PUBLIC NOTICE

U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

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APPLICATION FOR PERMIT:
ARROYO GRANDE WATERWAY MANAGEMENT PROGRAM

Public Notice/Application No.: SPL-2012-00317-JWM
Project: Arroyo Grande Creek Waterway Management Program
Comment Period: December 16, 2014 to January 17, 2015
Project Manager: John Markham; 805-585-2150; John.W.Markham@usace.army.mil

Applicant
County of San Luis Obispo
Department of Public Works
County Government Center, Room 207
San Luis Obispo, California 93408

Contact
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Location
This proposed flood control channel maintenance program would occur within lower Arroyo Grande and Los Berros Creeks, near the communities of Arroyo Grande and Oceano, San Luis Obispo County, California (from 35.105499, -120.588096 (upstream) to 35.098638, -120.618622 (downstream)).

Activity
The Arroyo Grande Creek Channel Waterway Management Program ("proposed project") consists of the following actions within a 3-mile reach of lower Arroyo Grande Creek and a 0.5-mile reach of lower Los Berros Creek: 1) initial vegetation and sediment management with an attendant levee raise; and, 2) long-term vegetation and sediment management (see attached drawings). For more information see page 3 of this notice.

Interested parties are hereby notified that an application has been received for a Department of the Army permit for the activity described herein and shown on the attached drawing(s). We invite you to review today's public notice and provide views on the proposed work. By providing substantive, site-specific comments to the Corps Regulatory Division, you provide information that support the Corps' decision-making process. All comments received during the comment period become part of the record and will be considered in the decision. This permit will be issued, issued with special conditions, or denied under Section 404 of the Clean Water Act.

Comments should be mailed to:

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, U.S. ARMY CORPS OF ENGINEERS
REGULATORY DIVISION
VENTURA FIELD OFFICE
ATTN: JOHN W. MARKHAM
2151 ALESSANDRO DRIVE, SUITE 110
VENTURA, CALIFORNIA 93001

Alternatively, comments can be sent electronically to: John.W.Markham@usace.army.mil.

The mission of the U.S. Army Corps of Engineers Regulatory Program is to protect the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands. The Regulatory Program in the Los Angeles District is executed to protect aquatic resources by developing and implementing short- and long-term initiatives to improve regulatory products, processes, program transparency, and customer feedback considering current staffing levels and historical funding trends.

Corps permits are necessary for any work, including construction and dredging, in the Nation's navigable water and their tributary waters. The Corps balances the reasonably foreseeable benefits and detriments of proposed projects, and makes permit decisions that recognize the essential values of the Nation's aquatic ecosystems to the general public, as well as the property rights of private citizens who want to use their land. The Corps strives to make its permit decisions in a timely manner that minimizes impacts to the regulated public.

During the permit process, the Corps considers the views of other Federal, state and local agencies, interest groups, and the general public. The results of this careful public interest review are fair and equitable decisions that allow reasonable use of private property, infrastructure development, and growth of the economy, while offsetting the authorized impacts to the waters of the United States. The permit review process serves to first avoid and then minimize adverse effects of projects on aquatic resources to the maximum practicable extent. Any remaining unavoidable adverse impacts to the aquatic environment are offset by compensatory mitigation requirements, which may include restoration, enhancement, establishment, and/or preservation of aquatic ecosystem system functions and services.

Evaluation Factors

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof. Factors that will be considered include conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people. In addition, if the proposal would discharge dredged or fill material, the evaluation of the activity will include application of the EPA Guidelines (40 CFR Part 230) as required by Section 404 (b)(1) of the Clean Water Act.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Preliminary Review of Selected Factors

EIS Determination- A preliminary determination has been made that an environmental impact statement is not required for the proposed work.

Water Quality- The applicant is required to obtain water quality certification, under Section 401 of the Clean Water Act, from the California Regional Water Quality Control Board. Section 401 requires that any applicant for an individual Section 404 permit provide proof of water quality certification to the Corps of Engineers prior to permit issuance.

Coastal Zone Management- The applicant has certified that the proposed activity would comply with and would be conducted in a manner that is consistent with the approved State Coastal Zone Management Program. For those projects in or affecting the coastal zone, the Federal Coastal Zone Management Act requires that prior to issuing the Corps authorization for the project, the applicant must obtain concurrence from the California Coastal Commission that the project is consistent with the State's Coastal Zone Management Plan. The District Engineer hereby requests the California Coastal Commission's concurrence or non-concurrence.

Essential Fish Habitat- The Corps has determined that no Essential Fish Habitat (EFH), as defined by the Magnuson-Stevens Fishery Conservation and Management Act (MSA), occurs within the proposed project area. However, the proposed project is located in the vicinity of the Arroyo Grande Creek lagoon/estuary (approximately 2,000 feet downstream of proposed project terminus). Based upon prior, annual surveys conducted between 2002 and 2008, the lagoon is known to support at least one fish species managed under a federal fisheries management plan, pursuant to MSA. Specifically, starry flounder (*Platichthys stellatus)* has been identified repeatedly within the Arroyo Grande lagoon, and is managed under the Pacific Groundfish Fishery Management Plan (*Lower Arroyo Grande Creek and Lagoon Fishery and Aquatic Resources Summary, 2008 Monitoring Report*, D. Rischbieter, January 2009).

Estuaries are considered Habitat Areas of Particular Concern (HAPCs), a subset of Essential Fish Habitat "…which are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area" (*Pacific Coast Groundfish Plan*, National Marine Fisheries Service (NMFS), May 2014). As defined, due in part to varying salinity and tidal cycles, estuaries "…generally possess great diversity, offering freshwater, brackish and marine habitats within close proximity (Haertel and Osterberg 1967). Estuaries tend to be shallow, protected, nutrient-rich, and are biologically productive, providing important habitat for marine organisms, including groundfish."

The inland extent of the estuary HAPC is defined as MHHW, or the upriver extent of saltwater intrusion, defined as upstream and landward to where ocean-derived salts measure less than 0.5 ppt during the period of average annual low flow. The seaward extent is an imaginary line closing the mouth of a river, bay, or sound; and to the seaward limit of wetland emergents, shrubs, or trees occurring beyond the lines closing rivers, bays, or sounds. This HAPC also includes those estuary-

influenced offshore areas of continuously diluted seawater. HAPCs include all waters, substrates, and associated biological communities falling within this geographic area (NMFS, May 2014).

The proposed project has the potential to adversely affect EFH for this managed species within the Arroyo Grande lagoon due to potential changes in erosion/accretion patterns and water quality (e.g., turbidity, hydrocarbons). Hydraulic modeling of the lagoon area indicates that the proposed project would increase sediment transport within the lagoon during periods when flow rates are 4,000 cubic feet per second (cfs) or greater (i.e., higher flows, ~10+ year event) but would transport a similar amount or less when flow rates are less than 4,000 cfs (i.e., low to moderate flows, ~1 to 10 year event). Sediment transport was found to be highest at the upper and lower ends of the lagoon and lowest in the middle of the lagoon (*Arroyo Grande Creek Erosion, Sedimentation and Flooding Alternatives Study,* Swanson Hydrology & Geomorphology, January 2006).

In order to minimize potential adverse effects upon these downstream areas due to changes in erosion/accretion patterns, the applicant proposes to periodically monitor four (4) cross-sections within the lagoon following the cessation of winter rains (April/May) and compare against baseline conditions (to be conducted prior to initiation of work). The four cross-sections would be monitored every three (3) years following the first year of sediment management activities, and a report would be submitted to NMFS, U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB), and the Corps ("agencies") for consideration and comment. Monitoring activities within the lagoon would be reduced in frequency if no adverse effects are observed after nine (9) years of sediment management. In addition, the applicant would establish and periodically monitor cross-sections (at 500-foot intervals and at both sides of bridge crossings) and conduct hydraulic modeling within the proposed project reach in the same timeframe in order to measure potential changes to sediment erosion/accretion. If sediment management is required, a sediment management plan would be prepared and submitted to the agencies outlining the proposed location(s) of sediment removal, the quantity of sediment removal, proposed work schedule, and type of equipment and access required (*Arroyo Grande Creek Channel Waterway Management Program* (WMP) (Waterways Consulting, October 2010).

In order to minimize potential adverse effects upon water quality and wildlife habitat within the proposed project reach and downstream areas, the applicant would prepare and submit an erosion control and water quality protection plan. As envisioned, this plan would be consistent with the applicant's Storm Water Pollution Prevention Plan (SWPPP), and would include measures to: 1) retain a riparian transition zone outside and adjacent to the woody riparian buffer areas to provide shade and protection (i.e., canopy coverage (overstory) from vegetation originating from within the 10-foot buffer on each side of Arroyo Grande Creek channel and the 5-foot buffer on each side of Los Berros Creek diversion channel); 2) minimize equipment operation in the channels; 3) prohibit equipment operations in flowing or standing water; 4) prohibit refueling within or adjacent to the channels; and, 5) identify appropriate native species to be planted on levee slopes to provide erosion control that are compatible with biological resources mitigation and the desired channel roughness coefficient (*Revegetation, Enhancement, and Mitigation Plan for Jurisdictional Areas*, SWCA, April 2014; WMP, October 2010).

According to the *Preliminary Geotechnical Engineering Report* (Fugro, 2009), some of the proposed project components, including the levee raises may require dewatering that would temporarily lower surface and groundwater levels to facilitate excavations. Groundwater would be subsequently discharged back into the creek. However, discharge of turbid waters or water with an altered temperature back into the channel could impact water quality within and downstream of the proposed project reach; therefore, based upon water quality monitoring results, the applicant may use Baker tanks as desiltation devices to settle out sediments prior to discharge.

Based upon this information, the Corps has made a preliminary determination that the proposed project may adversely affect EFH located downstream of the proposed project reach, and also that

the applicant has incorporated sufficient best management practices in order to minimize potential adverse effects to lagoon/estuarine habitat. Pursuant to Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), the Los Angeles District hereby requests initiation of EFH consultation for the proposed project. My final determination relative to project impacts and the need for additional mitigation measures is subject to review by and coordination with the NOAA Fisheries. If I do not receive written comments (regular mail or e-mail) within the 30-day notification period, I will assume concurrence by NOAA Fisheries.

Cultural Resources- The proposed project involves maintenance of existing flood control channels, repair or improvement of existing levee system, and minor improvement to the 22nd Street Bridge. Archaeological literature and records searches conducted in 2008 and 2009 indicate a minimum of 256 cultural resource surveys have been conducted within or in the vicinity of the proposed project area (0.5-mile radius). Of these surveys, 18 partly overlapped with the Area of Potential Effect (APE)[1] for the proposed project, and 10 are adjacent to the APE. The literature and records search indicates that 28 cultural resources have been recorded within a 0.5-mile radius of the APE. These include 23 prehistoric archaeological resources, three multi-component sites, one historic church, and one unknown resource. However, according to the literature search, no cultural resources have been previously recorded within or immediately adjacent to the current project area (SWCA, July 2009; JRP, August 2009).

Cultural resource pedestrian surveys were conducted in 2009 throughout the entire 110-acre APE, but did not encounter any cultural resources of either prehistoric and/or historical sensitivity. In addition, a Sacred Lands File search was requested from the Native American Heritage Commission (Commission) in July 2008. In their response, the Commission indicated that there were no known sacred lands within a half mile radius of the proposed APE. The applicant's archaeological consultant subsequently sent letters on July 14, 2008 to eight Native American contacts requesting any information related to cultural resources heritage sites within or immediately adjacent to the APE, and then followed up via telephone if there was no response to a letter. To date, three responses have been received. In summary, one (1) respondent stated the APE has high potential for the discovery of Native American resources, one (1) respondent requested that earthmoving equipment should be restricted to the APE, one (1) respondent requested that trash is regularly picked up, and one (1) respondent stated they have no concerns with the proposed project (SWCA, July 2009).

With respect to other historic resources (e.g., historic structures, historic properties), the APE contains eight structures over 50 years old, consisting of four houses (residences at 2150 Creek Road, 1111 Halcyon Road, and 3120 Cienaga Road, and the Saruwatari farmstead), one agricultural accessory structure (outbuilding on APN 075-032-010), two bridges (Southern Pacific/Union Pacific Railroad and Highway 1), and the engineered Arroyo Grande Creek flood control channel itself. The applicant's architectural historian evaluated each of these eight structures for listing and eligibility in the National Register of Historic Places (NRHP), and concluded that none of these structures are currently listed or appear to meet the eligibility criteria for NRHP (JRP, August 2009).

While the Corps is the federal lead for the proposed project, the Federal Emergency Management Agency (FEMA) is providing financial assistance for the proposed project. As a cooperating (federal) agency, FEMA has agreed to coordinate with the State Historic Preservation Office (SHPO) regarding the potential effects of the proposed project upon cultural resources and historic resources, pursuant to Section 106 of the National Historic Preservation Act (NHPA).

[1] The APE is the area within which the direct and indirect impacts of the project may have an effect on cultural resources or historic properties. The 110-acre APE for the proposed project includes: (1) a construction easement; (2) 3.9 miles of levee on the north and south banks of Arroyo Grande Creek; (3) 0.8 mile of railroad right-of-way; (4) 0.4 mile of levee on a spur of Arroyo Grande Creek that connects it with Los Berros Creek; and (5) 0.2 mile of levee within Los Berros Creek in the eastern portion of the APE. The width of the APE varies between 30 and 76 meters (98–249 feet) (SWCA, July 2009).

This review constitutes the extent of cultural resources investigations by the District Engineer, and she is otherwise unaware of the presence of such resources. With this Public Notice, the Corps is seeking comment from the State Historic Preservation Office or other interested parties regarding these determinations.

Endangered Species- Vegetative communities/habitats present within the Corps' geographic scope of analysis include willow riparian woodland, riparian scrub, in-stream wetlands/open water, coyote brush scrub, non-native (ruderal) grassland, ornamental vegetation, and agricultural land. The Arroyo Grande Creek and Los Berros Creek channels are bordered by agricultural, commercial, and residential land uses. The proposed project area and its vicinity ("action area")[2] is known to support several federally listed species, including: 1) California red-legged frog (*Rana draytonii*); 2) tidewater goby (*Eucyclogobius newberryi*); and, 3) South-Central California Coast Evolutionarily Significant Unit **(**ESU) of steelhead (*Oncorhynchus mykiss*) ("steelhead"), as well as its designated critical habitat.

While protocol surveys for California red-legged frog and tidewater goby were not conducted by the applicant prior to submitting their application, these species have been recently observed by various investigators in Arroyo Grande Creek and their presence in the action area is presumed (pers. comm., Heather Abbey, USFWS, May 2010). The action area does not contain designated critical habitat for either of these species.

Arroyo Grande Creek is known to be used by steelhead for migration, spawning, and rearing. Historically, Arroyo Grande Creek supported a large native population of steelhead. Land use impacts in the watershed and construction of Lopez Dam and Reservoir has greatly reduced their numbers to a point where only a small run of adult steelhead occur in the watershed today. Access to historic spawning habitat upstream of Lopez Reservoir was completely cut off due to construction of the dam in the late 1960's. The remaining habitat consists of the mainstem of Arroyo Grande Creek downstream of the dam and short reaches of year-round flow Los Berros Creek. However, the mainstem of Arroyo Grande Creek downstream of Lopez Reservoir and Los Berros Creek do not provide the prime spawning and rearing habitat that historically occurred upstream of Lopez Reservoir (Boughton and Goslin, 2006).

The most recent comprehensive habitat assessment and steelhead abundance surveys were conducted in 2004 and 2006, respectively (Close and Smith, 2004; Dvorsky and Hagar, 2008). In summary, steelhead habitat in the lower Arroyo Grande Creek and lower Los Berros Creek has been substantially modified by channelization, levee construction, and other prior flood control (e.g., sediment and vegetation removal) activities. Steelhead habitat within the action area itself consists of marginal pool habitat that is used by adults migrating to upstream areas to spawn. In addition, low densities of juveniles may use the shallow pools and low gradient riffles as seasonal rearing habitat or as a migratory corridor between the downstream lagoon and higher quality rearing upstream (*Draft Biological Assessment for South Coast Central California Steelhead, Arroyo Grande Creek Channel*, SWCA, July 2013).

Designated critical habitat for steelhead includes "all waterways, substrate, and adjacent riparian zones in an ESU below longstanding naturally impassable barriers" (64 FR 24049). Further, critical habitat was designated for the South Central California Coast (SCC) distinct population segment (DPS) on September 2, 2005 (70 FR 52488), and includes the mainstem of Arroyo Grande Creek from the Pacific Ocean to Lopez Dam and the mainstem of Los Berros Creek. Accordingly, the entire proposed project action area falls within designated critical habitat for this species.

[2] The Corps' geographic scope of analysis ("action area") includes the proposed work areas within the lateral limits of the ordinary high water mark and their adjacent wetlands ("permit area"), as well as "upland" areas immediately adjacent to the permit area for purposes of staging, storage, or access (e.g., 50 feet landward of the top of channel bank/levee). In total, the action area encompasses approximately 110 acres, and runs along an approximately 3-mile-long reach of the Arroyo Grande Creek channel and an approximately ½-mile-long reach of the Los Berros Creek channel.

The Corps has made a preliminary determination that the proposed project may affect and is likely to adversely affect California red-legged frog, tidewater goby, and steelhead, but is not likely to adversely modify designated critical habitat for steelhead. Implementation of avoidance and minimization measures is expected to reduce the potential for adverse effects[3]. See "Proposed Mitigation" section below for a summary of these measures. Accordingly, pursuant to Section 7 of the Endangered Species Act, the Corps has initiated formal consultation with the USFWS and NMFS for potential adverse effects to these (3) federally listed species, and in the case of steelhead, it's designated critical habitat.

Public Hearing- Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearing shall state with particularity the reasons for holding a public hearing.

Proposed Activity for Which a Permit is Required

Basic Project Purpose- The basic project purpose comprises the fundamental, essential, or irreducible purpose of the proposed project, and is used by the Corps to determine whether the applicant's project is water dependent (i.e., requires access or proximity to or siting within the special aquatic site to fulfill its basic purpose). Establishment of the basic project purpose is necessary only when the proposed activity would discharge dredged or fill material into a special aquatic site (e.g., wetlands, pool and riffle complex, mudflats, coral reefs). The basic project purpose for the proposed project is flood control, considered a water-dependent activity.

Overall Project Purpose- The overall project purpose serves as the basis for the Corps' 404(b)(1) alternatives analysis and is determined by further defining the basic project purpose in a manner that more specifically describes the applicant's goals for the project, and which allows a reasonable range of alternatives to be analyzed. The overall project purpose for the proposed project is to restore a portion of the original design capacity to the engineered flood control channels within Arroyo Grande and Los Berros Creeks in order to provide flood protection for storm events up to a 10-year with 2-feet of freeboard along the south levee and 10-year with a minimum of 3-feet of freeboard along the north levee.

Additional Project Information

Project description- The *Arroyo Grande Creek Channel Waterway Management Program* (WMP) (Waterways Consulting, October 2010) was developed through a cooperative effort between the local community, the Coastal San Luis Resource Conservation District and the San Luis Obispo County Flood Control and Water Conservation District ("applicant"). The primary objective of the WMP is to develop a comprehensive set of actions designed to restore the capacity of the previously-constructed lower Arroyo Grande Creek and lower Los Berros Creek (trapezoidal) channels in order to provide flood protection from up to a 20-year storm event, while simultaneously enhancing water quality and sensitive species habitat within the managed channels. The current proposed project is a component of the overall WMP identified as Alternate 3a and Modified 3c based on the following project description.

The proposed project is located along a 3-mile-reach of the lower Arroyo Grande Creek flood control channel, 0.14 mile upstream (approximate river station 150+00) of the confluence of Los Berros Creek to approximate river station 36+00, and along a ½-mile-reach of Los Berros Creek flood control diversion channel from approximately 300-feet upstream of the Century Lane Bridge to the confluence with Arroyo Grande Creek flood control channel, near the City of Arroyo Grande and the

[3] See Biological Assessment, Section 4.3.1.4 (SWCA, July 2013) and Arroyo Grande Creek Channel Waterway Management Program (WMP), Sections 4.2, 4.3, and 4.4 (Waterways Consulting, October 2010).

unicorporated community of Oceano, California.

The applicant proposes to implement the following components of the WMP following receipt of the Corps' permit and other pending regulatory approvals (95% Improvement Plans (Waterways Consulting, July 30, 2014) will be provided upon request):

- Remove all woody vegetation from the two flood control channels, with the exception of a protected riparian corridor consisting of the existing low-flow channels and a 10-foot-wide woody riparian "buffer" located on each side of the low-flow channel for Arroyo Grande Creek, and a 5-foot-wide woody riparian "buffer" located on each side of the low-flow channel for Los Berros Creek, and on an as-needed basis (see discussion below), maintain this portion of the channels clear of vegetation in order to achieve a composite roughness of 0.040 within the subject reach of both Arroyo Grande Creek and Los Berros Creek diversion channels[4];
- Install temporary surface water diversion(s) and (if needed) cofferdams and dewatering pumps in preparation for sediment removal;
- Remove approximately 25,000 cubic yards of sediment from the two flood control channels, and on an as-needed basis (see discussion below), remove accumulated sediment in order to provide capacity in accordance with the Overall Project Purpose (estimated at 2,000 cy per year);
- Excavate secondary channels (also known as overflow channels) within the floodplain area on either side of the low flow channels to allow for more complex flow conditions that would encourage scour and sediment transport, enhance wildlife habitat, and potentially reduce the need for future sediment removal;
- Conduct levee improvements at select "low spots" to increase erosion protection and provide channel capacity for up to a 10-year flood event with 2 feet of freeboard for the south levee and 3 feet of freeboard for the north levee (approximately 18,000 cubic yards of fill material) (referred to as "WMP Alternative 3a" in the *Draft Biological Assessment for South Coast Central California Steelhead, Arroyo Grande Creek Channel* (SWCA, July 2013) and *Final Environmental Impact Report* (San Luis Obispo County, October 2010)), including:
    - Raising the levee in various locations along Arroyo Grande Creek channel from approximate river station 36+00 to upstream of the Hwy 1 bridge at approximately river station 150+00, as well as along the Los Berros Creek diversion channel downstream of the Century Lane Bridge;
    - Stabilization of levee toe (interior slope of levee) at various locations along Arroyo Grande Creek channel and Los Berros Creek diversion channel on an as-needed basis through recontouring and (potential) regrading to achieve a 2:1 slope on levee interior slope;
    - Installing interlocking concrete block as permanent, permeable erosion protection along the top and exterior slope of the south levee between Highway 1 and Valley Road (approximately 4,100 feet);
- Conduct additional levee improvements at select locations of the Arroyo Grande Creek channel to increase erosion protection and channel capacity for dense residential areas and commercial properties adjacent to the north levee (referred to as "WMP Modified Alternative 3c" in the *Biological Assessment* (SWCA, July 2013) and *Final Environmental Impact Report* (San Luis Obispo County, October 2010)), including:
    - Raising portions of the north levee through construction of flood walls from approximately Arroyo Grande Creek channel river stations 74+00 to 100+00;

[4] The protected riparian corridor would consist of the active low flow channel, estimated to average 25-feet-wide in most places, plus 10-foot-wide buffers on each side of the low flow channel, producing a 45-foot-wide corridor of riparian vegetation within a levee corridor that ranges from 60- to 80-feet-wide depending on location. Depending upon the maturity and size of the riparian trees (which would vary over time), the canopy width would extend beyond the 10-foot buffers, potentially creating a canopy width ranging from 45- to 60-feet-wide (Biological Assessment, Waterways Consulting, July 2013).

122+00 to 127+00; and 132+00 to 134+00, as well as construction of 500 linear feet of retaining wall along private property, and installation of steel plates to enclose the 22nd Street bridge railing in order to provide 10-year flood protection with 4 feet of freeboard to the high density residential and community facilities areas;

- Protecting approximately 8,100 linear feet of the exterior slope of the south levee from erosion and overtopping damage through installation of turf reinforcement mats between river station 37+00 and 118+00 (downstream of the Highway 1 bridge);
- In-place soil stabilization through the addition of a stabilizing agent (such as cement, bentonite or lime) along approximately 17,500 linear feet of the 15-foot wide north and south levee access roads (top of levees) to allow for erosion stabilization and improved maintenance access; and,

- Enhance riparian vegetation with native shrub and tree species within both channels to create a continuous corridor, and install approximately thirty-six (36) natural log and boulder habitat structures at confluence of each secondary channel and low flow channel.

Vegetation management within the portion of the floodplains outside of the low flow channels and protected buffer areas would be conducted periodically to maintain a roughness coefficient of 0.04 (current roughness is approximately 0.057 on average), and would be based upon an adaptive management approach that would include reconnaissance surveys by County engineers, biologists, and site visits with regulatory agency staff. Based on past experience, vegetation management would be repeated approximately every one to three years, depending on the amount of regrowth. Vegetation management would occur as late as possible in the summer and fall of each year to maximize stream shading during the warmer summer months while avoiding/minimizing impacts to aquatic species and nesting birds. This activity would be conducted primarily with hand tools and use of heavy machinery would be limited.

Similarly, sediment removal within the portion of the floodplains outside of the low flow channels and protected buffer areas would be required periodically to maintain channel capacity. Cross-section (channel width/depth) monitoring would also be conducted periodically within and downstream of the proposed project area ("action area") in order to assess the performance of the channel in moving sediment and channel capacity. The hydraulic model used to establish recent baseline conditions (Swanson Hydrology & Geomorphology, January 2006) would then be rerun with updated cross-sections and roughness information to assess channel capacity. The volume of sediment to be removed would vary from year to year, would be considerably less than the initial removal, and in some years may not be required. This activity would consist of removal of excess sediment by an excavator located on the top of the levee, deposition of removed sediment at designated stockpile areas outside waters of the U.S., use of a long-reach bucket to move sediment from the designated stockpile areas to dump trucks, and transport of the sediment off-site to a County-approved disposal area. Heavy machinery would most likely not need to access the channel during these activities.

Equipment for the Alternative 3a and Modified Alternative 3c levee improvement components would include a loader, grader, excavator, and haul trucks. Heavy equipment would be operating on the levee faces and adjacent properties while additional material is being added and compacted onto the levee faces. In some cases the material at the toe of the levees would be over-excavated to ensure the integrity of the levee improvements.

Work within waters of the U.S. (i.e., includes area of channel below the ordinary high water mark and its adjacent wetlands) would occur between June 1 and October 31, in order to minimize potential impacts upon listed fish species (including southern steelhead and tidewater goby), amphibian species (including California red-legged frog), and water quality. Work along the top and exterior levee slopes of both channels may not be subject to this seasonal restriction. See Table 1 below for estimates of temporary and permanent impacts to waters of the U.S. and waters of the State

associated with the proposed project, and "Proposed Mitigation" below for summary of avoidance, minimization, and compensatory mitigation measures currently proposed by the applicant.

Table 1: *Impact Calculations by Jurisdictional Category*

Type of Jurisdiction	Impacts (acres)			
	Vegetation Management		Sediment Management	
	Permanent[1]	Temporary	Permanent	Temporary[2]
Federal Jurisdictional Areas				
USACE Wetlands	0	0	0	0.2
USACE "Other Waters of the U.S."	0	0	0	0.34
State Jurisdictional Areas				
CDFW (includes CCC and RWQCB)	**2.41**	**2.88**	**4.76**	**2.21**
Willow Riparian Woodland	*2.35*	*2.88*	*4.76*	
In Riparian Transition Zone		*2.88*		
Outside Riparian Transition Zone	*2.35*			
Non-native Grassland	*0*	*0*	*0*	*2.21*
Riparian Scrub	*0.06*	*0*	*0*	*0*
Wetland	*0*	*0*	*0*	*0*
California Coastal Commission	**(1.80 – Included under CDFW)**	**(1.69 – Included under CDFW)**	**(2.32 – Included under USACE and CDFW)**	**0**
In Riparian Transition Zone		1.69		
Outside Riparian Transition Zone	1.80			
RWQCB	**(2.41 – Included under CDFW)**	**(2.88 – Included under CDFW)**	**(4.76 – Included under USACE and CDFW)**	**(2.21 – Included under USACE and CDFW)**
TOTAL	**2.41**	**2.88**	**4.76**	**2.21**

[1] Due to removal of woody vegetation outside of the buffer area.
[2] Log structures result in approximately 0.52 acres of disturbance total to USACE jurisdictional areas. A total of 36 structures are proposed within the project area. Sediment management of wetland near RV park accounts for 0.02 acres

Project Alternatives – Pursuant to the National Environmental Policy Act (NEPA) (40 C.F.R. 1502.14[a]), Federal agencies shall evaluate a range of reasonable alternatives to a proposed action that will avoid or minimize adverse effects of these actions upon the quality of the human environment.

Additionally, when proposed impacts fall within Clean Water Act jurisdiction, alternatives must be evaluated pursuant to the Clean Water Act Section 404(b)(1) Guidelines (Guidelines) (40 CFR 230). Except as provided under Section 404(b)(2), no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. The term practicable means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

The following alternatives to the proposed project have been identified and will be evaluated by the Corps, pursuant to NEPA and the Guidelines:

1) *No Federal Action*: This alternative would consist of the elements of the proposed project that could be carried out in the absence of federal action (e.g., permits, funding);
2) *Levee Raise and Setback*: This alternative would widen the existing channel to 200 feet along most of the project area by relocating the southern levee. It would require rebuilding the Union Pacific Railroad (UPRR) Bridge, the 22nd Street Bridge, and the Highway 1 Bridge, and purchasing agricultural land on the south side of the existing levee to accommodate a widened channel. Relocation of existing structures would be required as well to accommodate the new levee;
3) *Los Berros Creek Overflow*: This alternative would use the old Los Berros channel as a potential storage area for floodwaters originating from the Los Berros Creek watershed. An existing flood gate located at the inlet of the old Los Berros channel would be retrofitted to allow flood flows to enter the old channel and bypass the existing flood control reach. Floodwaters would enter Arroyo Grande Creek downstream, near the lagoon; and,
4) *Levee Raise and Vegetation Management.* This alternative would include the levee raise and the vegetation management components of the proposed project, but would not include the sediment removal component.

Proposed Mitigation– The proposed mitigation may change as a result of comments received in response to this public notice, the applicant's response to those comments, and/or the need for the project to comply with the 404(b)(1) Guidelines. In consideration of the above, the proposed mitigation sequence (avoidance/minimization/compensation), as applied to the proposed project is summarized below:

Avoidance and Minimization: In order to avoid and minimize potential adverse effects upon federally-listed species and water quality, the applicant proposes to implement the comprehensive monitoring plan and adaptive management strategy summarized below, including seasonal timing restrictions, phased dewatering/diversion methods, species monitoring & relocation, habitat monitoring, stream profile and erosion/accretion monitoring, and agency coordination:

- WMP vegetation performance measures PM-VEG-1 through -4 (WMP, Section 4.2, October 2010);
- WMP sediment performance measures PM-SED-1 through -5 (WMP, Section 4.3, October 2010);
- WMP protection measures PM-1 through -6 (WMP, Section 4.4, October 2010);
- Avoidance and Minimization Measures 1 through 16 (Biological Assessment for USFWS-Covered Species, Section 4.3.1.4, July 2013); and,
- The (14) avoidance and minimization measures described in the *Programmatic Formal Endangered Species Act Consultation on Issuance of Permits under Section 404 of the Clean Water Act or Authorizations under the Nationwide Permit Program for Projects that May Affect the California Red-legged Frog* (USFWS 1999).

Compensation: In order to compensate for temporary and permanent impacts upon sensitive habitats and listed species, the District would prepare a Habitat Mitigation and Monitoring Plan (HMMP), consistent with Corps' requirements (33 CFR 332.4(c)(2)-(c)(14)) as well as the requirements of California Department of Fish and Wildlife and the Regional Water Quality Control Board. Pursuant to 33 CFR 332(c)(1), a final HMMP is required prior to issuance of the Corps' permit. At present, the District proposed to: 1) re-establish secondary channels within the floodplain area on either side of the low flow channels in order to allow for more complex flow conditions that would

encourage scour and sediment transport, enhance wildlife habitat, and potentially reduce the need for future sediment removal; 2) install thirty-six log and boulder habitat structures at the confluence of each secondary channel and low flow channel; and, 3) enhance approximately 7.14 acres of on-site, degraded riparian habitat within the protected riparian buffer zone in Arroyo Grande Creek and Los Berros Creek channels.

For additional information please call John Markham of my staff at 805-585-2150 or via e-mail at John.W.Markham@usace.army.mil. This public notice is issued by the Chief, Regulatory Division.

Regulatory Program Goals:

- To provide strong protection of the nation's aquatic environment, including wetlands.
- To ensure the Corps provides the regulated public with fair and reasonable decisions.
- To enhance the efficiency of the Corps' administration of its regulatory program.

DEPARTMENT OF THE ARMY
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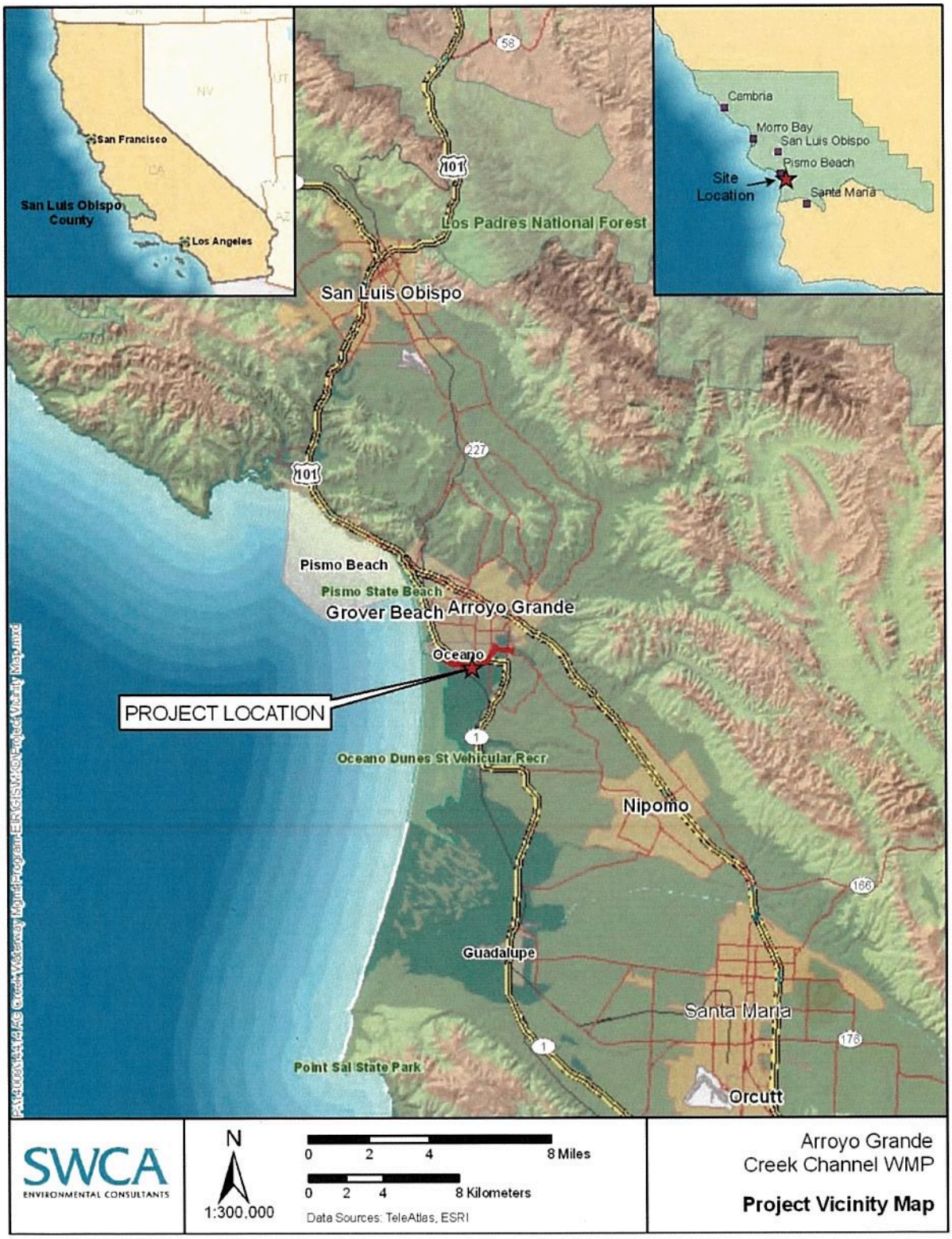
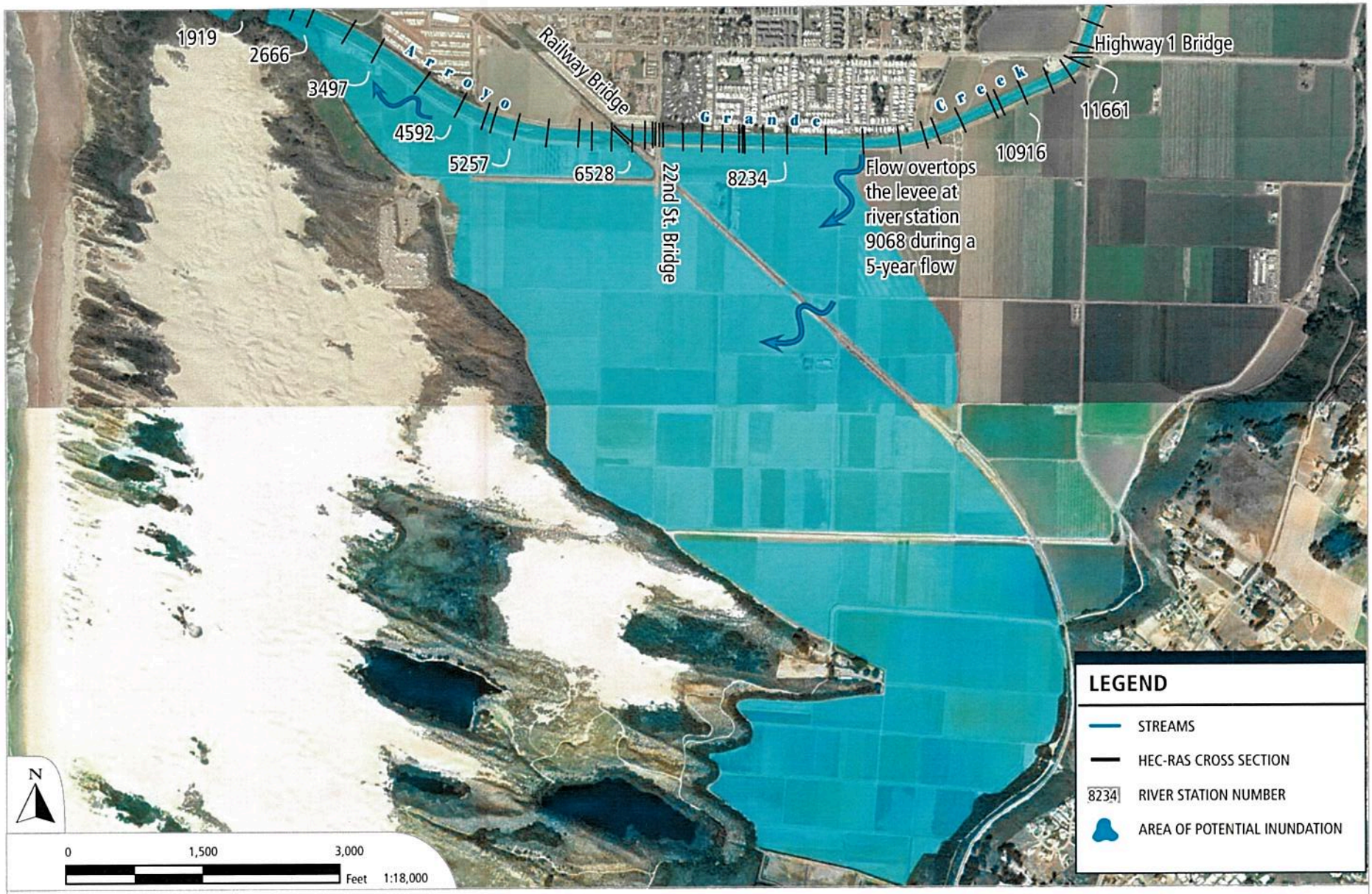
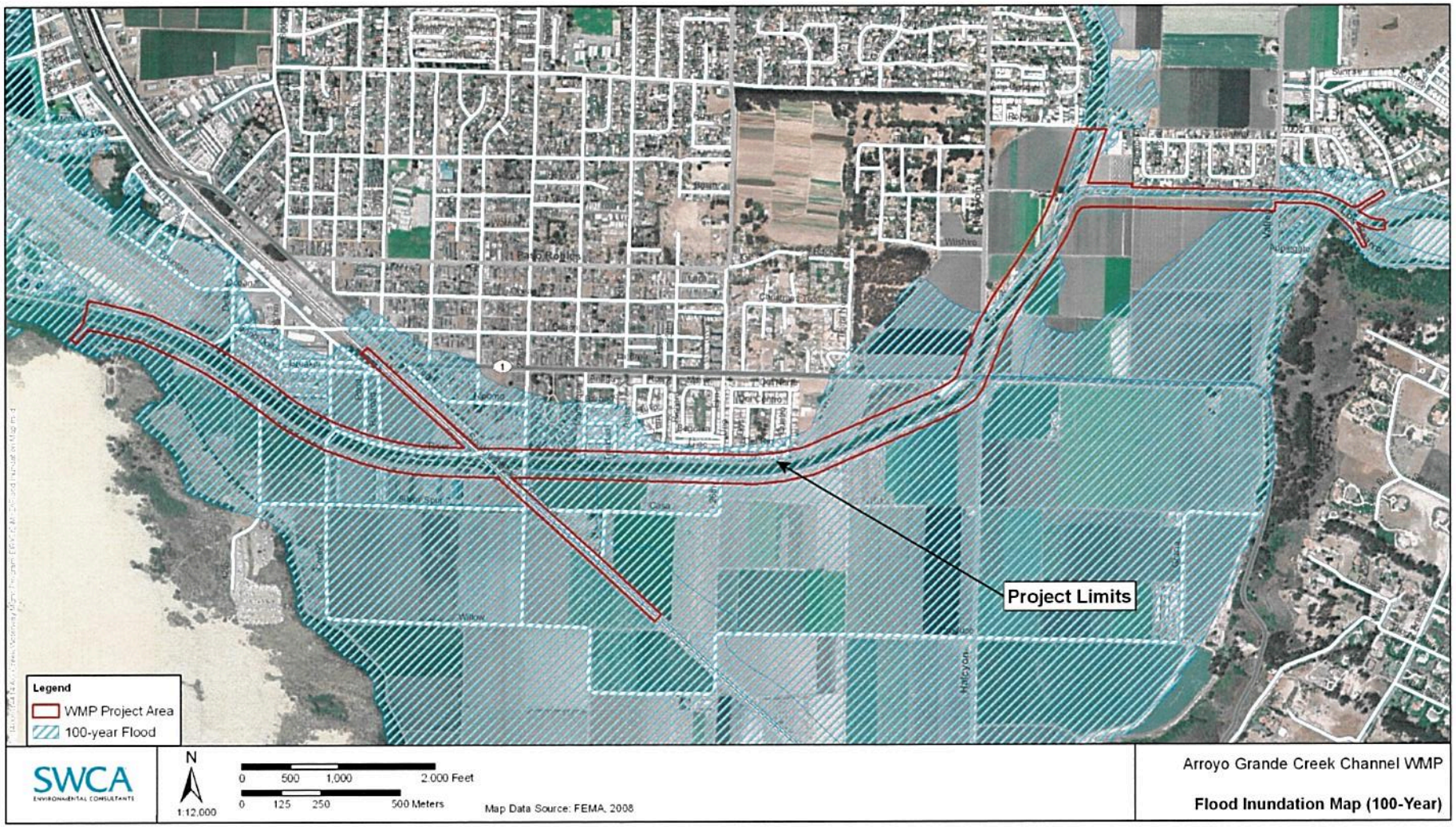

San Francisco
San Luis Obispo County
Los Angeles
NV
UT
CA
AZ
Cambria
Morro Bay
San Luis Obispo
Pismo Beach
Site Location
Santa Maria
58
101
Los Padres National Forest
San Luis Obispo
227
Pismo Beach
Pismo State Beach
Grover Beach
Arroyo Grande
Oceano
PROJECT LOCATION
1
Oceano Dunes St Vehicular Recr
Nipomo
166
Guadalupe
Santa Maria
176
Point Sal State Park
Orcutt
N
1:300,000
0 2 4 8 Miles
0 2 4 8 Kilometers
Data Sources: TeleAtlas, ESRI
SWCA
ENVIRONMENTAL CONSULTANTS
Arroyo Grande Creek Channel WMP
Project Vicinity Map



SWANSON HYDROLOGY + GEOMORPHOLOGY
500 Seabright Ave, Suite 202 Santa Cruz, CA 95062
PH 831.427.0288 FX 831.427.0472

FIGURE 3.2: Estimated area of flooding during a 5-year event assuming a levee overtop rather than a levee failure. Area of inundation was estimated to be approximately 700 acres. The area of inundation would differ under higher peak events or levee failure.

Figure 4.5-2. FEMA 100-Year Inundation Zone



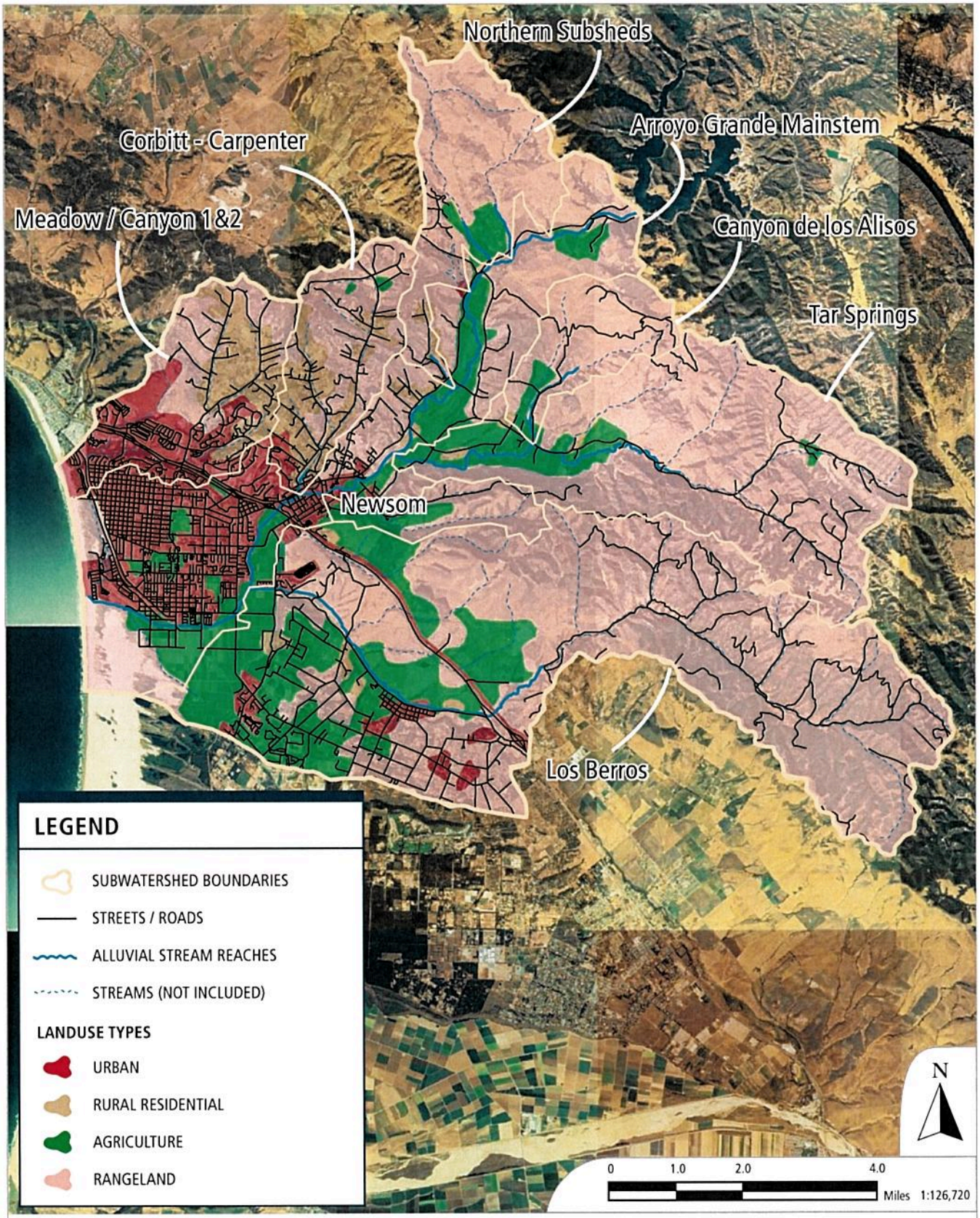


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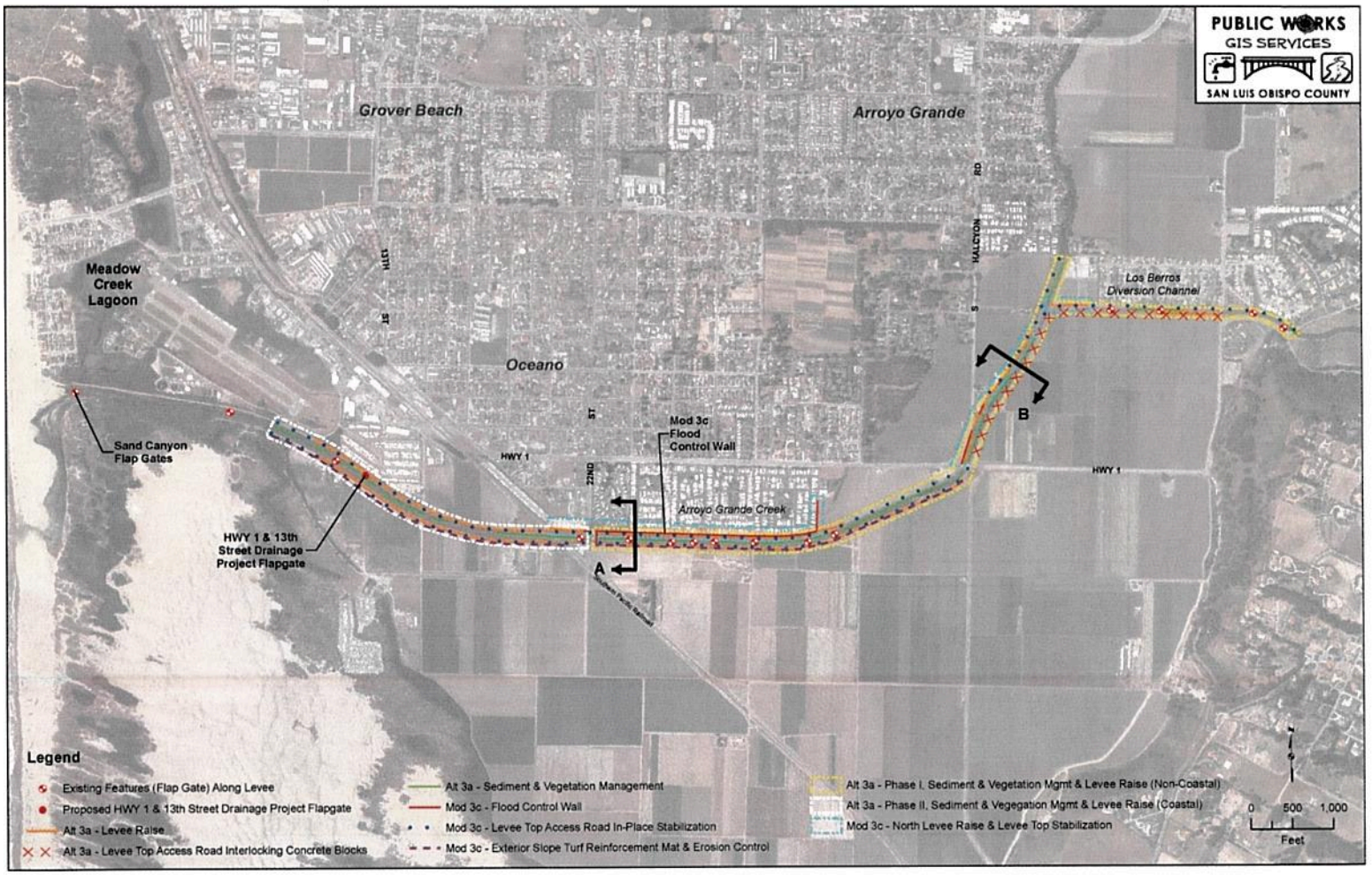
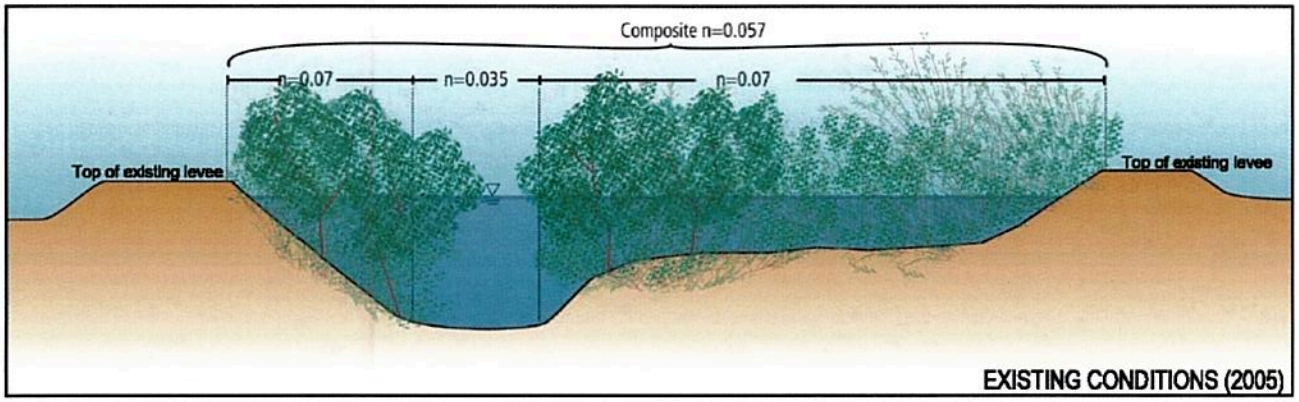
FIGURE 4.2: Land use classification, roads, and alluvial stream reach data for the Lower Arroyo Grande Creek watershed. These data were used to generate length and area statistics for development of the sediment budget. Alluvial stream reaches were classified by SH+G staff based on field surveys. Road information and land use data were adopted from a GIS database developed by Cal Poly San Luis Obispo and San Luis Obispo County (GIS data source: SLO data finder).


PUBLIC WORKS
GIS SERVICES
SAN LUIS OBISPO COUNTY
Grover Beach
Arroyo Grande
Meadow Creek Lagoon
Oceano
Los Berros Diversion Channel
Sand Canyon Flap Gates
Mod 3c Flood Control Wall
HWY 1
HWY 1
Arroyo Grande Creek
HWY 1 & 13th Street Drainage Project Flapgate
A
B
13TH ST
22ND ST
HALCYON RD
Southern Pacific Railroad
Legend
Existing Features (Flap Gate) Along Levee
Proposed HWY 1 & 13th Street Drainage Project Flapgate
Alt 3a - Levee Raise
Alt 3a - Levee Top Access Road Interlocking Concrete Blocks
Alt 3a - Sediment & Vegetation Management
Mod 3c - Flood Control Wall
Mod 3c - Levee Top Access Road In-Place Stabilization
Mod 3c - Exterior Slope Turf Reinforcement Mat & Erosion Control
Alt 3a - Phase I, Sediment & Vegetation Mgmt & Levee Raise (Non-Coastal)
Alt 3a - Phase II, Sediment & Vegegation Mgmt & Levee Raise (Coastal)
Mod 3c - North Levee Raise & Levee Top Stabilization
0 500 1,000
Feet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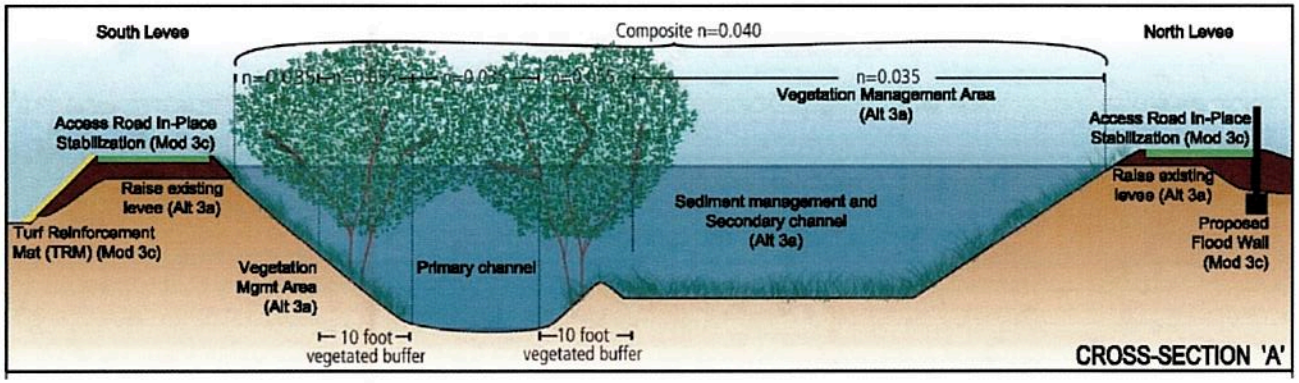
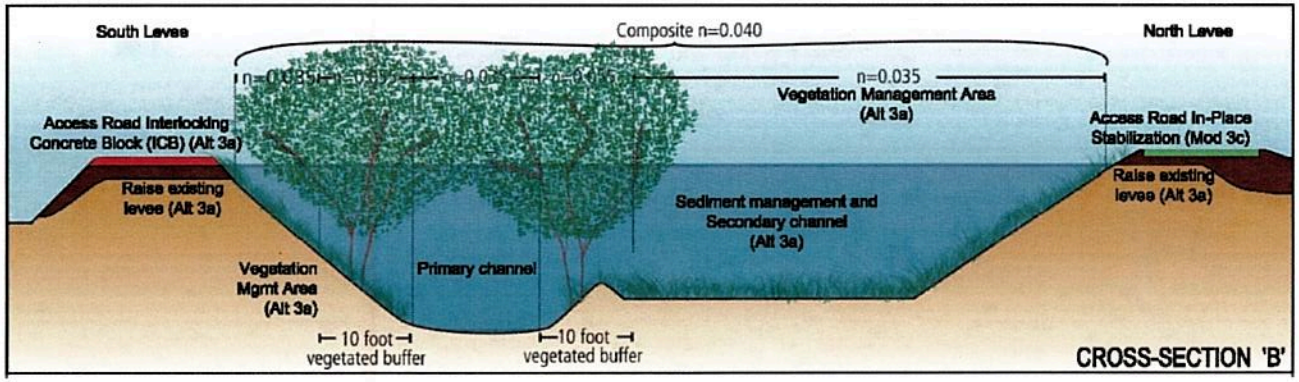
n=0.07
n=0.035
n=0.07
Top of existing levee
Top of existing levee
EXISTING CONDITIONS (2005)


South Levee
Composite n=0.040
North Levee
n=0.035
Vegetation Management Area
(Alt 3a)
Access Road In-Place
Stabilization (Mod 3c)
Raise existing
levee (Alt 3a)
Turf Reinforcement
Mat (TRM) (Mod 3c)
Vegetation
Mgmt Area
(Alt 3a)
Primary channel
Sediment management and
Secondary channel
(Alt 3a)
Access Road In-Place
Stabilization (Mod 3c)
Raise existing
levee (Alt 3a)
Proposed
Flood Wall
(Mod 3c)
10 foot
vegetated buffer
10 foot
vegetated buffer
CROSS-SECTION 'A'


South Levee
Composite n=0.040
North Levee
n=0.035
Vegetation Management Area
(Alt 3a)
Access Road Interlocking
Concrete Block (ICB) (Alt 3a)
Raise existing
levee (Alt 3a)
Vegetation
Mgmt Area
(Alt 3a)
Primary channel
Sediment management and
Secondary channel
(Alt 3a)
Access Road In-Place
Stabilization (Mod 3c)
Raise existing
levee (Alt 3a)
10 foot
vegetated buffer
10 foot
vegetated buffer
CROSS-SECTION 'B'