



Public Works Agency
Ventura County
Watershed Protection
District

Levee Safety Compliance VS. Endangered Species Act

A CASE STUDY
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Watershed Protection District

Tuesday, February 28, 2012



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Setting the Stage

- Background: Ventura County Levees
- FEMA/USACE Levee Safety Requirements
- Application for Regional General Permit for Facility O&M
- NMFS Draft Biological Opinion
- Draft Jeopardy Opinion
- District Response
- Next Steps

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Ventura County Watersheds



- Area: 1800 Square Miles
- Four Zones
- Three Major Watersheds
 - Calleguas Creek (40,000 cfs)
 - Santa Clara River (226,000 cfs)
 - Ventura River (75,000 cfs)
- 10 Cities and the County Unincorporated Areas
- Facilities:
 - 209 Channel Miles
 - 68 Levee Miles
 - 44 Debris and Detention Basins
 - 4 Pumping Stations

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Santa Clara River 1 Levee

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Final Levee System Rating – Santa Clara River 1 Levee

- **USACE Rating: UNACCEPTABLE**
- Unacceptable, Critical Ratings

System Component	Engineering Basis for Rating
Erosion /Bank Caving	Active channel erosion threatens to undercut levee slope protection.
Riprap Revetments & Bank Protection	Reaches of missing stone protection and areas of poor interlocking.

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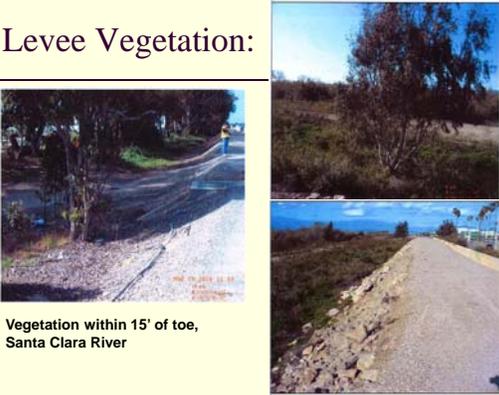
Final Levee System Rating – Santa Clara River 1 Levee

- Unacceptable, Non-Critical Ratings

System Component	Engineering basis for rating
Unwanted Vegetation Growth	Vegetation within the minimum vegetation free zone and blocking interior drainage structures.
Encroachments	Several unauthorized/unpermitted encroachments within levee easement.
Erosion/Bank Caving	Erosion has removed material from within the levee prism.
Culvert/Discharge Pipes	The interior condition of the side-drainage structures has not been verified.
Flap Gates	Missing flap gates.
Other Metallic Structures	Damaged and severely corroded grates and conduit.

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Levee Vegetation:



Vegetation within 15' of toe, Santa Clara River

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Levee Embankment Deficiencies: Action Plan

Rated Item	Recommended Action
Unwanted Vegetation Growth	Develop and implement a removal plan. Trees within the vegetation-free zone should be removed per guidance found in <i>ETL 1110-2-571</i> Cost: \$400,000 - \$500,000

Total Levee Rehabilitation Cost Estimate: \$45 million

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Ventura County Annual Routine Maintenance Plan

- Santa Clara and Ventura River watersheds are areas of designated critical habitat for steelhead.
- Applied for Regional General Permit (RGP) to complete routine maintenance for channels and basins.
- Prepared Program Environmental Impact Report (PEIR) to address ongoing routine O&M (5/2008).
- Initiated discussions with National Marine Fisheries Service (NMFS) to develop biological opinion (BO).

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NMFS Biological Opinion

- Compliance with USACE levee vegetation policy requires 24 acres of habitat to be cleared:
 - Ventura River- 8 acres on 4.4 miles
 - Santa Clara River- 16 acres on 10 miles
- NMFS issued a draft jeopardy opinion to USACE.
- Levee toe vegetation clearance is likely to:
 - jeopardize the continued existence of the endangered steelhead, and
 - destroy or adversely modify designated critical habitat for this species.

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Basis for Jeopardy Opinion

- Current status of the steelhead is estimated at less than 500 individuals.
- Levees alter natural processes:
 - Reduces steelhead population size, growth rate, spatial diversity and structure of habitat.
 - Increases the likelihood of channel bed scour during high flow events.
 - Scour impacts trout spawning areas (redds).
 - 15-ft clearance policy reduces riparian shade and cover.

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Reasonable and Prudent Alternative (RPA)

- NMFS states USACE shall require the District to:
 - Preserve existing native riparian vegetation, i.e. **no vegetation removal 15' of levee toe!**
 - Facilitate native plant recruitment and reestablishment along existing levees.
 - Adopt the 2007 DWR Interim Levee Vegetation Inspection Criteria for Standard Levees for levee inspection and flood-fighting
 - Prepare a vegetation management and monitoring plan and yearly report.

NMFS contends the RPA is economically feasible because the District will avoid removal of thousands of feet of vegetation.

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 **District Response to RPA**

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- Impact magnitude
 - Maintenance areas comprise less than one percent of the available habitat for steelhead.
 - Levees or bank protection in both watersheds only affect one bank, avoiding a channelized condition. Riparian vegetation is often present along the opposite bank.
- Baseline Condition
 - NMFS compares the existing condition to a future potential condition with vegetation.
 - Ongoing routine maintenance is not a new impact, but a continuation of the existing baseline condition.

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 **District Response to RPA**

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- Levee Safety Mandates
 - NMFS disregarded safety mandates.
 - Failure to follow mandates will lead to de-accreditation of levees.
 - District and County of Ventura would forfeit future FEMA and USACE funds. Jeopardizes continued participation in PL 84-99 program.
 - Flood insurance per NFIP would need to be purchased and maintained by community.
 - NMFS failed to conduct an economic analysis to assess these fiscal impacts.

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 **Next Steps**

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- Rescind levee vegetation removal activities from the RGP.
- Meet with USACE and NMFS to work towards a final resolution.
- Support CSAC/CEAC in requesting a delay in the implementation of the USACE policy on levee vegetation management.

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Next Steps

- Specifically, CSAC/CEAC is advocating USACE to:
 - (1) consider regional variation across the nation;
 - (2) include a variance and exemption provision where appropriate;
 - (3) conform to other federal and state laws;
 - (4) include local government in a transparent and collaborative process;
 - (5) allow risk-based and science-based management decisions;
 - (6) delegate limited authority to approve variances and exemptions to Corps Division commanders.

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So, where do we go from here?



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