levee structure
- Encroachments including pools, homes, vegetation
  - Erosion - water flow, wakes and waves, remove soil material, degrading the levee

## Typical Levee Deficiencies

# Seepage and Inadequate Freeboard

**Levee Instability** - Saturated soil and sand layers may cause levee slopes to slump, or levee foundation to settle, risking levee failure at flood stage.



**Free Board** - Levee height may be too low relative to predicted water levels.

**Through Seepage** - When the river is near flood stage, high water pressure at some locations causes seepage through the levee.

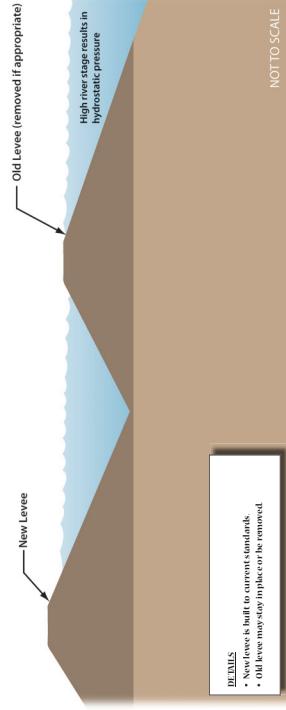
**Underseepage** - High river levels lead to underseepage through sand and graveled soils. High water pressure beneath the surface can emerge at the land-side levee toe, causing sand boils, and can also appear at the surface up to several hundred feet on the land-side of the levee.

- Inadequate Freeboard - levee height may be too low relative to predicted water levels

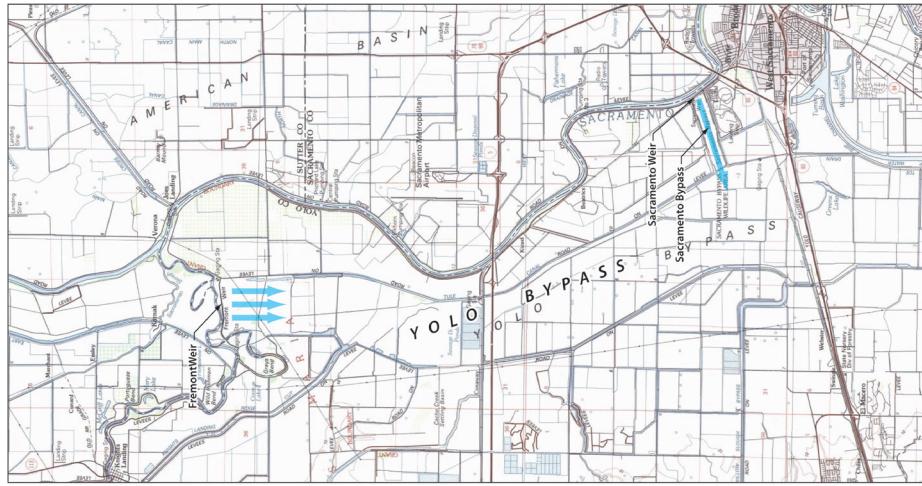
## Potential Solutions

# IMPROVEMENTS TO FLOOD CONTROL FEATURES THAT ADDRESS STABILITY, EROSION AND FREEBOARD

### Setback Levee (stability, seepage, & freeboard)

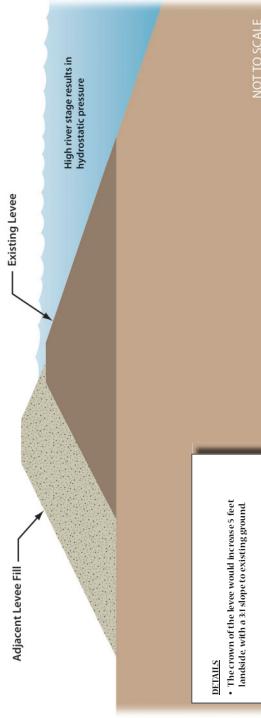


### Diversion to Bypass System (seepage, stability, & freeboard)

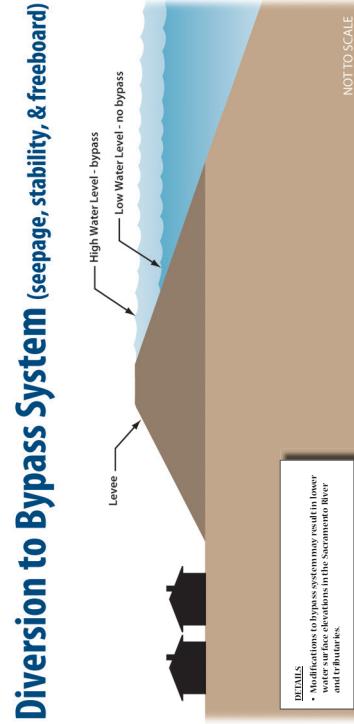


**Concept:**  
A new levee is built toward the landside of an existing levee where the existing levee is not readily repairable or where more flooding capacity is desired.

### Adjacent Levee Raise (stability, seepage, & freeboard)



**Concept:**  
A new embankment strengthens the existing levee and enlarges the slopes.



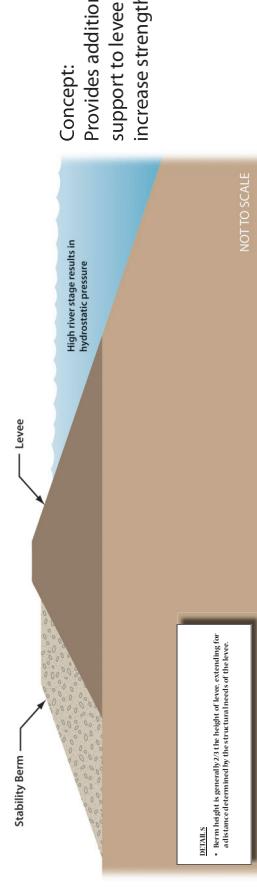
### Diversion to Bypass System (seepage, stability, & freeboard)

**Concept:**  
Reducing water surface elevations by modifying diversion to the bypass system may also reduce seepage and stability issues by reducing hydrostatic pressure. Lower water surface elevations will also alleviate freeboard issues.

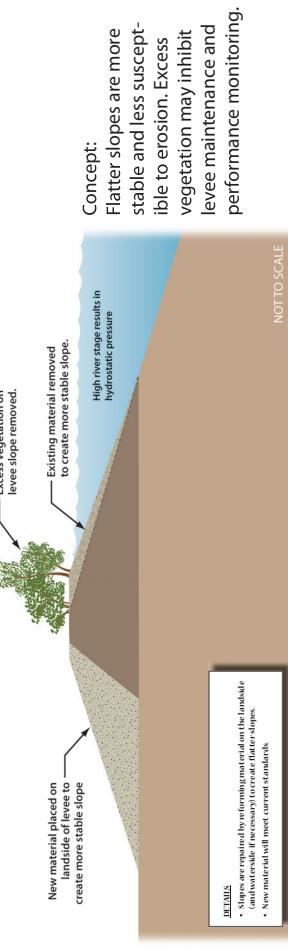
## Potential Solutions

# IMPROVEMENTS TO LEVEES THAT ADDRESS STABILITY, EROSION AND FREEBOARD

### Stability Berm (stability)

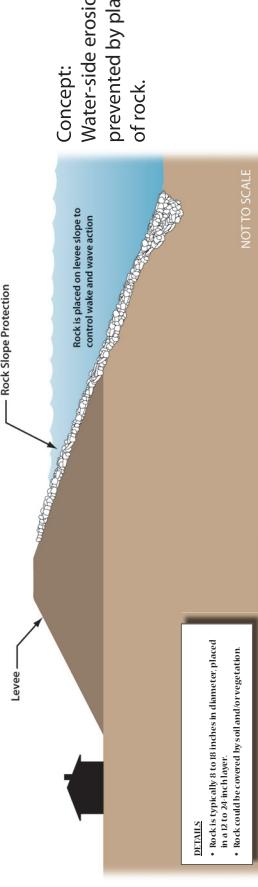


### Slope Flattening (stability)

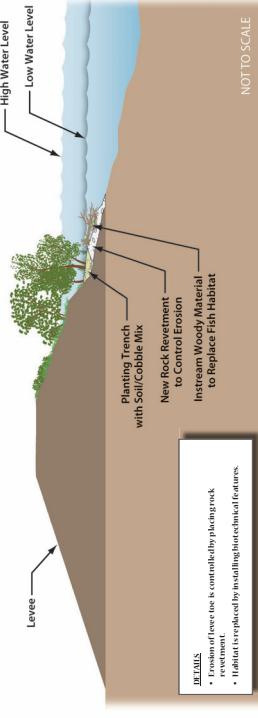


Concept:  
Flatter slopes are more stable and less susceptible to erosion. Excess vegetation may inhibit levee maintenance and performance monitoring.

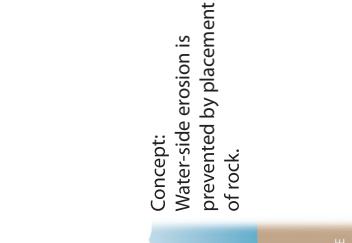
### Rock Slope Protection (erosion)



### Biotechnical Erosion Protection (erosion)

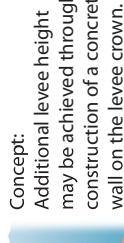
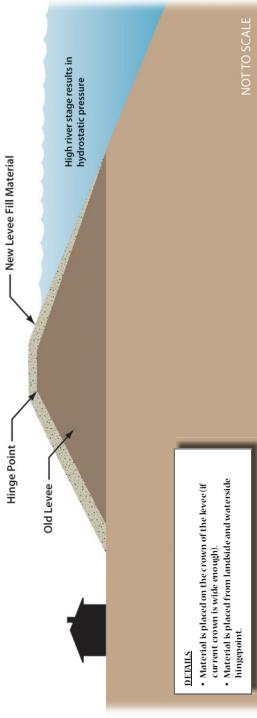


Concept:  
Placing rock revetment at toe of eroding levee controls erosion. Installing biotechnical features replaces habitat and further controls erosion.



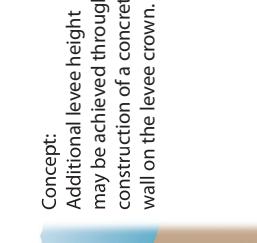
Concept:  
Waterside erosion is prevented by placement of rock.

### In-Place Levee Raise (freeboard)



Concept:  
Additional levee height may be achieved through construction of a concrete wall on the levee crown.

### Flood Wall (freeboard)



Concept:  
Flood protection is increased by adding material to crown and levee slope (land or water side).

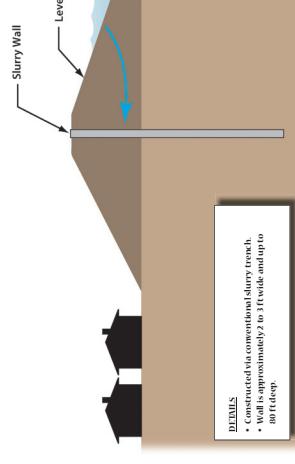


Concept:  
Additional levee height may be achieved through construction of a concrete wall on the levee crown.

## Potential Solutions

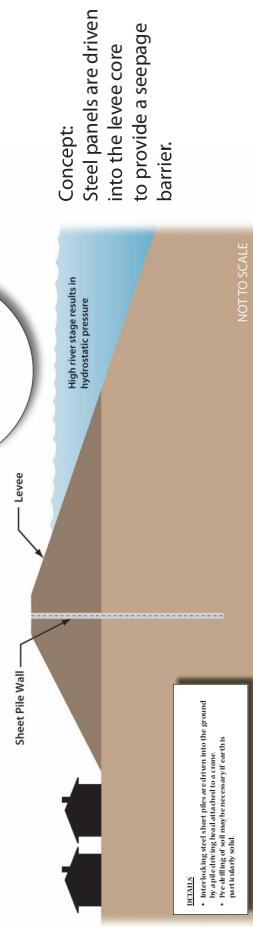
### IMPROVEMENTS TO LEVEES THAT ADDRESS SEEPAGE

#### Slurry Wall (seepage)



**DETAILS**  
• Constructed via conventional slurry trench  
• Most economical to 30' wide and up to 80' deep.

#### Sheet Pile Wall (seepage)

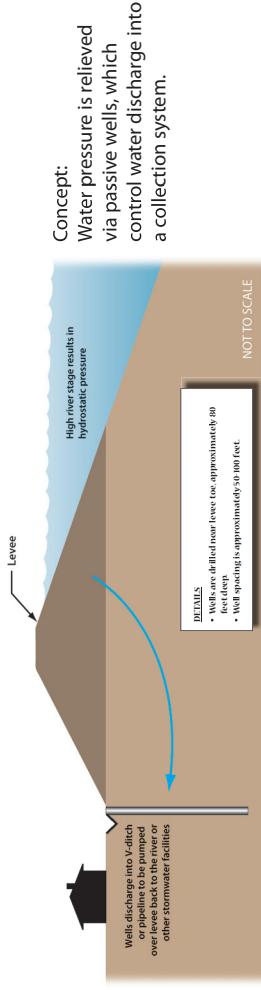


**Concept:**  
Steel panels are driven into the levee core to provide a seepage barrier.

NOT TO SCALE

NOT TO SCALE

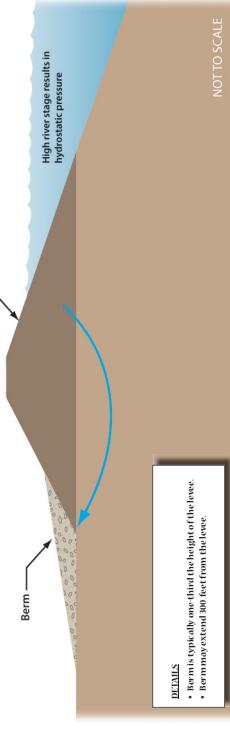
#### Relief Well (seepage)



**DETAILS**  
• Wells are drilled near levee toe, approximately 80 feet apart.  
• Well spacing is approximately 50-100 feet.

NOT TO SCALE

#### Seepage Berm (seepage)



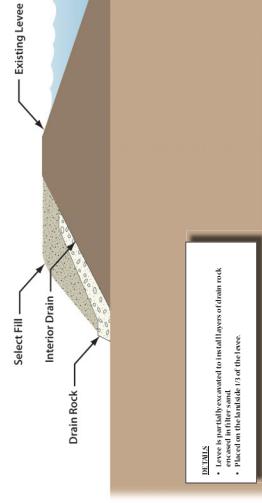
**DETAILS**  
• Berm is typically one third the height of the levee.  
• Berm may extend 800 feet from the levee.

NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

#### Interior Drain (seepage)



**DETAILS**  
• Drains are usually required to install layers of drain rock  
• Drains are installed vertically and placed in the available 1/3 of the levee.

NOT TO SCALE

NOT TO SCALE

The process of determining the scope, focus and content of an EIS/EIR is known as “scoping”. Scoping is a part of the NEPA/CEQA process in which the general public, interested agencies and stakeholders provide comments to the Lead Agency to help identify the key issues, range of actions, alternatives, and environmental affects to be analyzed in the EIS/EIR.

The following issues related to this project have been identified to date:

- Riparian vegetation and habitat effects;
- Cultural resources;
- Flood control and river hydraulic effect;
- Location of flood control infrastructure and effects on land use and access;
- Construction related effects such as those related to transportation, noise, and air quality;
- Economic issues

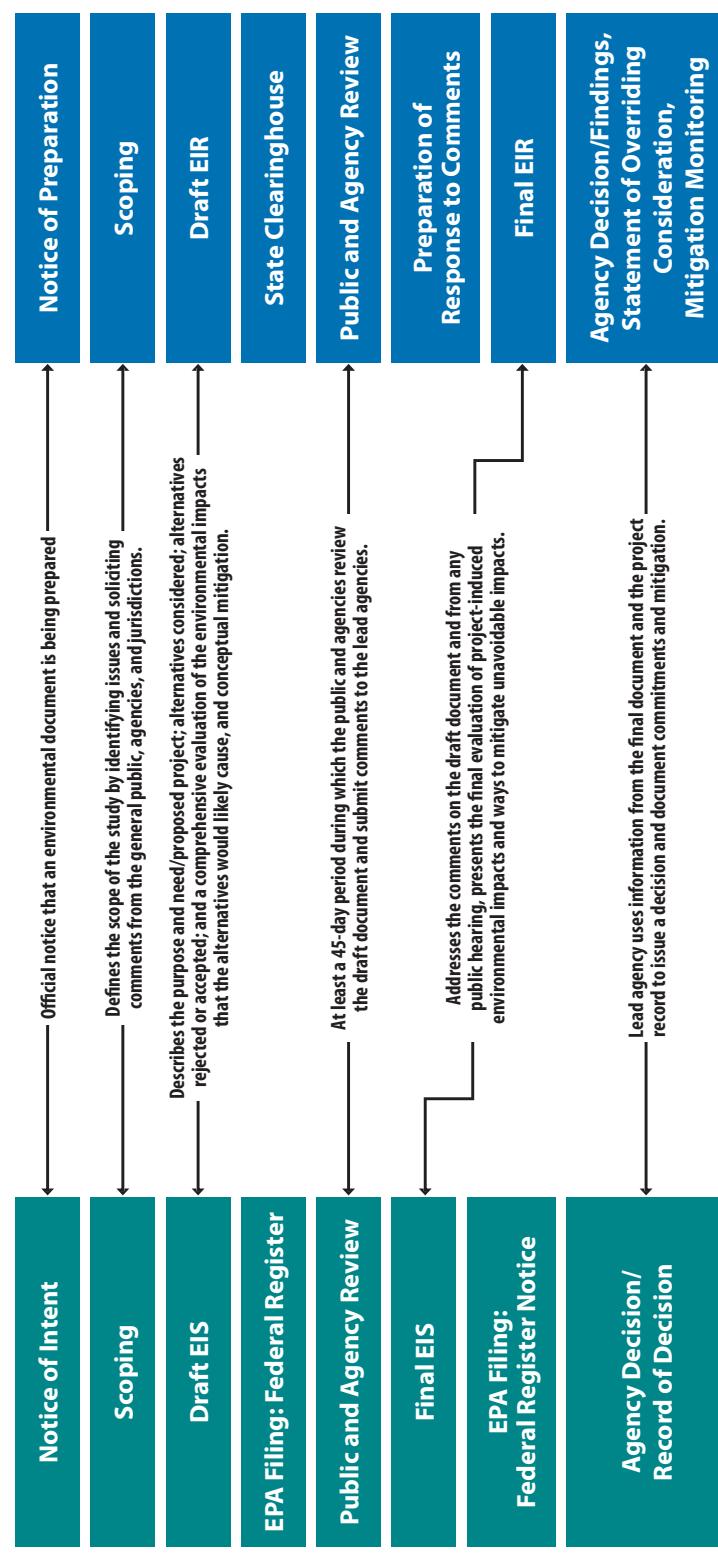
## NEPA/CEQA Compliance

### What is an EIS/EIR?

An EIS (Environmental Impact Statement) and an EIR (Environmental Impact Report) are documents that are required to comply with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), respectively. The purpose of these documents is to analyze and disclose a project's potential effects on the natural and human environment and identify conservation measures and alternatives to avoid significant effects.

An EIS is prepared when there is Federal involvement in the project and an EIR is prepared when the project is subject to State or local jurisdiction. A joint document, an EIS/EIR, may be prepared when both a Federal and State agency are involved. The major steps to complying with both acts are outlined below.

### NEPA (Environmental Impact Statement)



### CEQA (Environmental Impact Report)

