



**US Army Corps
of Engineers®**

**Los Angeles County Drainage Area
Whittier Narrows Dam Flood Control Reservoir**

**Proposed Modification to the Planned Minor
Deviation for Water Conservation Purposes
through March 8, 2016**

**Finding of No Significant Impact
and
Environmental Assessment**

**U.S. Army Corps of Engineers
Los Angeles District
South Pacific Division
915 Wilshire Blvd.
Los Angeles, CA 90017**

November 2015

DRAFT
FINDING OF NO SIGNIFICANT IMPACT
Water Conservation Planned Minor Deviation from the Current Water Control Plan for
Flood Season 2015-2016
Whittier Narrows Dam Flood Control Reservoir,
Los Angeles County, California

I have reviewed the Environmental Assessment (EA) that has been prepared for the 2015-2016 winter storm season proposed modification to the Approved Planned Minor Deviation for Water Conservation Purposes from the Current Water Control Plan, Whittier Narrows Dam, Los Angeles County, California. The EA has been prepared by the United States Army Corps of Engineers (Corps) to comply with the National Environmental Policy Act (NEPA) (42 United States Code 4321 et seq.), Council on Environmental Quality (CEQ) regulations published at 40 Code of Federal Regulations (CFR) part 1500-1508, other environmental laws, Executive Orders, and Corps' regulations. The Corps has also published its own *Procedures for Implementing NEPA*, Engineering Regulation (ER) 200-2-2, (33 CFR Part 230) in order to provide guidance for the procedural provisions of NEPA and to be used in conjunction with CEQ regulations.

The Corps received a request from the Los Angeles County Department of Public Works (LACDPW) in September 2014 to deviate from the approved Whittier Narrows Water Control Plan for 2014 to 2017 by increasing the buffer pool elevation upstream of the dam. On December 12, 2014 the Corps approved the request, but only through March 8, 2016 and with the caveat that water impounded by the Whittier Narrows Dam -could be held for a maximum of 24 hours up to elevation 205 feet NGVD. Water impounded in the Basin for water conservation would be released at a rate which would enable LACDPW to capture a greater amount of water in downstream spreading basins thereby increasing the amount of groundwater recharge that could be achieved during a storm event. Releases from Whittier Narrows Dam are closely coordinated with LACDPW to accommodate their ability to divert the water.

Changed conditions, deteriorating circumstances, and additional analysis has resulted in a reevaluation of the constraints contained in the current PMD and may permit reoperation of Whittier Narrows Dam for greater water conservation than was permissible before .

The purpose of this EA is limited to a review of the Approved PMD to evaluate minor modifications that would allow for greater opportunities to maximize groundwater recharge and to increase the potential to divert additional quantities of water over a longer period of time given the extreme drought condition that has left ground water tables at a historic low. This EA analyzes the impacts of a modified PMD that, if approved, would go into effect from November 25, 2015 to March 8, 2016 to increase the period of time the buffer pool could be in held in a range of elevations between 201.6 and 205 ft NGVD (Preferred Alternative). The buffer pool could be held as high as 205 feet NGVD for a duration up to one week from November 25 through March 8. Note that for flood risk management purposes, there would be no such limitation on Project operations.

Project operations retain flood risk management as the primary project purpose. The Corps could release any water impounded for conservation at its sole discretion should the full Whittier Narrows Reservoir capacity be required for flood risk management operations. At all other times this enables the County to maximize the amount of stormwater diverted into its spreading basins downstream of Whittier Narrows Dam without diminishing the project's flood risk management capability.

In addition to the Preferred Alternative, this EA also evaluates a No Action Alternative. Under the No Action Alternative the PMD would remain in place unmodified. Storm water would continue to be impounded to elevation 205.0 ft (NGVD) for no more than 24 hours until March 8, 2016 for water conservation purposes and released in coordination with the County for downstream ground water recharge in its spreading basins.

Public comments on this EA were solicited from November 3, 2015 through November 18, 2015. Based upon the impacts described in the EA, incorporated here by reference, impacts from implementation of the Preferred Alternative would be temporary and not significant. I have determined that implementation of the Preferred Alternative would comply with the Clean Water Act, National Historic Preservation Act, the Endangered Species Act, Migratory Bird Treaty Act, other Federal laws, Executive Orders and Corps Policies as described in this EA.

I have considered the available information contained in the EA for the Proposed Modification to the Planned Minor Deviation to the Water Control Plan and determined that the impacts resulting from the implementation of the proposed modification would not have a significant adverse impact upon the existing environment or the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not required.

Date

Kirk E. Gibbs
Colonel, U.S. Army
Commander and District Engineer

1.0 INTRODUCTION

The U.S. Army Corps of Engineers (Corps) prepared this Environmental Assessment (EA) to evaluate the potential impacts of modifying operations at Whittier Narrows Flood Control Basin (Project) to further optimize water conservation opportunities in Los Angeles County, California. This draft EA has been prepared pursuant to the National Environmental Policy Act (NEPA) (42 United States Code 4321 et seq.), Council on Environmental Quality regulations published at 40 Code of Federal Regulations (CFR) Part 1500, et seq., other environmental laws, Executive Orders, Corps' regulations and policies. The Corps' review of its operations is conducted pursuant to a request from the Los Angeles County Department of Public Works, dated [insert].

1.1 Location of Proposed Action

The Project is located about 10 miles east of downtown Los Angeles in South El Monte, Los Angeles County, California (Figure 1-1). The drainage area is north of the Project and encompasses 554 square miles, including 236 square miles of open space behind Santa Fe Dam, also owned and operated by the Corps. The Project impounds flows from both the Rio Hondo and the San Gabriel River. Both river systems are ephemeral and normally do not provide significant inflow into the reservoir except during and immediately following rainfall events. Consequently, Whittier Narrows Dam Basin (Basin) is empty or nearly empty about 90% of the time. The Project is comprised of an earthen dam approximately 16,960 feet in length with a design elevation of 239 feet NGVD. Two outlet channels lead out of the Project at each of the rivers. The Rio Hondo side, whose invert is 17 feet lower than the invert on the San Gabriel side, serves as the primary discharge outlet from the Project. Its four 19 foot high tainter gate openings discharge to the concrete-lined Rio Hondo which has an initial capacity of 40,000 cfs. The four tainter gates are capable of releasing well in excess of the defined downstream channel capacity. The higher elevation San Gabriel outlets function primarily as the Project's spillway. The total flood control storage capacity of the Project below the spillway crest elevation of 228.5 ft (NGVD) is approximately 36,300 acre-feet.

The proposed Modified Planned Minor Deviation (PMD) would primarily impact the area of the Whittier Narrows Reservoir upstream of the west embankment in the area bordered by Lincoln Ave. on the west and Rosemead Blvd. on the east, with some area of the "overflow" channel upstream of the central embankment (Figures 3-1 thru 3-4). The area upstream of the west embankment is the area that the Rio Hondo flows through before reaching the outlet structure. This area of the basin land is maintained by the Corps as an "Operations" area of the Basin as described in the Project Master Plan and depicted in Figure 1- 2. Operations areas are those lands required for Project structures, operational requirements (e.g. staging, mobilization, dredging, placement, disposal, etc.), office, maintenance compound and other areas that are used solely for Project Operations.

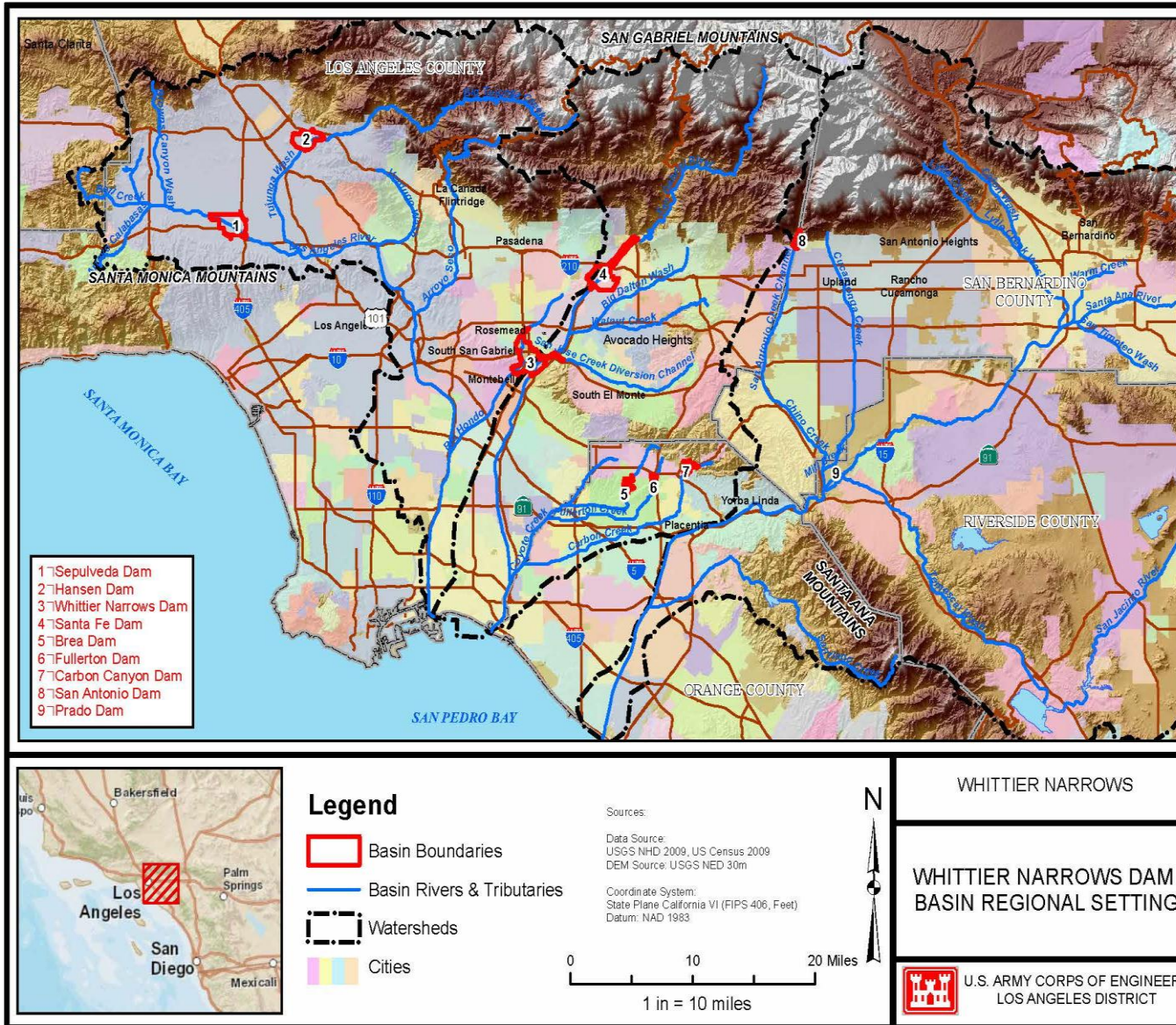


Figure 1-1 Reservoir Location

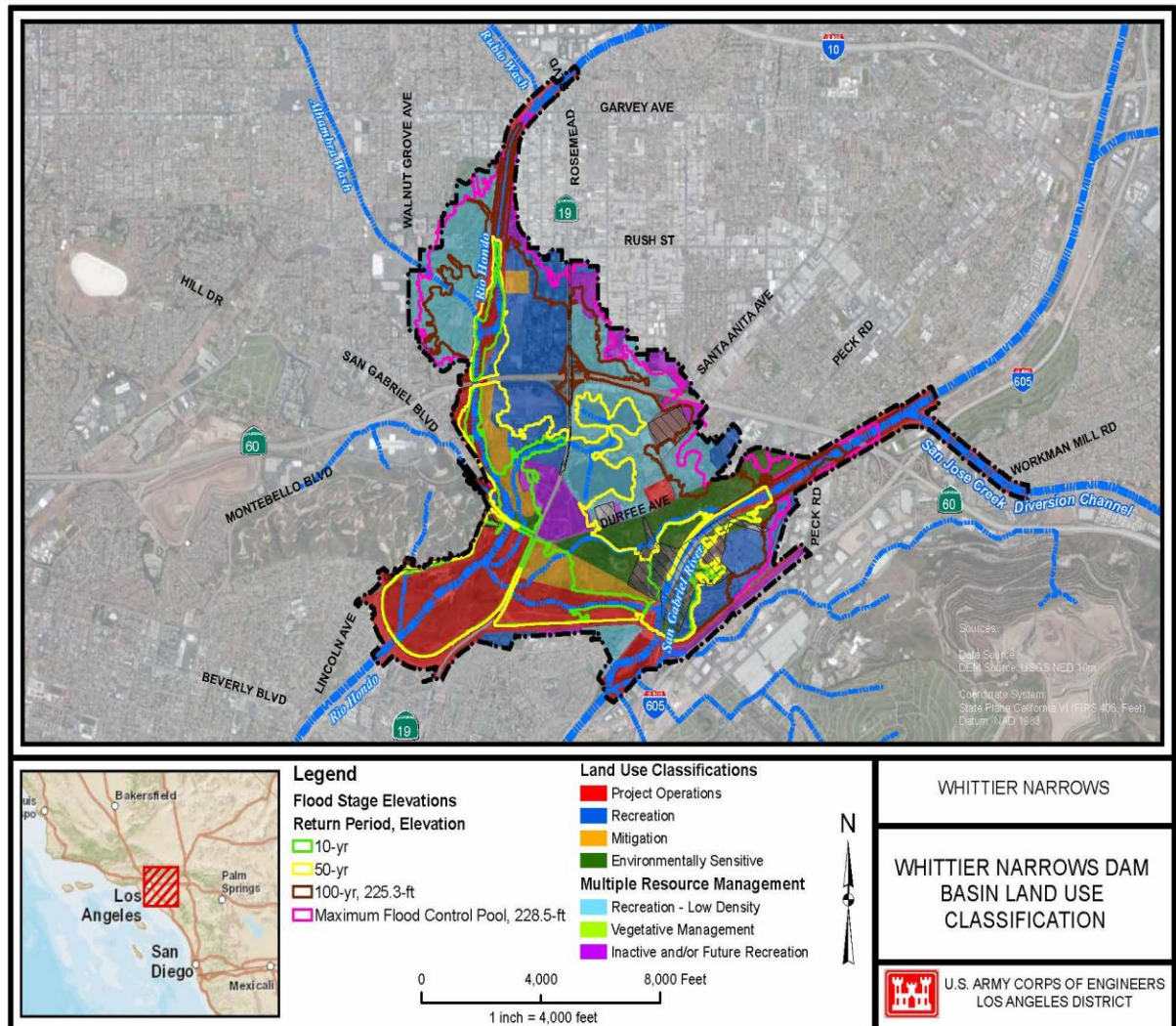


Figure 3.10-3

Figure 1-2 Land Use Classification and Flood Stage Elevations

1.2 Background

Authorization

The Project is a Federally authorized flood risk management project constructed, operated and maintained by the Corps' Los Angeles District. The primary Project purpose is to provide flood risk management for the residents of Los Angeles and Orange counties residing downstream of the dam.

The Flood Control Act of 1936 (Public Law (P.L.) 74-738) authorized civil works projects for flood risk management to reduce flood risk for Los Angeles County, California. The Flood

Control Act of 1938 authorized acquisition of land for flood control projects for the Los Angeles County Drainage Area (LACDA), including Whittier Narrows Dam and Reservoir. The Flood Control Act of 1941 (Public Law (P.L.) 77-228) authorized construction of the Whittier Narrows Dam and initial funds for construction of Whittier Narrows Dam were provided in the 1949 Appropriations Bill. Construction began in March 1950 and the final major contract was completed in March 1957.

Subsequent Acts of Congress authorized the development of the Whittier Narrows Flood Control Reservoir for park and recreation purposes. Recreation facilities have been developed throughout the reservoir by the Corps and non-Federal sponsors: the Los Angeles County Department of Parks and Recreation (LACDPR), and the City of Pico Rivera.

Water Conservation and Approved Modifications to Operations

The primary Project purpose is to provide flood risk management for the residents of Los Angeles and Orange counties residing downstream of the Project. A small portion of the existing flood risk management pool volume of 36,300 acre-feet can be operated in cooperation with LACDPW for water conservation without impinging on the Project's flood risk management operations. Compatible water conservation operations occur year round at the Project by reducing the release rate to optimize percolation rates and retaining a buffer pool up to elevation 201.6 ft NGVD. Should an inflow event be forecast while the District is maintaining a pool for water conservation operations, the outlet and downstream channel capacity allows the pool to be emptied in a couple of hours if required for flood risk management.

This method of cooperative operation for water conservation was first granted by Memorandum from Chief of Engineers to Division Engineer, (11 May 1959) 2nd endorsement dated June 9, 1959. The water conservation pool was set at elevation 195.5 ft (NGVD, 29), corresponding to 1,000 acre-feet. In 1978 it was expanded to elevation 201.6 ft corresponding by South Pacific Division after a severe short-term California drought in 1977 as approved by Memorandum from South Pacific Division to District Engineer, (24 Aug 77) 3rd Endorsement, February 16, 1978.

A short-term or temporary deviation to the water control manual was approved by SPD in February of 2014 authorizing a deviation up to 205 ft (NGVD, 29) for a period not to exceed 24 hours continuously until March 8, 2016 (Approved PMD). When compatible with flood risk management operations in the judgment of Corps staff, a buffer pool may be held to elevation 205.0 ft (NGVD, 29) to limit releases when possible to maximize opportunities that would allow LACDPW to divert the greatest amount of Rio Hondo flow into their Rio Hondo Coastal Basin Spreading Grounds (RHCBSG) located one mile downstream from the Project. The outflow is reduced under the Approved PMD to 1,900 cfs or less to allow LACDPW to capture all of the water for a 24-hour period. However, once the spreading grounds are full, they can only take about 500 cfs, which is the long-term percolation rate of the spreading grounds.

When inclement weather is forecasted, the Basin is drawn down to make space for the anticipated inflow, ensuring there is adequate space available for flood risk management operations. Water is released into the concrete channels downstream and is carried to the Pacific Ocean. The purpose of this Federal Action, the Government is evaluating the feasibility of

increasing the duration for which water may be held at the Basin to maximize ground water recharge opportunities. Any potential modification to the Approved PMD must be compatible with flood risk management operations.

California's Drought Emergency

The state of California is currently in year four of a prolonged period of abnormally low rainfall and resulting water storage, or drought. Average rainfall in downtown Los Angeles is 15 inches, but Los Angeles received only 8.5 inches in 2014-2015. On January 17, 2014 California Governor Jerry Brown declared a drought emergency after California experienced the driest year on record. On March 17, 2014, the County requested the Corps' cooperation in capturing storm water behind the District's Los Angeles County Drainage Area (LACDA) dams and in May 2014 more specifically requested a deviation from the water control plan at Whittier Narrows Dam Basin.

In anticipation of a significant storm event forecast for mid-December 2014, a PMD package was prepared by the District and approved by SPD to allow additional capture of water from that event and subsequent events through March of 2016. This Approved PMD allows for compatible water conservation operations to occur at the Project by reducing the release rate to optimize percolation rates and retaining a buffer pool up to elevation 205 ft (NGVD, 29) for a period of up to 24 hours. After a 24 hour period, water may be held to elevation 201.6 (NGVD, 29), but any increase above this elevation would require water to be released into the downstream channel until the buffer pool elevation is reduced to 201.6 ft (NGVD, 29).

2015-2016 El Niño

Southern California is currently experiencing the National Weather Service prediction of an El Niño event for the southwestern U.S. for 2015-2016 winter flood season. El Niño is characterized by an increase in the sea temperatures in the tropical water of the eastern and central Pacific Ocean. The warm water influences the storm patterns globally, bringing heavy rain storms to the coastal regions of the Pacific. Southern California is one of the regions being continuously impacted by El Niño events, which bring warmer than normal winters and severe rain storms. These warm and wetter events occur on an irregular cycle, ranging from 2 to 7 years and each cycle lasts from 6 months to 4 years. This condition is known to cause a storm track bringing numerous successive storms that could make this winter wetter than usual in southern California. El Niño is one of the most widely publicized weather patterns in southern California.

Lincoln Fire

In August 16, 2015, the Corps received notification that transient populations caused an unauthorized fire in the Basin. Approximately 200 acres burned within the Basin, mostly downstream of San Gabriel Blvd. The fire crossed San Gabriel Blvd, destroying native and non-native vegetation in and adjacent to the Rio Hondo River (Figure 1-3). Some of the vegetation that burned is known to meet the primary constituent elements for least Bell's vireo habitat, a Federally listed endangered bird species.

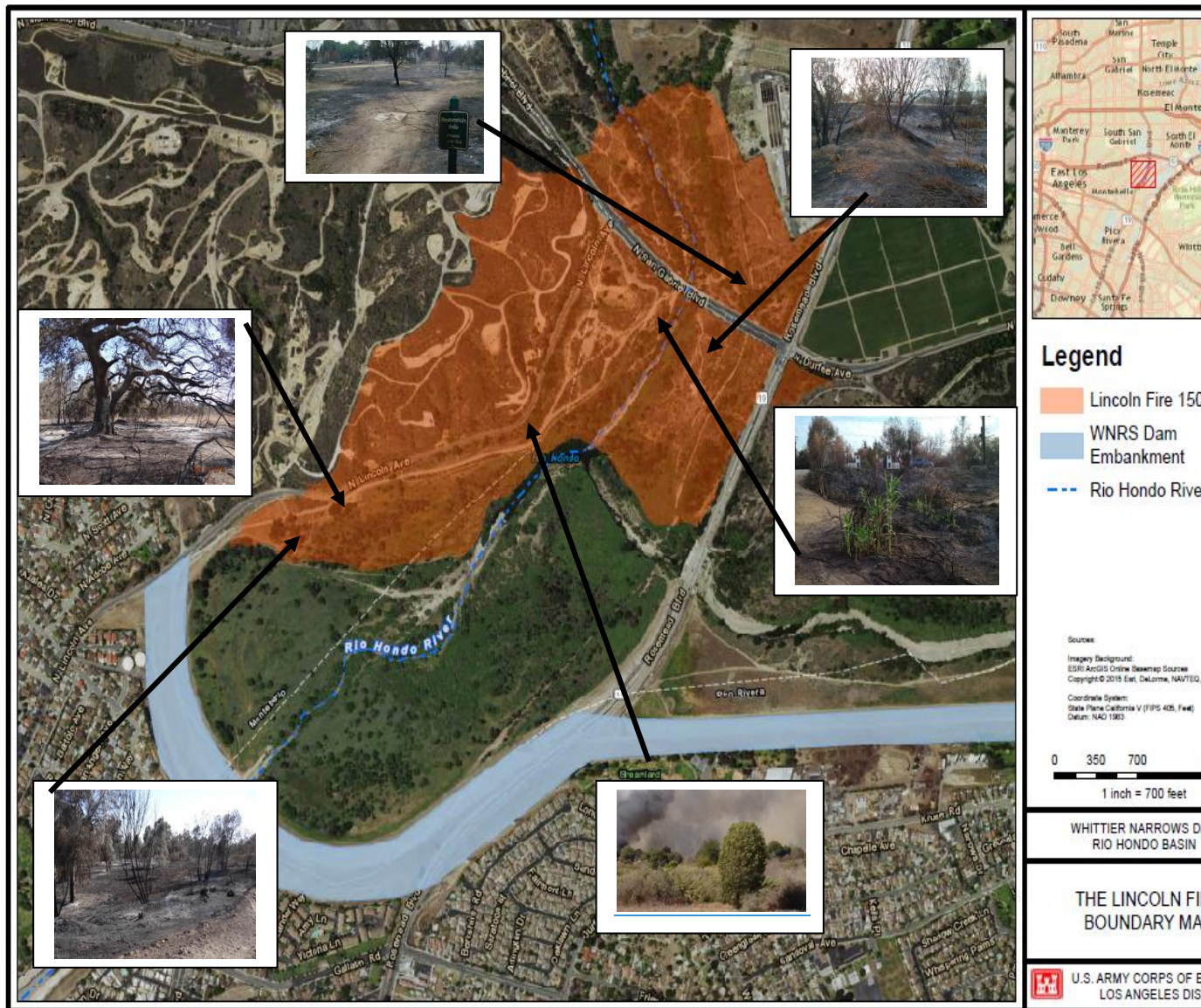


Figure 1 -3 Lincoln Wildfire Boundary August 2015

From the top right photo clockwise, vegetative understory burned, leaving scorched trees; after just 3 weeks, giant reed has re-sprouted; smoke from fire rises above the Basin; vegetative understory burned, leaving scorched eucalyptus trees, illustrating that the fire was fast moving and relatively hot; early area burned; and top left, area of restored by the Mountains Recreation Conservancy as part of the Bosque del Rio, located on the northwest corner of San Gabriel Blvd. and Rosemead Blvd. burned.

1.3 Purpose and Need

Events since December 2014, including the forecast by the National Weather Service of a strong El Niño condition entering this storm season (2015-2016), the Lincoln Ave fire of August 2015 that burned significant amounts of native and non-native vegetation between the Montebello Hills and Rosemead Blvd., and additional analysis regarding the inundation and recovery of various plant species found within the Proposed Project area, have necessitated a re-evaluation of the potential for modifying the Approved PMD. The purpose of the proposed action is to evaluate reasonable alternatives to address local government requests for cooperation to utilize existing Corps infrastructure to further optimize potential groundwater recharge at LACDPW spreading basins adjacent to the Rio Hondo River channel, downstream of the Whittier Narrows Dam. The need is to address local concerns regarding water shortages caused by the drought condition in light of changing conditions as stated above.

2.0 ALTERNATIVES

Two alternatives, the No Action Alternative and Proposed Action, or Action Alternative, lengthening the duration of the water conservation elevation to 205.0 (NGVD) at Whittier Narrows Dam Reservoir are the only two alternatives being considered. The Proposed Action would provide a longer duration of time to optimize opportunities for groundwater recharge in a manner that would be compatible with flood risk management operations

No other alternatives were considered as elevation 205.0 NGVD was already in place for the 2015-2016 winter storm season, only the length of duration of impounded water is being proposed. Alternatives at higher elevations would result in impacts to resources, utilities, facilities and lands within the Basin that would be significant without mitigation and were therefore not considered.

2.1 Proposed Action

The Corps, Los Angeles District proposes to modify the Approved Planned Minor Deviation (PMD) that would allow for increased inundation duration in the existing buffer pool up to elevation 205.0 ft (NGVD, 29) from 24-hours to no more than seven (7) continuous days from November 15, 2015 through March 8, 2016 at any one time. Beyond a seven (7) continuous day period, water may be held up to 201.6 ft (NGVD, 29). If water is held for flood risk management above 205.0 ft (NGVD, 29), those days would count as equivalent number of days of the seven (7) continuous days. Once the water level elevation has receded to 201.6 (N\GVD, 29), with the next storm, water may be held once again to 205.0 (NGVD, @()) for up to seven (7) continuous days. After March 8, 2016 water would not be impounded higher than 201.6ft. This modification is referred to as the “Modified PMD.

The increased duration of impoundment within the buffer pool is compatible with flood risk management operations. Modifications to flood risk management operations would only be utilized when the Corps determines that weather and operational conditions are favorable and is dependent on there being water to impound. The proposed PMD does not reserve storage in the

Basin for water conservation and there is no guaranteed right to any amount of water being held by or being released from the Project. To the extent that Project operations may accommodate slower releases and a temporary increase in the buffer pool elevation duration for water conservation purposes, the Corps would modify its operations for this compatible purpose without impacting the Project's ability to provide flood risk management. The decision to utilize the water conservation buffer pool or increased impoundment duration within the buffer pool is at the sole discretion of the Corps. This decision would be made on a case by case basis, in coordination with Corps Environmental Subject Matter Experts. As part of the Corps' current coordination practices, all potentially impacted Basin users including any lessees or easement holders would be alerted to any changed operational parameters before they would occur.

Historically, reaching elevation 205 ft (NGVD) would have between a five year and ten year return period. Under the modified Planned Minor Deviation impoundments to 205 would be expected to be more frequent and with the higher rain amounts associated with the forecast El Nino it would appear highly likely to occur during the period of this modified PMD. This increased probability of reaching 205 is somewhat offset by; a) the County currently has over 80,000 acre-feet of vacant storage in its reservoirs including Cogswell, San Gabriel and Morris Dam reservoirs, located in the canyons of the San Gabriel Mountains, upstream of Santa Fe and Whittier Narrows Dams, b) there has been dramatically less than normal rain for over four years so the ground will absorb a maximum amount of runoff due to historically low groundwater tables, and c) because of drought conditions, the LACDPW spreading grounds are significantly depleted and able to accept maximum diversion. If the pool exceeds or is expected to exceed 205.0 ft (NGVD), flood risk management releases approximately matching inflow are made to the Rio Hondo at a rate not exceeding the downstream channel capacity of either the Rio Hondo or the Los Angeles River. If there are no subsequent storms the remaining water in storage may be fully captured by the County while the dam is emptied. All of these operations are performed in close coordination with the County.

During any additional impoundment resulting from the Modified PMD, monitoring of the Project's general performance would be increased. If anomalous conditions arise while holding an increased pool as permitted by the Modified PMD, the Corps will notify appropriate subject matter experts and investigate Project conditions. Implementation of the Modified PMD is dependent upon the occurrence of adequate rainfall and runoff events.

2.2 No Action Alternative

Under the No Action Alternative, storm water would continue to be impounded according to the Approved PMD, which authorizes a buffer pool that may be held to elevation 205.0 ft (NGVD) from November 1 to March 8 for no more than 24 hours. From March 8 through March 30, water impounded to elevation 205.0 ft (NGVD) would be released within six (6) hours decreasing the buffer pool to elevation 201.6 ft or less. The No Action Alternative does not meet the purpose and need of the proposed action based on the changed conditions of the Project area, including the effects of the Lincoln Fire of August 2015 on the Project area and the predicted El Niño occurrence for the 2015-2016 flood season of the southwestern U.S. but is carried forward for comparison purposes.

3.0 AFFECTED ENVIRONMENT and IMPACT ANALYSIS

3.1 Soils and Geology

There would be no change on the soils and geology of the area of the Basin under the proposed action and would be the same as the No Action Alternative.

3.2 Air Quality

There would be no change on the air quality of the area of the Basin under the proposed action as no equipment would be used to increase the water conservation elevation and would be the same as the No Action Alternative.

3.3 Water Resources

There would be no change on the water quality of the area when water is impounded currently to elevation of 205 ft, as the impacts would be similar or the same as when water is held within the Basin for flood risk management and would be similar to the No Action alternative. It is anticipated that there would be some incidental benefits to groundwater recharge within the Project area by the proposed increase in duration for impounding water for water conservation. These impacts would not be significant.

3.4 Noise

There would be no change in the output of noise into the surrounding environment under the proposed action compared to the No Action Alternative.

3.5 Climate Change

Reports forecasting climate change indicate in the western United States and especially in the arid southwest, longer periods of drought with increased temperatures are expected with fewer storms, but storms would be more intense. The opportunities to hold water for water conservation would become fewer, but volume may increase. The ability to capture and hold water for a longer period of time to optimize groundwater recharge under the proposed action compared to the No Action Alternative would be beneficial in regards to the potential climate change impacts. However, this beneficial impact is not significant in terms of impacts to the overall climate.

3.6 Biological Resources

Plant Resources

Within the Project area downstream of San Gabriel Blvd, *Arundo donax* (giant reed) Semi-Natural Herbaceous Stands are dominant, with *Eucalyptus* spp Semi-Natural Woodland Stands co-dominant with occasional and irregular *Salix gooddingii* (black willow) Woodland Alliance also being noticeably present in this area. *Arundo donax* comprises 85% of the Basin vegetation

with *Eucalyptus* spp covering 10% and a mixture of *Salix* species about 5%. *Arundo donax* is the most prodigious and prominent exotic species within the Basin upstream the dam. This species is extremely invasive and can overtake and reduce the functional value of riparian habitats for native riparian species.

Upstream of San Gabriel Blvd. the most prominent vegetation types consist of *Baccharis salicifolia* (mulefat) Shrubland Alliance, *Salix gooddingii* (black willow) Woodland Alliance, *Populus fremontii* Woodland Alliance, *Salix lasiolepis* (arroyo willow) Shrubland Alliance and *Salix exigua* (sandbar willow) Shrubland Alliance make up 90% of the vegetation. Invasives, including giant reed comprise the other 10%. The vegetation types in this area are dominated by *Salix gooddingii* with *Baccharis salicifolia*, and to a lesser extent *Salix lasiolepis* shrub understory, all of which are native plants. *Salix gooddingii* as the dominate tree overstory, with some *Populus fremontii*. *Baccharis salicifolia* occur in areas that experience less frequent inundation than the willow riparian woodland. *Baccharis salicifolia* scrub often comprises an important subcomponent of the willow riparian woodland through its presence along the edge and within openings of the woodland. Throughout this general area, *Baccharis salicifolia* scrub is also found in discrete patches.

Willow riparian woodland/forest along the Rio Hondo upstream of San Gabriel Blvd is structurally a multi-storied, uneven age stand of riparian habitat. There is an extensive native overstory of riparian species such as *Salix gooddingii*, *Salix lasiolepis*, and *Acer negundo* (box elder) with a shrub understory of mulefat and *Salix exigua*. Other native species that contribute to the overstory include *Populus fremontii* and *Juglans californica* (black walnut). There are numerous exotic tree species within the riparian habitat. Exotic species include *Ulmus parvifolia* (Chinese elm), *Ailanthus altissima* (tree of heaven), and several species of *Eucalyptus* spp. The herbaceous understory contains species such as *Utica holosericea*, *Xanthium strumarium*, (ripgut brome), *Echinochloa crusgalli*, *Ipomoea purpurea*, *Passiflora* spp.

Freshwater marsh vegetation occurs along the edges of the San Gabriel River Flood Diversion Channel, and the Rio Hondo. This plant community includes species such as *Rorippa nasturtium-aquaticum* (water cress), *Typha (augustifolia, latifolia)* (cattail) Herbaceous Alliance, *Cyperus* spp. Herbaceous Alliance (nutsedges), and *Carex* spp. Herbaceous Alliance (sedges). However, these vegetation types are not structurally developed and therefore have low habitat quality adjacent to the Rio Hondo. Nonetheless, there is the potential for significant enhancement of these vegetation types within the flood risk management basin with frequent periodic inundation.

Special Status Listed Species

Least Bell's vireo

The least Bell's vireo (*Vireo bellii pusillus*), or vireo, was Federally listed as an endangered species in 1986 and state listed as an endangered species in 1980. Federally designated critical habitat does not exist within the Basin for the species. Vireo natural history and ecology has been intensively studied in gray literature for 36 years (1978 – 2014) by a variety of government, academic, and consulting biologists including the Corps and USGS 1988-2015.

Vireo Natural History

The natural history excerpt provided here for the least Bell's vireo is from Lynn, S., and B. E. Kus (2011). "*Male vireos arrive on breeding grounds in southern California in mid-March. Male vireos are conspicuous, and frequently sing their diagnostic primary song from exposed perches throughout the breeding season. Females arrive approximately 1-2 weeks after males and are more secretive, but are often seen early in the season traveling through habitat with the male. The female, with the male's help, builds an open cup nest in dense vegetation approximately 3 feet-5 feet above the ground. Clutch size for least Bell's vireos average 3-4 eggs. Typically, the female and male incubate the eggs for 14 days and young fledge from the nest at 11-12 days of age. It is not unusual for vireos to re-nest after a failed attempt provided ample time remains within the breeding season. Vireos will re-nest up five times and more. Nesting lasts from early April through July, but adults and juvenile birds can remain on the breeding grounds into late September/early October before migrating to their wintering grounds in southern Baja California, Mexico*".

Vireo Nesting Habitat

The vireo primarily occupies riparian habitats that typically feature dense cover within 3 to 7 ft of the ground and a dense, stratified canopy. It inhabits edge riparian growth along water or along dry parts of intermittent streams. Vegetation types used by the vireo are the *Salix gooddingii* Forest Alliance, *Baccharis salicifolia* Shrubland Alliance, *Salix lasiolepis* Shrubland Alliance, *Salix exigua* Shrubland Alliance. The understory is typically dominated by *Baccharis salicifolia*, individuals of other willow species such as *Salix lasiolepis* or *S. gooddingii* and *S. Exigua* and one or more herbaceous species. Important overstory species include mature arroyo willows and black willows. Other overstory species that may contribute to vireo habitat include *Populus fremontii* (Fremont's cottonwood) Forest Alliance, *Platanus racemosa* (western sycamore) Woodland Alliance and *Quercus agrifolia* (coast live oak) Woodland Alliance.

Vireos nests in vegetation typically dominated by willows and mule fat but may also use a variety of shrubs, trees, and vines. Nests are typically built within 3 ft – 4ft of the ground in the fork of willows, mulefat, or other understory vegetation, such as *Rosa californica* (California wild rose). Cover surrounding nests is usually a moderately open mid-story with an overstory of willow, cottonwood, or oak. Crown cover is usually is <60 percent and contains occasional small openings. The most critical structural component to vireo breeding habitat is a dense shrub layer at 2 to 10 ft above the ground. The birds forage in riparian and at times are known to forage in mustard and coastal sage habitat patches in close proximity

Least Bell's vireo primary constituent elements (PCE) consist of:

1. *Mixed willow riparian*: dominated by one or more willow species including *Salix gooddingii*, *Salix lasiolepis*, and *S. exigua*, with *Baccharis salicifolia* as a frequent co-dominant.
2. *Willow-cottonwood*: Willow riparian habitat in which at times *Populus fremontii* may be a co-dominant.

3. *Willow and/or mulefat scrub*: Dry and/or sandy habitat dominated by sandbar willow or mule fat, with few other woody species.
4. Early succession vegetation types 5 years (sometimes 3 years) to 15 years age class; <60% canopy, >50% shrub cover.
5. Edges or ecotonal with the tree/shrub habitat component is essential.

Distribution of Vireo within Whittier Narrows Reservoir

Figures 3-1 thru 3-4 illustrate vireo “territories” point locations for 2013 and 2014. The vireo 2015 data is still being processed and reviewed. Vireo point location “territories” are clustered in four areas: 1) San Gabriel River, 2) Siphon Road 3) Rio Hondo Basin (upstream of the west embankment), and 4) Rio Hondo Bosque north of San Gabriel Blvd to the concrete channel bottom north of the Pomona Freeway (I-60)

Vireo presences/absences surveys were performed by Corps’ biologists once every 10-12 days. GPS points were taken of singing male vireos using a smart phone. If vireos were detected immediately adjacent to the observer along a trail or vegetation opening, then the GPS points are accurate to within 3 feet to 9 feet. If however, the vireo was detected away from the trail and there were no openings in the vegetation to move about, then the detection point location was estimated. The accuracy of this detected vireo could range from 10 feet to 30 feet. Therefore the vireo point locations on Figures 3-1 thru 3-4 are estimates of detection of vocalizing vireo males and not the actual nest site placement. Male vireos travel through their territory vocalization at exposed song perches in trees and shrubs as a territory defense mechanism for other male vireos and for attracting a female mate. Typical vocalization locations are from periphery of foliage, although not necessarily highest possible perch (Kus et al 2010).

Within the Basin and south of San Gabriel Blvd, vireos #11 and #13 were observed early in the survey season on one to two occasions but not heard or seen thereafter. These vireos were either migrating through the habitat or moved to other areas due to disturbance or habitat conditions. These two vireo locations are therefore not counted as territories. North of San Gabriel Blvd along the Rio Hondo Bosque, there are 13 vireo territories (Table 1) over a two year survey period in which some of the locations could be the same vireo between the two years.

Table 1. Vireo Territories		
Year	Number of Point Locations “Territories”	Vireo Number
2013	3	#12, #19, #20
2014	10	#3, #4, #5, #6, #7, #8, #9, # 10, #12, #20
Maximum Total over 2 years	13	

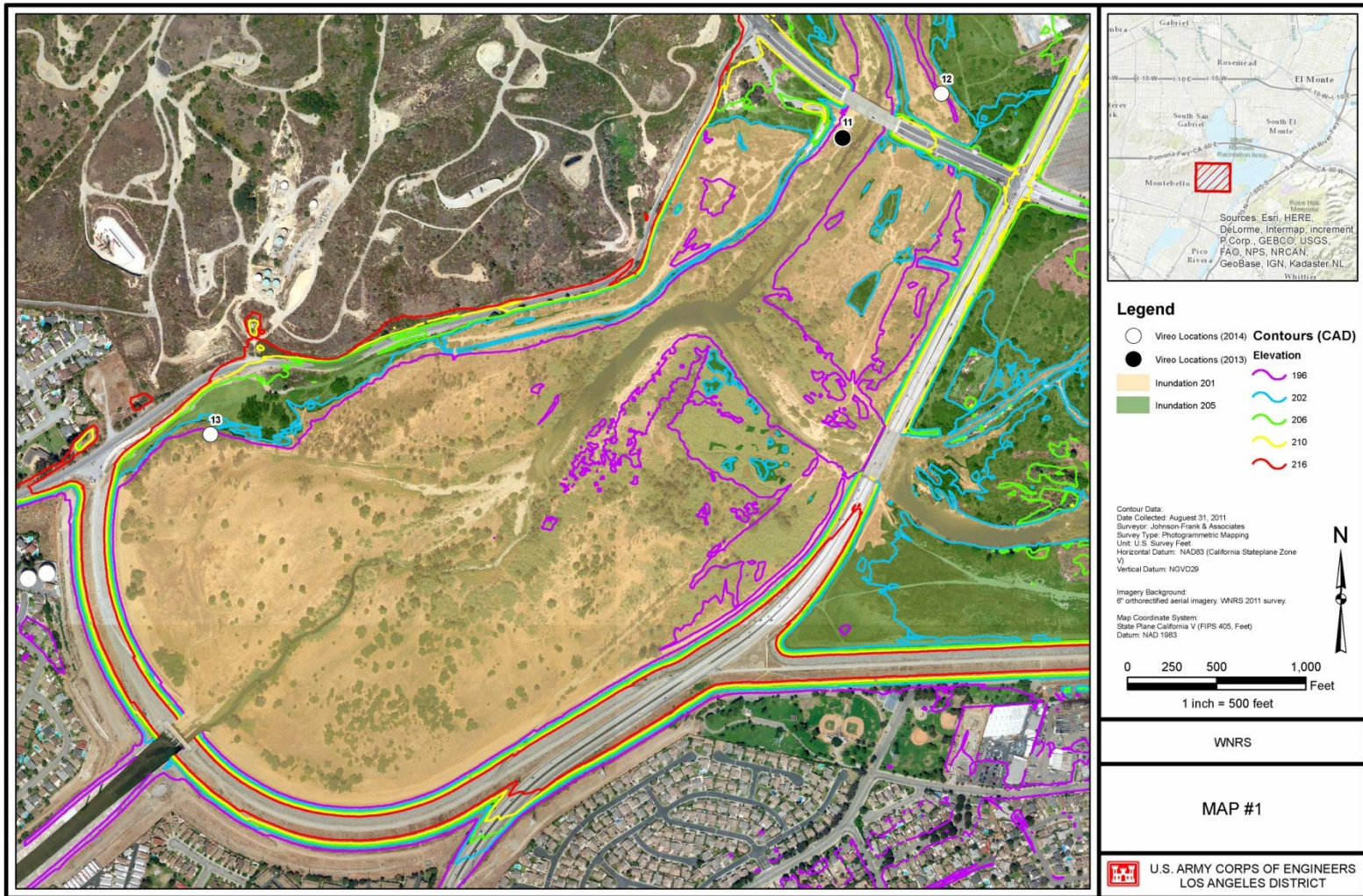


Figure 3-1 Upstream of Dam to San Gabriel Blvd.

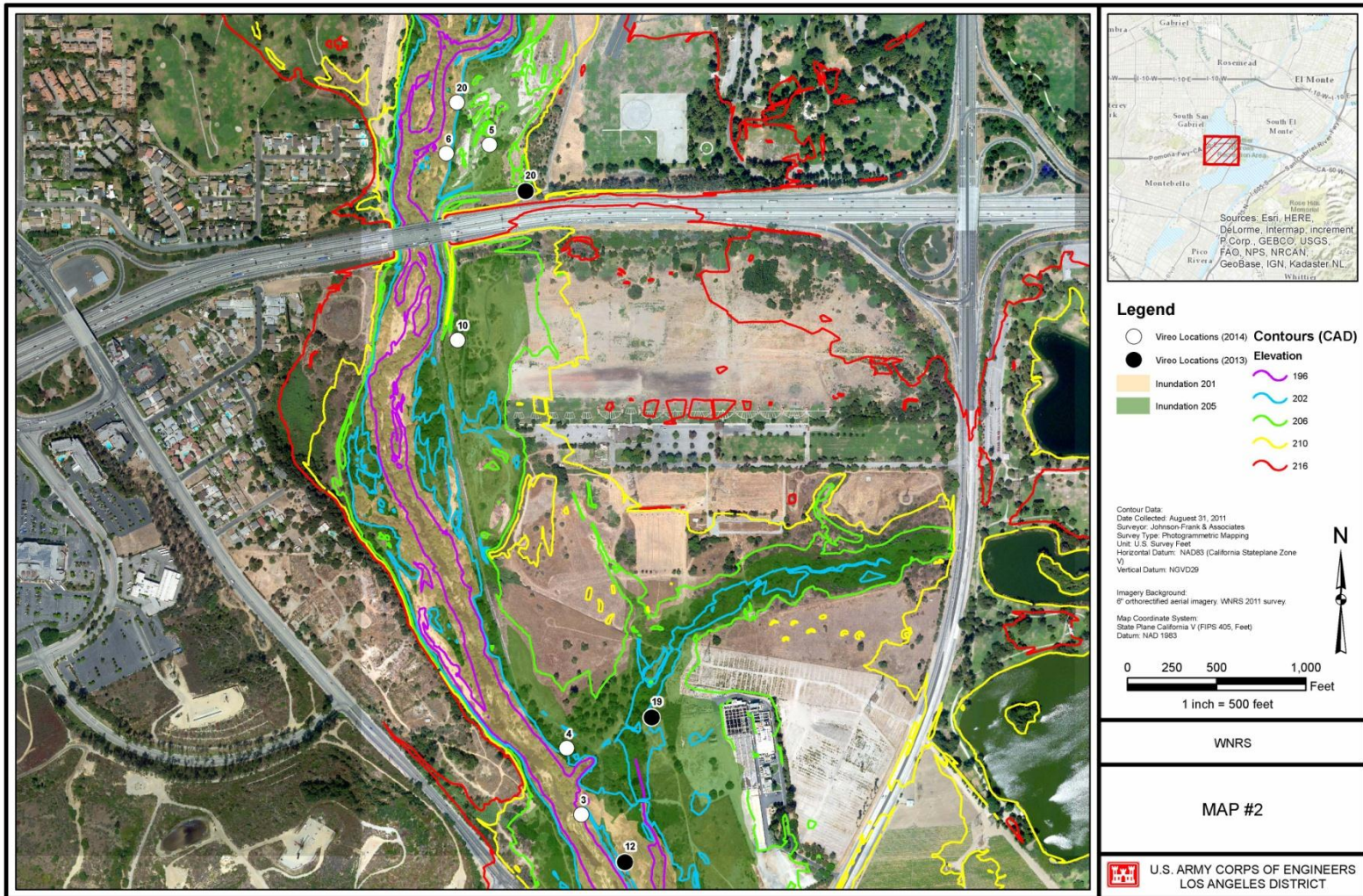


Figure 3-2 Upstream of San Gabriel Blvd. to Pomona Freeway

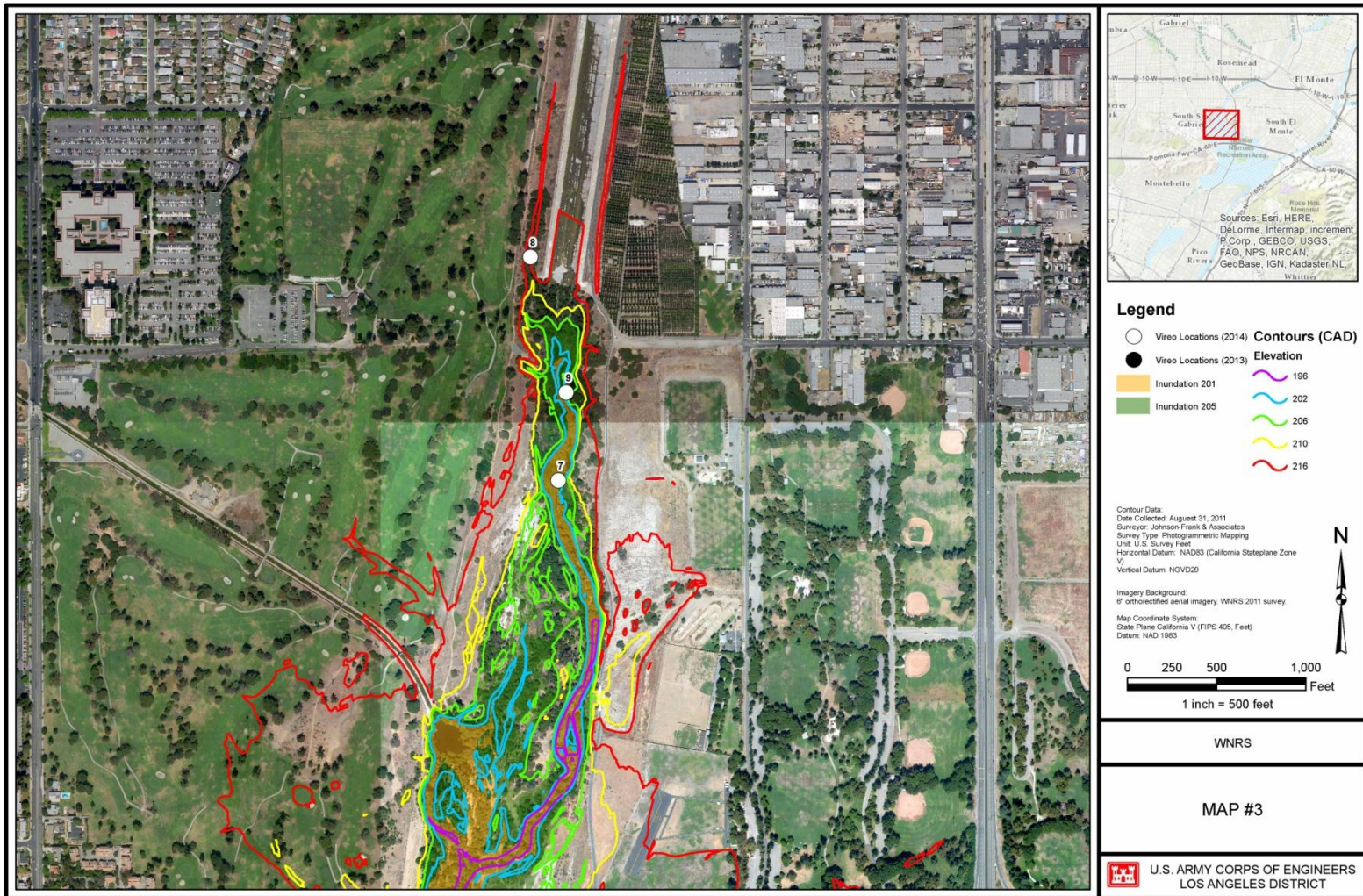


Figure 3-3 Upstream of Pomona Freeway to Basin Boundary

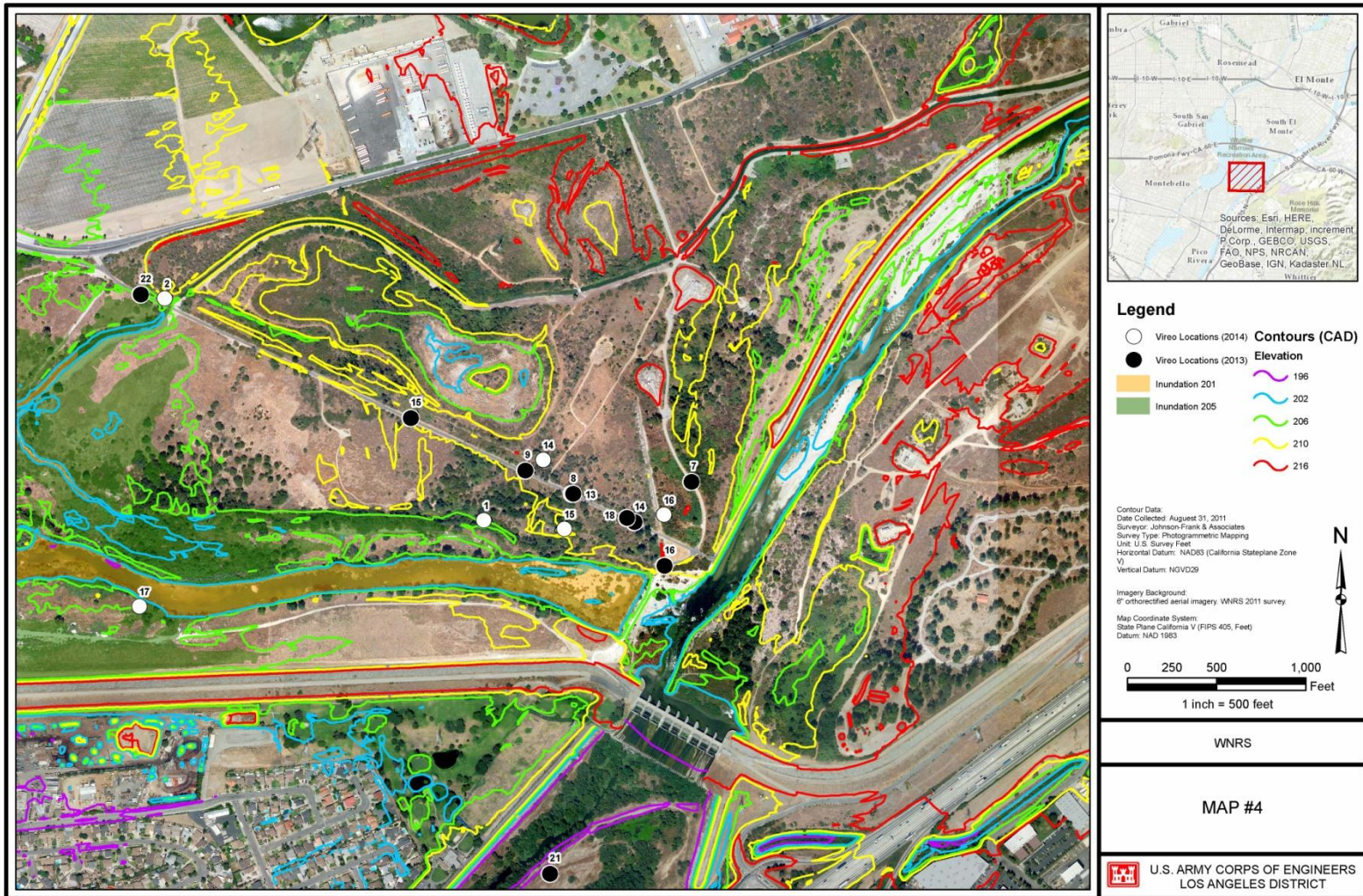


Figure 3-4 “Overflow Channel” East of Rosemead Blvd.

Environmental Consequences

Plant Resources

Riverine habitats are typically found in areas that have either a high water table or the presences of surface water, such as those found at the Rio Hondo Bosque. These conditions fluctuate seasonally. Many animal species are dependent upon riparian habitat during some portion of their life cycle ecology for breeding, foraging, or cover (resting).

The seasonality of inundation to riparian communities is important in regard to the potential effects on the distribution composition and structure. Western storm systems tend to create ephemeral conditions of rapid rises and draw-downs. Therefore, inundation resulting from these storms is typically short-lived. Because plant tolerances to flooding vary widely within genera and between species, the effects of extending the inundation period beyond what naturally occurs depends on the flooding tolerances of the species that make up the community.

The distribution of plants throughout Whittier Narrows Reservoir is indicative of their tolerance to flooding. Willow riparian forest in southern California is adapted to flooding during the rainy season (November to March). This is a time of dormancy for many of the plant species found in this community. Extending the period of inundation during the dormant phase of these species will likely have significant negative effects on this habitat and vegetation type structure especially the shrub understory. Along higher elevation contours, species such as *Salix lasiolepis*, *Salix exigua*, and *Baccharis salicifolia* become more common and contribute to the structure of the woodland.

Salix species can withstand inundation for several months without affecting gas exchange in the leaves and roots and growth. *Salix gooddingii* dominates habitat that are inundated for the longest periods. Prolonging inundation into the active growth phase (i.e., typically between March and October) could have a deleterious effect on the plant community composition and physical structure. In areas flooded for longer periods or most frequently, freshwater marsh species may dominate. Willows (*Salix gooddingii*, *S. exigua*, and *S. lasiolepis*) can withstand higher and longer water inundations due to deep tap roots. They are adapted to standing water due to their juxtaposition in close proximity to the creek bed and water (Faber et al, 1989; Levine and Stromberg 2001).

Baccharis salicifolia can withstand inundation for not more than 2 weeks (about 14 days) without affecting gas exchange in the leaves and roots and growth. *Salix gooddingii* growth affected and may even be stimulated during flood events if the flood water recedes before the growing season starts. The *Baccharis salicifolia* of concern along the Rio Hondo where the riparian habitat is in a better functional condition, primarily north of San Gabriel Blvd and has a reduced amount of invasive plants such as giant reed.

Mulefat (*Baccharis salicifolia*) is shallow rooted and is not adapted to more than a few weeks of inundation of water. Mature *Baccharis salicifolia* are able to handle up to two weeks of moderate inundation but after that it depend largely upon water depth and maturity/height of plant.

Established mulefat can sustain 2 weeks of inundation as long as the plant is not totally submerged and can still photosynthesize as well as oxygen exchange above and below ground. Submerging newly planted individuals or saplings could be very problematic, even for short periods of time. Fully saturated soil can also cause problems; brief periods are tolerable but roots will die if they go totally anaerobic, that is the absence of free oxygen (Pete Tomsovic and Terressa Whitaker, Restoration Ecologists, RECON, Inc., San Diego, personal communication, 16 September 2015; Mike Evans, Tree of Life Nursery, Certified Horticulturalist, personal comm., 21 Sept. 2015).

Nonetheless, total inundation of critical riparian plants will not occur between elevation 201.6 feet to elevation 205 feet as proposed under the Modified PMD. Downstream of San Gabriel Blvd, the Basin Operations Land is already 85%-90% giant reed and *Eucalyptus* dominated, thus there will little to no impacts to riparian habitat, specifically, willow shrubs or mulefat. Furthermore, nearly 40% of this habitat partial burned in the Lincoln Wildfire 16 August 2015 (Photos 1-6).

Up river of San Gabriel Blvd, the Rio Hondo is incised from 15 feet to 35 feet in various locales. The creek ranges in elevation from 194 feet to 200 feet within the incised creek channel. A survey of the incised Rio Hondo did not find any mulefat within these elevation zones. Mulefat is found between elevations 200 feet and 206 feet with the majority of the mulefat near elevation 206 feet. When water is conserved at elevation 201.6 feet, some mulefat shrub will be able to withstand water because the plant will not be totally inundated but only covering the ground to the crown of the plant for 1 week or less and therefore not having a deleterious effect to the mulefat shrub that would increase the likelihood of adverse consequences to mulefat within these elevations. When the water conservation pool is held to elevation 205 feet, a large percent of the mulefat is found between elevation 205 feet and elevation 206 feet and the mulefat will either not have any water on its roost or at the pant crown at or the water will at the bottom portion of the plant. The water conservation pool will only be held at elevation 205 for 1 week up to 8 March and evacuated from these elevations thereafter that date.

Special Status Listed Species

Least Bell's Vireo

The Corps as the Federal action agency makes a “no effect” determination for the least Bell's vireo within the project area. It is the Corps determination as the Federal action agency that the Whittier Narrows PMD Water Conservation Project to elevation 205 feet as modified to allow for an increased inundation time will not affect the least Bell's vireo and its breeding habitat. A “No effect” means ESA-listed species or critical habitat will not be affected, directly or indirectly. No Federally-listed species or critical habitat will be exposed to any potentially harmful or beneficial effects of the action. For critical habitat to reach a “no effect” conclusion would be that the project occurs within a vegetated area that meets the PCEs for vireo, but no “essential features” of critical habitat will be affected.

Based on Figures 3 thru 6, there are potentially 6 vireo territories within the action area elevation of 201.6 feet to 205 feet based on the 2013 and 2014 vireo presence/absence

data. Within the basin south of San Gabriel Blvd, vireos #11 and #13 were observed early in the survey season on one to two occasions but not heard or seen thereafter. Furthermore, these two (2) vireo locations habitat was destroyed in the Lincoln Wildfire, 16 August 2015. Figure 3 thru 6 indicate vireos that were present during the entire breeding season and were detected during the survey period. Vireo habitat locations #3, #4, #11, #12 (both years), #13, and #19 were destroyed in the Lincoln Wildfire (16 August 2015). It is anticipated that these vireos will move north or over to other riparian habitat within the Whittier Narrows Dam Reservoir. Vireo locations #20 (2013) and #8 (2014) are at elevations 210 feet and 216 feet and are therefore well outside the water conservation upper pool elevation limit of 205 feet. Vireo locations #5, #6, #7, #9, #10, and #20 (2014) are vireo habitat locations that appear to be within the elevation 200 feet and elevation 206 feet. However, taking into account the GPS off-set imprecision due to the GPS units being used, these habitat detection locations have a high probability of being at higher elevations above 206 feet. Furthermore, water conservation will end on 8 March. Any water held for water conservation after 8 March would only be held to elevation 201.6 as currently approved with a limited duration of one (1) week continuously.

For the following reasons, vireos will not be affected by implementation of the modification to the Approved PMD at the Project:

1. Vireo will not be present on site during the modified PMD because it will occur during the non-breeding season thru 8 March and there is no listed vireo critical habitat within the inundation area - **avoidance.**
2. During the three years of vireo presence/absents surveys only 2 single males were found between the outlet structure in the west embankment and San Gabriel Blvd. These vireos did not stay in the basin for the full breeding season and it is not reasonable to believe that the single males would return given the Lincoln Wildfire, see below, - **avoidance.**
3. Vireo habitat recently burned in the Lincoln Wildfire, 16 August 2015, which destroyed 5 vireo territories upstream of the west embankment of the Whittier Narrows Dam Reservoir - **avoidance.**
4. Vireo nesting habitat may be potentially exposed to low level water inundation actions by saturating the soil of the nesting habitat substrate soil to plant crown, but not the foliage of the understory nesting shrubs. Primary nesting understory plants, such as sandbar willow and arroyo willow are nesting shrubs for vireos will not be affected or they are adapted to long term water inundation levels. Although mulefat is adapted to only two weeks of water on their roots, water would be held for no more than one week at the elevation where mulefat grows – **avoidance.**
5. The key element to a “no effect” determination for water conservation inundation to elevation 205 feet will not disturb or destroy the breeding shrub substrate - **avoidance.**
6. A modified PMD would lengthen the duration of the existing buffer pool elevation from 24-hours to no more than one (1) week from November 15, 2015 through March 8, 2016 - **avoidance.**

7. This action will occur from 15 November thru 8 March. During winter storm events water will be released to the Rio Hondo Coastal Basin Spreading Grounds (RHCBSG) and once full, water will be released at a specific rate through the outlet structure to the Rio Hondo downstream of the dam to the Los Angeles River and on to the Pacific Ocean. The water conservation deviation would occur between elevations 201.6 feet and 205 feet. For reference, the San Gabriel River Flood Diversion Channel crossover weir diverting water from the San Gabriel River to the Rio Hondo is at elevation 208 feet.

California Gnatcatcher

The Corps as the Federal action agency makes a “no effect” determination for the listed critical habitat for the California gnatcatcher (*Polioptila californica californica*) within the project area. *A “No effect” means Federally-listed species or critical habitat will not be affected, directly or indirectly. No Federally-listed species or critical habitat will be exposed to any potentially harmful or beneficial elements of the action. For critical habitat to reach a “no effect” conclusion would be that the project occurs inside designated critical habitat, but no “essential features” of critical habitat are present or will be affected.*

The reasoning is described in the following:

1. The listed critical habitat at Whittier Narrows is used for cover and foraging during the post-breeding and over winter as well as dispersal habitat and not for breeding habitat.
2. Approximately 95% of the listed critical habitat is dominated by non-native, invasive giant reed and *Eucalyptus* trees.
3. The recent Lincoln Wildfire burned a large portion of the dispersal habitat between the Montebello Hills and Rosemead Blvd.
4. California gnatcatcher critical habitat, and thus its primary constituent elements (PCE), does not include existing features and structures, such as buildings, roads, aqueducts, railroads, airports, other paved areas, lawns, and other urban landscaped areas not containing one or more of the PCEs.
5. Therefore no “essential features” of critical habitat are present or will be affected.

3.7 Socioeconomics

As indicated in the previous water conservation study (1999), recharged groundwater has value. By recharging groundwater, the reliance on costly imported water is reduced, especially during a drought when the availability of water is reduced and the cost of imported water increases. Current estimated value of imported water in southern California is \$1,000 an acre-foot. Even at this price the availability of additional supplies is unlikely because of depleting water supply across the western region. Increasing local capture of storm water represents a significant societal savings.

There would be no impact on housing or minority populations, as residing within the Basin is not permitted although the Corps is aware that transient communities may be

impermissibly occupying land within the Basin. These occurrences tend to be within the Nature area, east of Rosemead Blvd., which would result in minimal impact on transient communities as transient individuals tend to move to higher elevations when storms are forecast.

Compared to the No Action Alternative, the reliance on costly imported water is reduced with greater opportunities for capturing water for groundwater recharge.

3.8 Recreation

Operations land is generally not available for recreational purposes. However, the Corps acknowledges that the public does traverse Operations land for passive recreation and that unofficial dirt trails have been formed in the Operations area without authorization, south of San Gabriel Blvd. Under the Modified PMD, these dirt trails would be inundated. Some portion of the dirt trails would also be inundated under the No Action Alternative as some trails are located between the dam to elevation 201.6 ft (NGVD, 29). The paved maintenance road/bicycle trail north of San Gabriel Blvd. and east of the Rio Hondo would be inundated in some areas for a short time, until water recedes when released. Debris on the trail/maintenance road may be greater than the No Action Alternative, but similar to impacts when water is impounded for flood risk management to elevation 205.0 NGVD or greater. On lands leased to Los Angeles County Department of Parks and Recreation, trails are maintained by the County.

3.9 Land Use

There would be no change in land use under the proposed action compared to the No Action Alternative, as land use classifications would remain as indicated in the Master plan (2011) for the Project area. Operations land would remain available for flood risk management operations which would be prioritized. Water conservation reoperation under the proposed action would only occur when compatible with water conservation operations.

3.10 Aesthetic Quality

There would be no significant change to the aesthetic quality of the area as similar conditions would exist if water were held to a similar elevation for flood risk management.

3.11 Cultural Resources

Under the no action and proposed action, there would be no ground disturbance or grading. Furthermore, inundation up to and beyond 205.0 ft. feet already occurs for flood risk management and there are no cultural or historic resources above ground between the dam up to elevation 205.0 ft. There are no National Register-listed or National Register-eligible historical structure on site, or other statutorily protected resources within the project footprint or the immediate surrounding area. Per 36 CFR

800.3(a)(1), concerning 106 compliance, a determination of “no potential to cause effects” has been made.

3.12 Safety

As noted above, it is known that transient individuals are known to impermissibly reside within the Basin within the area east of Rosemead Blvd. in the Nature Area. However, some may occupy the “Operations” area as the area is considered fairly remote from other activities in the Basin. Normally when a storm is forecast, homeless residents of the reservoir tend to seek shelter and/or move to higher ground. Under the proposed action as under the No Action Alternative, the Corps’ would notify LACDPR that a storm is forecast and possible rise in water elevation would be allowed for water conservation. There would be no additional impact to the area downstream of the dam.

4.0 COORDINATION AND CONSULTATION

A Public Notice soliciting comments on the proposed project was posted on the Corps’ website for a 15-day period during which comments received would be addressed in the Final EA. The comment period ended on November 18, 2015.

5.0 ENVIRONMENTAL LAWS AND EXECUTIVE ORDERS

5.1 National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190), as amended

This EA has been prepared to comply with the requirements of NEPA (42 USC 43221, as amended) and the CEQ Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508), dated 1 July 1988.

5.3 Clean Water Act (33 U.S. C. 1251 et seq.)

There is no discharge of dredged or fill material regulated under Section 404 of the Clean Water Act and therefore Section 404 does not apply and there is no requirement to obtain a Section 401 water quality certification for implementation of the PMD as specified herein.

5.4 Clean Air Act of 1970 (42 U.S.C. 7401 et seq.)

The Corps has determined that implementation of the Modified PMD would have no significant effects on the future air quality of the area and the action would be in compliance with the Act.

5.5 Noise Control Act of 1972, as amended (42 U.S.C. 4901 et seq.)

Implementation of the Modified PMD would not alter the existing noise environment, as the noise levels associated with the PMD operation and maintenance activities would remain unchanged.

5.6 U.S. Fish and Wildlife Coordination Act (16 U.S.C. 661)

Implementation of the PMD would not permanently impound or divert any water body. Therefore, the action is in compliance with the Act.

5.7 Endangered Species Act, as amended (16 U. S. C. 1531 et seq.)

The action area has been reviewed by a Corps Ecologist. The Federal action would not affect any Federally-listed species or designated Critical Habitat as determined in Section 3.6.

5.8 Migratory Bird Treaty Act (MBTA) (16 U. S. C. 715- 715s)

The Proposed Action is in compliance with the Act as the migratory bird season is approximately early March through September and water conservation to elevation 205 would take place during normal flood season of November 15 through March 8, avoiding impacts to vegetative habitat of migratory birds within the area of the proposed action. The Proposed Action is in compliance with the Act.

5.9 National Historic Preservation Act (Public Law 89-665; 16 U.S.C. 470-470m, as amended, 16 U.S.C. 460b, 470 l-470 n)

The action area is located in a highly disturbed area of repeated maintenance. No potential to cause effects to cultural resources are anticipated. Therefore, consultation under section 106 of the National Historic Preservation Act is not required.

5.10 Executive Order (EO) 11514, Protection and Enhancement of Environmental Quality, amended by Executive Order 11991, Relating to Protection and Enhancement of Environmental Quality

The action would be in compliance with the EO with the completion of the NEPA process.

5.11 Executive Order 11988, Floodplain Management

The action would be in compliance with Executive Order 11988. The Preferred Alternative would have no adverse effects on existing floodplain function.

5.12 Executive Order 11990, Protection of Wetlands

The action would occur in compliance with Executive Order 11990.

5.13 Executive Order 12088, Federal Compliance with Pollution Control Standards

The action would be in compliance with the EO.

5.14 Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

The action would be in compliance with the EO as no minority populations would be adversely impacted by the project. As with flood risk management operations, homeless tend to move to higher ground with an impending storm, which would be similar to operating for water conservation.

6.0 PREPARES AND REVIEWERS

The following are the principle preparers and reviewers of this Environmental Assessment.

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Reviewed By

Jodi Clifford, Chief Environmental Resources Branch

