

Draft Environmental Assessment



Tijuana River Vegetation Control

Department of Homeland Security
U.S. Customs and Border Protection
U.S. Border Patrol, San Diego Sector



July 2017

Cover Photo:
Dairy Mart Road Bridge from south levee looking northwest into the Tijuana River Floodway.

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FINDING OF NO SIGNIFICANT IMPACT
For Tijuana River Vegetation Control
Tijuana River Floodway, San Diego, California

BACKGROUND

In 1924, Congress created the U.S. Border Patrol (USBP) to serve as the law enforcement entity of the Immigration and Naturalization Service (INS). Congress transferred all INS responsibilities to the Department of Homeland Security (DHS) with the passage of the Homeland Security Act of 2002 (Public Law 107-296) on November 25, 2002. The USBP law enforcement organization and responsibilities were transferred to the U.S. Customs and Border Protection (CBP) component of DHS on March 1, 2003. The mission of CBP is to safeguard America's borders thereby protecting the public from dangerous people and materials while enhancing the Nation's global economic competitiveness by enabling legitimate trade and travel.

The Proposed Action would preserve line of sight for USBP agents and reduce hiding opportunities within the Tijuana River Floodway (TRF) by controlling vegetation in the TRF in accordance with a 1980 Memorandum of Understanding between CBP and the International Boundary and Water Commission (IBWC), the owner of the TRF. The Environmental Assessment (EA) for Tijuana River Vegetation Control was prepared by CBP with the IBWC as a cooperating agency.

The Tijuana River crosses the international border from Tijuana, Mexico into San Diego, California and continues westward to the Pacific Ocean. Giant reed (*Arundo donax*), a non-native highly invasive grass grows 10-feet tall and has overtaken much of the Project Area. Giant Reed and existing native plants obstruct the CBP officers' views, which hinders their ability to detect people illegally crossing the border.

PROJECT LOCATION

The Project Area is between the TRF levees that generally parallel the modified Tijuana River channel. The levees extend downstream from the border to the start of the natural Tijuana River channel in the Tijuana River Valley Regional Park, just west of the Project Area. The south levee (approximately 1.7 miles long) runs along the international boundary, and the north levee (approximately 2 miles long) parallels the southern boundary of the San Ysidro community, just south and west of Camino De La Plaza. The Project Area focuses on the southern 167.5 acres just north of the border, to approximately 200 yards downstream of the Dairy Mart Road Bridge, and does not include the sod farm to the north. Near the bridge, a 16.99 acre portion of a much larger (885 acre) designated least Bells' vireo (LBV) (*Vireo bellii pusillus*) critical habitat extends upriver from the Tijuana River Valley Regional Park into the Project Area.

PURPOSE AND NEED

The purpose of the Proposed Action is to enable CBP to fulfill its mission of protecting the U.S. southern border and to enhance the safety of USBP agents in carrying out their duties. For CBP to meet its mission to control illegal activities, it must maintain surveillance sight lines across the Project Area in perpetuity.

The need for the Proposed Action is that existing native and non-native plants within the Project Area obstruct the view of USBP agents, which hinders their ability to detect people illegally crossing the border in the vicinity of the TRF. In addition to blocking visibility, many of the plants

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are robust enough to impede movement. Native black willows (*Salix gooddingii*) near the Dairy Mart Bridge also limit sight lines, preventing CBP from fulfilling its mission.

ALTERNATIVES

No Action Alternative. Under the No Action Alternative, the current vegetation removal process would continue. The current vegetation control strategy in the Project Area relies completely on mechanical removal methods, such as disking, mowing, cutting of vegetation, and occasionally use of heavy equipment to extract roots and remove non-native vegetation. However, within designated LBV critical habitat, removal of native vegetation is currently restricted. Native black willows and mulefat (*Baccharis salicifolia*) continue to grow larger, obscuring effective CBP surveillance and limiting direct views into the areas with native vegetation. The current mechanical removal only protocol restricts removal or trimming of native plants that support the LBV critical habitat, thereby preventing effective CBP surveillance and line of sight monitoring in those areas. CBP also maintains the levees in the area by removing unwanted vegetation and mechanically maintaining protective gravel surfaces. Vegetation removal is currently done twice a year, or as necessary to preserve line of sight.

Proposed Action Alternative. Under the Proposed Action, removal of all non-native vegetation in the Project Area would continue. CBP also proposes to expand its mechanical removal efforts to include removal of 2.56 acres of the existing 4.10 acres of *native* vegetation currently within the 15.99 acre portion of the LBV designated critical habitat area at the west end of the site, as shown in Figure 3. Currently, the native vegetation in the critical habitat area is split by the Dairy Mart Road Bridge. This action would remove all native vegetation on the east side of the bridge (about 65% of the *total* native vegetation) and allow all native vegetation in the critical habitat area west of the bridge to remain. As is currently the case under the No Action Alternative, removal of all non-native vegetation on both sides of the bridge would continue. This action also includes mechanical removal of any new native vegetation growth west of the bridge within the Project Area. Additionally, CBP proposes to supplement expanded mechanical removal with herbicide application to improve overall efficacy of vegetation removal. Currently no herbicides are used by the CBP to control vegetation within the Project Area.

Other Alternatives Considered. Pruning native willows and removal of tree limb growth to a height of 10 feet off the ground throughout the Project Area to maintain visual access was considered. Regular pruning however, may not be effective in providing USBP agents adequate surveillance sightlines. The CBP also considered grazing by domesticated animals, such as sheep and/or goats, but found that managing animal populations in the flood control channel would be infeasible.

ENVIRONMENTAL CONSEQUENCES

The Proposed Action would result in minimal impacts on visual resources, biological resources, cultural resources, groundwater, hazardous materials and waste management, and surface waters and waters of the United States.

Aesthetics and Visual Resources. Degradation of the aesthetic value of the Project Area would occur during vegetation control under the Proposed Action. Under the Proposed Action, CBP

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would thin native vegetation to about 35% of the current density. The Project Area is adjacent to the U.S./Mexico border, which has been heavily degraded due to illegal vehicle/foot traffic and subsequent CBP actions required to monitor and halt illegal activities. A minor to negligible visual impact would be noticeable at the western end of the Project Area only, as the native vegetation there would be thinned by about 65%, while the other 35% would remain in place and continue to grow. Thus, no major impacts on aesthetics and visual resources within the Project Area corridor are expected.

Biological Resources. The Proposed Action would impact biological resources by permanent removal of about 65% of the native vegetation within LBV critical habitat (2.56 acres). The remaining 1.54 acres of native vegetation, on the west side of the bridge, would be allowed to grow in an area where invasive species would be managed, which would be a long-term benefit to the remaining native vegetation. With the permanent management of non-native, invasive species throughout the Project Area, the Proposed Action as a whole would have moderate, direct *beneficial* effects for the long-term, over 145.05 acres. Therefore, the Proposed Action is anticipated to have an overall beneficial effect to the quality of vegetation within the Project Area.

GENERAL WILDLIFE: The permanent removal of 2.56 acres of native vegetation would be expected to have a minor adverse effect, since general wildlife species observed or potentially present within the Project Area are common, and suitable habitat of various types exists in relative abundance in the vicinity of the Project Area. Therefore, the Proposed Action is expected to have a negligible effect to common wildlife species with potential to occur in the Project Area.

FEDERAL LISTED SPECIES: LBV is the only Federal-listed species with potential to occur within the Project Area. The remaining Federal-listed species known to occur within the vicinity are unlikely or have no potential to occur within the Project Area.

The Proposed Action would permanently remove about 65% of the native riparian vegetation within the Project Area, which is expected to have short- and long-term, moderate, direct and indirect adverse effects to LBV due to the removal of suitable nesting habitat. The effect would not exceed the moderate effect threshold since the area that would be affected is not particularly large and was regularly cleared as recently as 2009. Of the 885 acres of critical LBV habitat located within the Tijuana River Valley, the Project Area consists of 15.99 acres of critical LBV habitat. Within the Project Area, 4.1 acres contain the appropriate native vegetation suitable for LBV habitat, about 65% of which, or 2.56 acres, is planned for removal. Best Management Practice (BMP) implementation would minimize impacts to LBV habitat and individuals.

Mitigation for loss of 2.56 acres of LBV habitat would include purchase of mitigation bank credits at a likely ratio of 3:1, credits to impacts and could also include funding of research or eradication of LBV predators and funding for research on the Kuroshio shot-hole-borer which is currently causing broad declines in riparian vegetation in the Tijuana River Valley and surrounding areas. Formal consultation with the United States Fish and Wildlife Service (USFWS) is ongoing regarding potential impacts to LBV and LBV critical habitat and would be completed prior to implementation of the Proposed Action. The Biological Opinion issued after consultation with the USFWS would likely require mitigation at a ratio of 3:1 for permanent losses to LBV habitat.

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Implementation of BMPs and mitigation measures would serve to expand LBV habitat at a protected mitigation bank where the scale of habitat preservation would triple that impacted by the Proposed Action in order to support more reproducing populations of LBV, and where maintenance would be funded for long-term habitat protection. In addition, the existing remaining habitat would benefit from funding made available by the Proposed Action to research methods to minimize the broad scale impacts currently caused by the Kuroshio shot hole borer affecting LVB habitat in the Tijuana River Valley and to develop and implement new techniques to limit impacts to riparian vegetation.

MIGRATORY BIRD TREATY ACT. A variety of bird species protected by the Migratory Bird Treaty Act (MBTA) are expected to nest within the Project Area. The Proposed Action would remove vegetation within the Project Area and would consequently remove habitat for nesting birds. Avoidance of any action during the nesting season is the best way to avoid impacts, otherwise a pre-construction nesting bird survey would be performed to avoid disruption of bird nesting activities. All active nests (for covered species) found during the survey would be protected by respective exclusion buffers in which no project-related work may occur until all young in the nest have fledged or the nest has otherwise become inactive (e.g., due to predation). Therefore, with the implementation of pre-construction nesting bird surveys, the Proposed Action would result in negligible effect to migratory birds.

Cultural Resources. Based on the findings of a records review, site survey, and coordination letters sent to Native American Tribes and the Native American Heritage Commission, the Proposed Action is not expected to encounter or affect any cultural resources. Furthermore, in accordance with Stipulation IV of the *Programmatic Agreement Regarding CBP Undertakings in States Located along the Southwest Border of the United States* (CBP 2014), this undertaking is within the scope of Stipulation VI.D.3 and is therefore exempted from further review. No further consultation with Native American tribes or the California State Historic Preservation Officer (SHPO) is required at this time.

However, if previously unidentified cultural resources are encountered, the contractor would stop all ground disturbing activities in the vicinity of the discovery until officials from CBP, the IBWC, and the California Office of Historic Preservation (OHP) are notified and the nature and significance of the find can be evaluated. If human remains are encountered during construction activity, construction would stop and the OHP would also be notified per the Native American Graves Protection and Repatriation Act, and the California Public Resources Code Section 5097.98., and appropriate tribal organizations would be consulted.

Groundwater. The groundwater supply and groundwater recharge would remain unaffected by the Proposed Action; however, potential effects to groundwater quality could come from herbicides leaching through the soils into groundwater. Herbicide application BMPs, such as using direct application to plants and no broadcasting or aerial applications, would be employed to limit the potential for leaching into groundwater. Overall, current aquifer conditions are likely to continue in the future in terms of aquifer recharge and water quality.

Hazardous Materials and Waste Management. All herbicides sold or distributed in the United States must be registered by the United States Environmental Protection Agency (USEPA). The

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USEPA must conclude that the particular agent in question can be used without posing unreasonable risks to people or the environment, based on scientific evidence.

Occupational exposure to herbicides varies with the method of application. The greatest risk occurs when the worker must directly handle and/or mix chemicals. Spot and localized herbicide applications including use of backpack sprayers, aerial mixers/loaders, and stem injection require the most hands-on use of herbicides and, therefore, carry the greatest risk of exposure (and require the greatest amount of worker precaution and use of safety equipment, such as respirators). Adherence to operational safety guidelines, use of protective clothing, equipment checks, and personal hygiene can prevent incidents from occurring. BMPs would ensure that no adverse effect would occur from using hazardous materials.

Surface Waters and Waters of the United States. The Proposed Action may result in short term, negligible to minor, direct, adverse impacts to Surface Waters and Waters of the United States from the application of herbicides, tree trimming and disking within the Project Area. All necessary federal and state permits and certifications would be obtained for any work that would occur in jurisdictional drainages within the Project Area. Standard BMPs would be adopted to maintain water quality in jurisdictional waters and would minimize the potential for adverse effects.

ENVIRONMENTAL DESIGN MEASURES, BEST MANAGEMENT PRACTICES (BMPs) AND MITIGATION MEASURES

Environmental design measures, BMPs, and mitigation would be implemented to minimize potential impacts. The following BMPs and mitigation measures would ensure the protection of the resources of the Tijuana River:

Biological Resources.

BMPs

- Clearing of native vegetation would take place outside of the breeding season and under the guidance of a qualified biologist.
- If clearing activities must be scheduled during nesting season (February 15 through September 1), surveys would be performed to identify active nests. If an active nest is found, a buffer would be established and the nest avoided or CBP would consult with USFWS.
- Maintenance equipment would be cleaned prior to entering and departing the Project Area to minimize the spread and establishment of nonnative invasive species.
- CBP would not, for any length of time, permit any pets inside the Project Area or adjacent native habitats. This BMP does not pertain to law enforcement animals.

MITIGATION MEASURES

- Mitigation bank credits would be acquired to offset permanent impacts to native habitat at a 3:1 ratio at an approved mitigation bank within the San Diego area, and/or
- Funding as determined in consultations with the USFWS would be provided for Kuroshio shot hole borer research and eradication.

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Surface Waters and Waters of the United States. All beneficial uses of surface water would be protected with standard BMPs to minimize the potential for impacts to Surface Waters and Waters of the United States.

- CBP would prepare and implement an Aquatic Pesticide Application Plan (APAP) designed to reduce impacts to surface water quality during project implementation.
- CBP would comply with all conditions pursuant to Section 401 and Section 404 of the Clean Water Act (CWA) as deemed applicable.
- CBP would comply with the General NPDES Permit for Residual Aquatic Pesticide Dischargers from Algae and Aquatic Weed Control Applications issued by the State Water Resources Control Board.
- The refueling of machinery would be completed in accordance with accepted industry and regulatory guidelines, and all vehicles would have drip pans during storage to contain minor spills and drips. Although it is unlikely that a major spill would occur, any spill of reportable quantities would be contained immediately within an earthen dike, and the application of an absorbent (e.g., granular, pillow, sock) would be used to absorb and contain the spill.

Cultural Resources. Should any archaeological artifacts be found during implementation of the Proposed Action, the contractor would stop all ground disturbing activities in the vicinity of the discovery until officials from CBP, the IBWC, and the California Office of Historic Preservation (OHP) are notified and the nature and significance of the find can be evaluated. If human remains are encountered during construction activity, construction would stop and the OHP would also be notified per the Native American Graves Protection and Repatriation Act, California Health and Safety Code Section 7050.5, and the California Public Resources Code Section 5097.98., and appropriate tribal organizations would be consulted.

Noise. All applicable OSHA regulations and requirements would be followed. On-site activities would be restricted to daylight hours, to the greatest extent practicable. All equipment would possess properly working mufflers and would be kept properly tuned to reduce backfires.

Hazardous Materials. The NPDES APAP may include but is not limited to the following BMPs, which would be implemented as standard operating procedures during all vegetation removal activities, and would include proper handling, storage, and/or disposal of hazardous and/or regulated materials.

- All fuels, waste oils, and solvents would be collected and stored in tanks or drums within a secondary containment system that consists of an impervious floor and bermed sidewalls capable of containing the volume of the largest container stored therein.
- CBP would ensure that all herbicide applicators have received training and are licensed in appropriate application categories.
- CBP would contain non-hazardous waste materials and other discarded materials, such as construction waste, until removed from the construction and maintenance sites. This would assist in keeping the Project Area and surroundings free of litter and reduce the amount of disturbed area needed for waste storage.

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- CBP would minimize site disturbance and avoid attracting predators by promptly removing waste materials, wrappers, and debris from the site. Any waste that must remain more than 12 hours should be properly stored until disposal.
- All waste oil and solvents would be recycled. All non-recyclable hazardous and regulated wastes would be collected, characterized, labeled, stored, transported, and disposed of in accordance with all applicable federal, state, and local regulations, including proper waste manifesting procedures.
- Solid waste receptacles would be maintained at the construction staging area. Non-hazardous solid waste (trash and waste construction materials) would be collected and deposited in on-site receptacles. Solid waste would be collected and disposed of by a local waste disposal contractor.

FINDING

Based on the results of the Environmental Assessment and the environmental design measures, BMPs, and mitigation measures to be incorporated as part of the Proposed Action, it has been concluded that the Proposed Action will not have a significant adverse effect on the environment. Therefore, no further NEPA analysis (i.e., Environmental Impact Statement) is warranted.

Glenn Bixler
Director
Border Patrol Tactical Infrastructure
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Date

Francis Dutch
Director
Facilities Management and Engineering
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Date

EXECUTIVE SUMMARY

INTRODUCTION

This Draft Environmental Assessment (EA) for the proposed Tijuana River Vegetation Control (Proposed Action) program was prepared by U.S. Customs and Border Protection (CBP), under the Department of Homeland Security (DHS). This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 U.S. Code [USC] 4321-4347), the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508), the DHS Instructional Manual 023-01-001, Rev. 1., and other pertinent federal environmental statutes, regulations, and compliance requirements.

BACKGROUND

In 1924, Congress created the U.S. Border Patrol (USBP) to serve as the law enforcement entity of the Immigration and Naturalization Service (INS). Congress transferred all INS responsibilities to the Department of Homeland Security (DHS) with the passage of the Homeland Security Act of 2002 (Public Law 107-296) on November 25, 2002. The USBP law enforcement organization and responsibilities were transferred to the CBP component of DHS on March 1, 2003. The mission of CBP is to safeguard America's borders thereby protecting the public from dangerous people and materials while enhancing the Nation's global economic competitiveness by enabling legitimate trade and travel.

The Tijuana River crosses the international border from Tijuana, Mexico into San Diego, California and continues westward to the Pacific Ocean. The Project Area is located in the Tijuana River Floodway (TRF) and encompasses approximately 167.5 acres of the floodway between the north and south levees.

Giant reed (*Arundo donax*), a non-native highly invasive grass grows 10-feet tall and has overtaken much of the Project Area. Giant Reed and existing native plants obstruct the CBP officers' views, which hinders their ability to detect people illegally crossing the border.

PROPOSED ACTION, PURPOSE AND NEED

The Proposed Action would preserve line of sight for USBP agents and reduce hiding opportunities within the Tijuana River Floodway (TRF) by controlling vegetation in the TRF in accordance with a 1980 Memorandum of Understanding between CBP and the International Boundary and Water Commission (IBWC), the owner of the TRF.

The purpose of the Proposed Action is to enable CBP to fulfill its mission of protecting the U.S. southern border and to enhance the safety of USBP agents in carrying out their duties. For CBP to meet its mission to control illegal activities, it must maintain surveillance sight lines across the Project Area in perpetuity.

The need for the Proposed Action is that existing native and non-native plants within the Project Area obstruct the view of USBP agents, which hinders their ability to detect people illegally crossing the border in the vicinity of the TRF. In addition to blocking visibility, many of the plants are robust enough to impede movement. Native black willows (*Salix gooddingii*) near the Dairy Mart Bridge also limit sight lines, preventing CBP from fulfilling its mission.

The Proposed Action was developed and refined through analysis of preliminary environmental survey results to minimize environmental impacts while fulfilling CBP operational and safety needs. As a result of preparing the draft EA, the Proposed Action includes:

- Continuation of mechanical removal of *non-native* vegetation in the 167.5 acre Project Area.
- Use of herbicides appropriate for aquatic environments to effectively control vegetation.
- Removal of 2.56 acres of the existing 4.10 acres of *native* vegetation currently within the 15.99 acre portion of the least Bells' vireo (LBV) critical habitat. Removal of existing native vegetation would occur only on the east side of Dairy Mart Bridge.
- Retention of 1.54 acres of native vegetation within the LBV critical habitat area on the west side of the bridge. This portion of LBV habitat is part of and adjacent to the 885 acre LBV critical habitat, which would benefit from removal of invasive species.
- Removal of any new native vegetation growth west of the bridge within the Project Area.
- Purchase of mitigation bank credits at a ratio of 3:1 (mitigation to impact) to address losses in the LBV critical habitat.
- Funding of research to minimize impacts currently caused by the Kuroshio shot hole borer.

RESULTS

Four alternatives, including the Proposed Action and the No Action Alternatives, were analyzed for proposed Tijuana River Vegetation Control. Each alternative was analyzed for the potential to impacts to eighteen environmental resource areas. Twelve resource areas were determined to not require detailed impact analyses as very limited to no potential for effects to these resource areas are anticipated. These areas include air quality, climate change, floodplains, human health and safety, land use, land resources (geology and soils), noise, prime and unique farmland, roadways and traffic, utilities and infrastructure, wild and scenic rivers, socioeconomic resources, environmental justice and protection of children.

Six environmental resource areas required more detailed analysis and were fully analyzed for each alternative. The Proposed Action was found to have minimal impacts on aesthetics and visual resources, biological resources, cultural resources, hazardous materials and waste management, and surface waters and waters of the United States. Impacts to biological resources, mainly focused on impacts to LBV critical habitat. Identified impacts are limited through the implementation of Best Management Practices (BMPs) during construction, and mitigated through purchase of appropriate mitigation bank credits, and funding of research to minimize the broad scale impacts currently caused by the Kuroshio shot hole borer. This insect is currently affecting wide ranges of LBV habitat in the Tijuana River Valley and the Los Angeles region, and funding would develop and implement new techniques to limit impacts to riparian vegetation. Impacts to the six environmental areas analyzed in depth would all be minimal with BMPs and mitigation measures applied.

No impacts were identified for any of the resource areas for the No Action Alternative.

The remaining two alternatives would either result in similar or marginally less adverse impacts as compared to the Proposed Action Alternative. However, they would not accomplish the goal of preserving the line of sight for USBP agents as safely, reliably, and efficiently as the Proposed Action.

CONCLUSION

Through the analysis conducted in the EA, and assuming all mitigation measures and BMPs are implemented, no significant impacts would occur from implementation of the Proposed Action Alternative.

Draft Environmental Assessment Tijuana River Vegetation Control

Department of Homeland Security
U.S. Customs and Border Protection
U.S. Border Patrol, San Diego Sector



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ABBREVIATIONS AND ACRONYMS

APAP	Aquatic Pesticide Application Plan
BMP	Best Management Practices
Cal-IPC	California Invasive Plant Council
CAA	Clean Air Act
CBP	U.S. Customs and Border Protection
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Database
CO ₂	Carbon dioxide
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
DHS	Department of Homeland Security
EA	Environmental Assessment
EO	Executive Order
FONSI	Finding of No Significant Impact
GHG	Greenhouse gas
IBWC	International Boundary and Water Commission
INS	Immigration and Naturalization Service
IPM	Integrated Pest Management
LBV	Least Bell's vireo
MBTA	Migratory Bird Treaty Act
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NOA	Notice of Availability
NPDES	National Pollutant Discharge Elimination System
OHP	Office of Historic Preservation
OHWM	Ordinary High Water Mark
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
ROI	Region of Influence
RWQCB	California Regional Water Quality Control Board
TRF	Tijuana River Floodway
USBP	U.S. Border Patrol
USC	United States Code
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WRA, Inc.	WRA

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1.0 INTRODUCTION

U.S. Customs and Border Protection (CBP), under the Department of Homeland Security (DHS), prepared this Draft Environmental Assessment (EA) for the proposed Tijuana River Vegetation Control (Proposed Action) program. The Proposed Action would implement a combination of expanded mechanical and chemical vegetation control methods, to include mowing, disking, thinning, and applying herbicides within the Tijuana River Floodway (TRF) in San Diego, California. The Proposed Action would preserve line of sight and reduce hiding opportunities within the TRF in accordance with a 1980 Memorandum of Understanding (MOU) between CBP and the International Boundary and Water Commission (IBWC).

This EA is divided into seven sections plus appendices. **Section 1.0** provides background information on U.S. Border Patrol (USBP) missions, identifies the purpose of and need for the Proposed Action, describes the area in which the Proposed Action would occur, and explains the public involvement process. **Section 2.0** provides a detailed description of the Proposed Action and alternatives considered, including the No Action Alternative. **Section 3.0** describes existing environmental conditions in the areas where the Proposed Action would occur and identifies potential environmental impacts that could occur within each resource area under the alternatives evaluated in detail. **Section 4.0** discusses potential cumulative impacts and other impacts that might result from implementation of the Proposed Action, combined with foreseeable future actions. **Section 5.0** lists best management practices (BMPs) that would be implemented to reduce or eliminate potential adverse impacts on the human and natural environment. **Section 6.0** provides the references for the EA, and **Section 7.0** provides a list of preparers.

1.1 U.S. CUSTOMS AND BORDER PROTECTION BACKGROUND

In 1924, Congress created the USBP to serve as the law enforcement entity of the Immigration and Naturalization Service (INS). Congress transferred all INS responsibilities to the newly created DHS with the passage of the Homeland Security Act of 2002 (Public Law 107-296) on November 25, 2002. The USBP law enforcement organization and responsibilities were transferred to the CBP component of DHS on March 1, 2003. The mission of CBP is to safeguard America's borders thereby protecting the public from dangerous people and materials while enhancing the Nation's global economic competitiveness by enabling legitimate trade and travel.

1.2 PURPOSE AND NEED

The purpose of the Proposed Action is to enable CBP to fulfill its mission of protecting the U.S. southern border and to enhance the safety of USBP agents in carrying out their duties. For CBP to meet its mission to control illegal activities, it must maintain surveillance sight lines across the Project Area in perpetuity.

The need for the Proposed Action is that existing native and non-native plants within the Project Area obstruct the view of USBP agents, which hinders their ability to detect people illegally crossing the border in the vicinity of the TRF. In addition to blocking visibility, many of the plants are robust enough to impede movement. Native black willows (*Salix gooddingii*) near the Dairy Mart Bridge also limit sight lines, preventing CBP from fulfilling its mission.

1.3 FRAMEWORK FOR ANALYSIS

This EA includes an analysis of direct, indirect, and cumulative effects that would result from implementing the Proposed Action or any reasonable alternatives carried forward for

consideration. The potentially affected biological and human environment would include resources in the undeveloped land of the Tijuana River Valley located in south San Diego; however, most potential effects would be limited to the Proposed Action site and immediately adjacent resources.

This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 U.S. Code [USC] 4321-4347), the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508), the DHS Instructional Manual 023-01-001, Rev. 1., and other pertinent federal environmental statutes, regulations, and compliance requirements.

1.4 PUBLIC INVOLVEMENT

CBP is committed to communicating with the public to help ensure that potentially affected communities and other interested parties understand CBP's Proposed Action and are given opportunities to participate in decisions that may affect them. CBP invites public participation in the NEPA process. Consideration of the views and information of all interested persons promotes open communication and enables better decision making. CBP urges all agencies, organizations, Indian nations, and members of the public having a potential interest in the Proposed Action, including minority, low-income, and disadvantaged persons, to participate in the decision-making process.

DHS Instructional Manual 023-01-001, Rev. 1. guides public participation opportunities with respect to this EA and decision making on the Proposed Action.

If CBP determines that there will be no significant impacts from the Proposed Action, CBP will incorporate comments received on the draft EA and draft FONSI (Finding of No Significant Impact) into the final EA and final FONSI, as appropriate. CBP will also present comments received and CBP's responses in an appendix. CBP may then execute the FONSI and proceed to implement the Proposed Action.

Otherwise, if CBP determines that implementing the Proposed Action would result in significant impacts, CBP will (a) publish in the Federal Register a Notice of Intent (NOI) to prepare an environmental impact statement (EIS), (b) commit to mitigation actions sufficient to reduce the impacts below significance levels, or (c) not take the action.

The following is a list of federal and state agencies and stakeholder groups that have been consulted during the NEPA process.

Federal Agencies

- U.S. International Boundary and Water Commission
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service

State Agencies

- California Department of Fish and Wildlife
- California State Parks
- Office of Historic Preservation
- California Regional Water Quality Control Board
- California Coastal Commission

- California Environmental Protection Agency
- California State Clearing House
- Native American Heritage Commission

Local Agencies

- Tijuana River National Estuarine Research Reserve
- County of San Diego
- City of San Diego
- City of Imperial Beach

Tribes

- Barona Band of Mission Indians
- Campo Band of Mission Indians
- Ewiiapaayp Tribal Office
- Inaja Band of Mission Indians
- Jamul Indian Village
- La Jolla Band of Mission Indians
- La Posta Band of Mission Indians
- Los Coyotes Band of Cahuilla and Cupena Indians
- Manzanita Band of Kumeyaay Nation
- Mesa Grande Band of Mission Indians
- Pala Band of Mission Indians
- Pauma/Yuima Band of Mission Indians
- Rincon Band of Luiseno Indians
- San Pasqual Band of Mission Indians
- Sycuan Band of the Kumeyaay Nation
- Viejas Band of Kumeyaay Indians

Non-governmental Agencies

- Southwest Wetland Interpretative Association
- WILDCOAST

The Draft EA and FONSI are available for public review for 30 days. The Notice of Availability (NOA) was published in the San Diego Tribune and the Imperial Beach Eagle and Times. A copy of the NOA text will be included in the final EA. The Draft EA and FONSI are also available electronically at:

<https://www.cbp.gov/about/environmental-cultural-stewardship/nepa-documents/docs-review>

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2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

This section describes the Proposed Action, the No Action Alternative, and two additional alternatives. As discussed in **Section 1.0**, the NEPA process evaluates potential environmental consequences associated with the Proposed Action and considers alternative courses of action. Reasonable alternatives must satisfy the purpose of and need for a Proposed Action, which are defined in **Section 1.2**. CEQ regulations specify the inclusion of a No Action Alternative against which potential effects can be compared.

2.1.1 Project Area

The Project Area for the Proposed Action is located in the TRF about four miles upstream from the Pacific Ocean as shown in Figure 1. The Project Area is located on federal lands managed by the IBWC, and extends downstream from the United States/Mexico international border in a westerly direction about 1.7 miles, to approximately 200 yards northwest of the Dairy Mart Road Bridge, as shown on the cover photo and mapped in Figure 2. The Project Area includes the TRF levees that generally parallel the modified Tijuana River channel, which extend downstream from the border to the start of the natural Tijuana River channel in the Tijuana River Valley Regional Park. The south levee (approximately 1.7 miles long) runs along the international boundary, and the north levee (approximately 2 miles long) parallels the southern boundary of the San Ysidro community, just south and west of Camino De La Plaza. The floodway between the north and south levees encompasses 332.2 acres, and the Project Area focuses on the southern 167.5 acres just north of the border, to approximately 200 yards downstream of the Dairy Mart Road Bridge. The remaining area to the north is a commercial sod production area where vegetation control is not needed by CBP.

The Tijuana River flows through the Project Area from Mexico to the Pacific Ocean. It is an intermittent stream that flows northward through the City of Tijuana in a 6.6-mile concrete flood control channel, crosses the border into San Diego, California, and continues westward to the Pacific Ocean. The TRF provides flood protection to areas in both the United States and Mexico. The TRF flood control project was constructed in 1978.

Giant reed (*Arundo donax*), a non-native highly invasive grass grows 10-feet tall and has overtaken much of the Project area. Native black willows and mulefat also grow at the western end, near the Dairy Mart Road Bridge. These existing native and non-native plants within the Project Area obstruct views of CBP officers, which hinders their ability to detect people illegally crossing the border in the vicinity of the TRF. The current vegetation treatment consists of selective mowing and disking. CBP and IBWC have historically conducted semi-annual (or as needed) vegetation removal, using only mechanical methods (mowing and disking), and continue to do so, in accordance with the 1980 MOU with the IBWC and a 2010 consultation between CBP and USFWS. Routine vegetation control starts at the border on the east end of the site, and extends between the levees westward to approximately 200 yards west of the Dairy Mart Road Bridge. The work is performed twice a year, or as deemed necessary for surveillance purposes, typically when the vegetation reaches approximately two feet tall. CBP also maintains the north levee road and mows the exterior bank of the levee outside the floodway. Routine floodway maintenance, conducted by CBP at its expense, includes vegetation control or eradication on the flood channel starting at the international border which is at the east end of the site. Maintenance extends north and south of the levee bases and to approximately 200 yards west of the Dairy

Mart Road Bridge. The portion of the TRF in which the Proposed Action would take place is the same as the current vegetation treatment area.

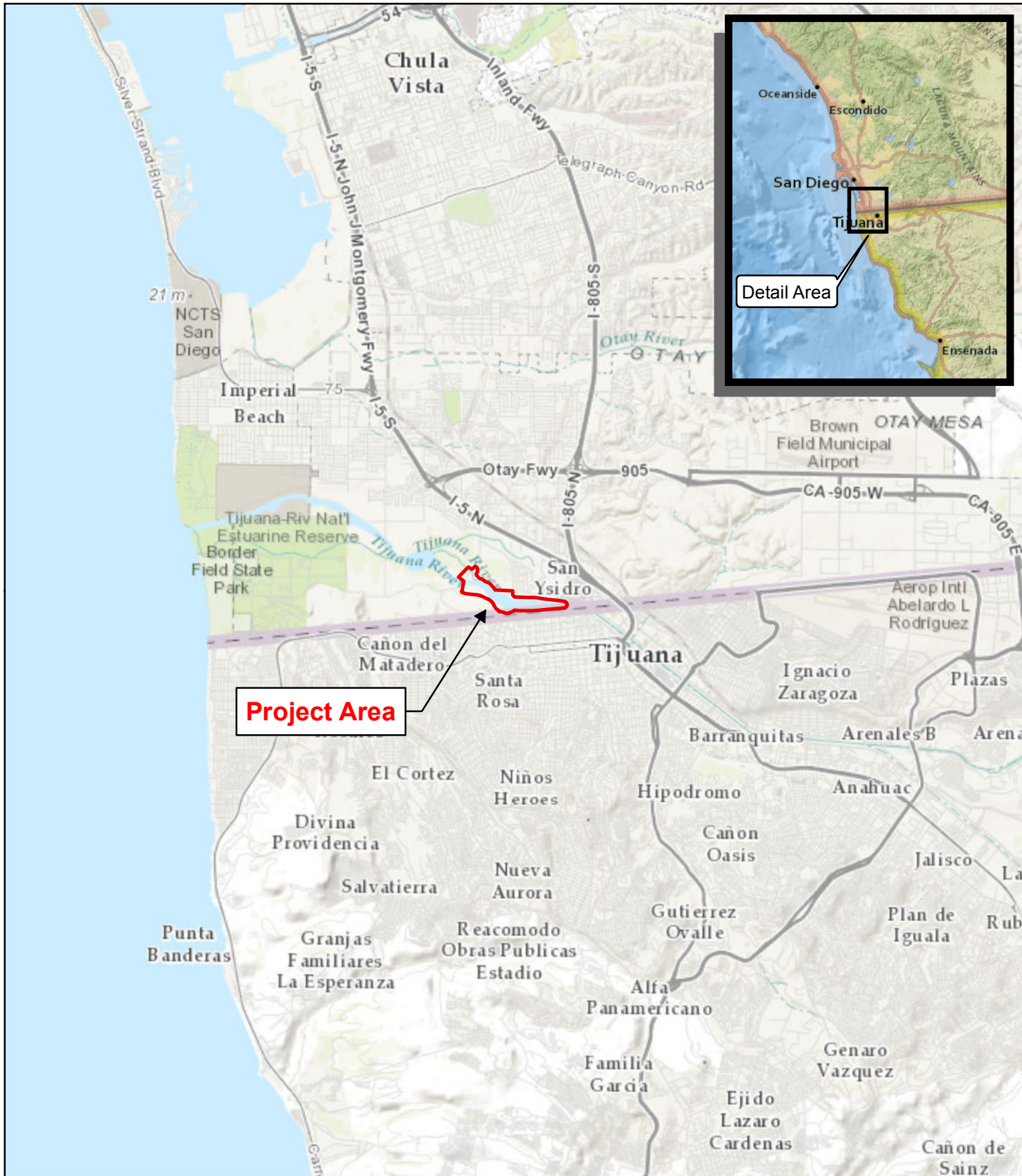
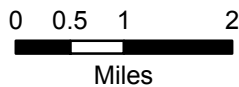


Figure 1. Project Area Location Map



Tijuana River Vegetation Control EA
San Diego County, California



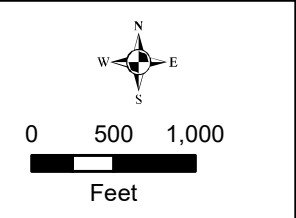
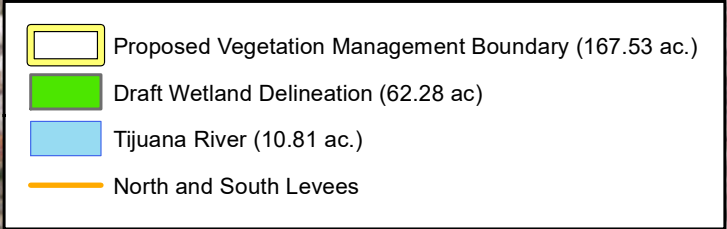
Map Prepared Date: 9/3/2015
Map Prepared By: pkobylarz
Base Source: Esri, National Geographic
Data Source(s): WRA



Tijuana River
Vegetation
Management EA

San Diego County,
California

Figure 2.
Project Area



Map Prepared Date: 6/8/2017
 Map Prepared By: Scott Mortensen
 Base Source: Microsoft 5/3/10
 Data Source(s): Programmatic EIS Int.
 Boundary and Water Commission
 US Section

2.2 ALTERNATIVE 1: NO ACTION ALTERNATIVE (MECHANICAL REMOVAL ONLY)

CEQ regulations for implementing NEPA require that an agency “include the alternative of no action” as one of the alternatives it considers in a Draft EA. Under the No Action Alternative, CBP would continue to rely on mechanical removal of vegetation. The No Action Alternative would maintain the status quo. The No Action Alternative serves as a baseline against which the impacts of the Proposed Action are compared. The current vegetation control strategy in the Project Area relies completely on mechanical removal methods, such as disking, mowing, cutting of vegetation, and occasionally use of heavy equipment to extract roots and remove non-native vegetation. However, in areas where native vegetation provides critical LBV habitat, vegetation removal is currently restricted. Native black willows and mulefat (*Baccharis salicifolia*) continue to grow larger, obscuring effective CBP surveillance and limiting direct views into the areas with native vegetation. The current mechanical removal only protocol restricts removal or trimming of native plants that support the LBV critical habitat, thereby preventing effective CBP surveillance and line of sight monitoring in those areas. CBP also maintains the levees in the area by removing unwanted vegetation and mechanically maintaining protective gravel surfaces. This is currently done twice a year, or as necessary to preserve line of sight.

The No Action Alternative does not meet minimum CBP mission needs because the rapid regrowth of mechanically removed vegetation continually obstructs the view of USBP agents and hinders their ability to detect people illegally crossing the border. In addition to blocking visibility, many of the plants are tall and robust enough to impede movement of CBP agents. The high density of native black willows near the Dairy Mart Bridge also limit sight lines, preventing CBP from fulfilling their mission. The No Action Alternative would also perpetuate continued risk to agent safety.

2.3 ALTERNATIVE 2: PROPOSED ACTION (MECHANICAL REMOVAL, VEGETATION THINNING, AND HERBICIDE APPLICATION)

2.3.1 Mechanical Removal

Under Alternative 2, CBP proposes to expand its mechanical removal efforts as described under Alternative 1 to include removal of 2.56 acres of the existing 4.10 acres of native vegetation currently within the 15.99 acre designated critical habitat area at the west end of the site, as shown in Figure 3. Currently, the native vegetation in the critical habitat area is split by the Dairy Mart Road Bridge. This action would remove all native vegetation on the east side of the bridge (about 65% of the *total* native vegetation in the critical habitat area) and allow all native vegetation in the critical habitat area to remain on the west side of the bridge (about 35% of the *total* native vegetation in the critical habitat area). As is currently the case under the No Action Alternative, removal of all non-native vegetation on both sides of the bridge would continue. This action would remove over half of the acreage of mostly woody native vegetation including native willows and mulefat in the critical habitat area near the Dairy Mart Road Bridge, to maintain visual access east of the bridge. This action also includes mechanical removal of exotic vegetation up to 200 yards downstream of the Dairy Mart Road Bridge. Mechanical control is an effective first step in controlling tall growing plant species that reduce sightlines within the Project Area. The most abundant tall growing species are the native trees black willow and arroyo willow (*Salix lasiolepis*), and the non-native giant reed (*Arundo donax*). Removal of native vegetation would be done in designated areas between September 1 and February 15, when nesting of bird species is not occurring.

2.3.2 Herbicide Application





CBP proposes to supplement expanded mechanical removal with herbicide application. Herbicides are chemicals that damage or kill plants. Herbicide application must comply with the U.S. Environmental Protection Agency (USEPA) label directions as well as California Environmental Protection Agency, Department of Pesticide Regulation label standards.

In areas near the Tijuana River, specific herbicides that are compatible with wetlands and water bodies would be used, including, AquaMaster® and Rodeo®, or equals. Use of other herbicides that are readily dispersed into aquatic habitats and that can cause damage to aquatic species would not be used. Herbicide application could occur up to four times a year. Staging areas would be sited in previously disturbed areas such as unimproved roads, shoulders, graded areas, or sites with compacted soil that do not support vegetation adjacent to the Tijuana River Floodway. Prior to the beginning of work, all crew members would be trained to differentiate between native and non-native plants that occur within the management area.

Currently no chemicals, specifically herbicides, are used by the CBP to control vegetation within the Project Area. Several herbicide application methods are available. The application method that would be used by CBP would be based upon the 1) treatment objective (removal or reduction), 2) accessibility, topography, and size of the treatment area, 3) characteristics of the target species and the desired vegetation cover, 4) location of sensitive areas and potential environmental impacts in the immediate vicinity, 5) anticipated costs and equipment limitations, 6) meteorological, vegetative, and soil conditions of the treatment area at the time of treatment, and 7) proximity of human habitation. (CBFFP 2013) In general, herbicide would be applied when translocation of herbicide from the leaves through the stem down to the rhizomes is maximized.

Herbicide would be thoroughly applied at the highest concentration allowed on the label to each leaf. Crew members would ensure that all of the stems in each stand are well-sprayed. The manufacturer's recommended rate of application for each targeted species would be followed. All crew members would have the proper personal protective equipment (PPE) when handling herbicides (e.g., safety glasses, rubber gloves, and long-sleeve shirts and pants), and as previously mentioned, all applicators would be licensed and certified. Work crews would only mix herbicide and refill sprayers within the staging areas to minimize impacts.

Application of chemical controls is most effective on new sprouts that typically emerge after removal of aboveground biomass by mechanical methods. CBP current mechanical practices would reduce the quantities of herbicide needed for subsequent control, due to the reduction in unwanted vegetation masses needing treatment. Re-sprouting species, such as giant reed, require a series of follow up applications of herbicide to be fully eliminated. An Aquatic Pesticide Application Plan would be prepared as part of this alternative.

-  Least Bell's Vireo Critical Habitat (15.99 acres)
-  Least Bell's Vireo Critical Habitat 20' Buffer
-  Native Vegetation 4.10 ac. (1.54 ac. to remain)
-  Vegetation to be Removed (2.56 ac. or ~65%)

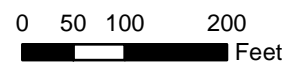


Tijuana River
Vegetation
Control EA

San Diego
County, California

Figure 3.

Alternative 2:
Proposed 65%
Native Vegetation
Removal



Map Prepared Date: 3/14/2017
Map Prepared By: mrochelle
Base Source: ESRI Streaming - NAIP 2014
Data Source(s): WRA

2.4 ALTERNATIVE 3: MECHANICAL REMOVAL, WILLOW PRUNING, AND HERBICIDE APPLICATION

2.4.1 Mechanical Removal

Under this alternative, mechanical control as described under Alternative 1 would continue. In addition, this alternative includes pruning native willows and removal of tree limb growth to a height of 10 feet off the ground throughout the Project Area up to 200 yards downstream of the Dairy Mart Road Bridge to maintain visual access. Pruning of all the lower limbs and branches and removal of new growth below 10 feet would allow for improved visibility. Pruning of willow trees and disking would be done between September 1 and February 15, when nesting of bird species is not occurring. Pruning native willows may not be effective in providing for CBP surveillance sightlines in all of the portions of the Project Area, particularly near the Dairy Mart Road Bridge.

2.4.2 Herbicide Application

Under this alternative, herbicide application as described under Alternative 2 would take place.

2.5 ALTERNATIVE 4: MECHANICAL REMOVAL, HERBICIDE APPLICATION AND GRAZING

2.5.1 Mechanical Removal

Under this alternative, mechanical removal of vegetation as described under Alternative 1 would take place. Methods such as disking, mowing, cutting of vegetation, and occasionally use of heavy equipment to extract roots and remove vegetation would be implemented twice a year, or as required by CBP for surveillance purposes.

2.5.2 Herbicide Application

Under this alternative, herbicide application as described under Alternative 2 would take place.

2.5.3 Grazing Management

The CBP would follow mechanical removal and herbicide application with grazing by domesticated animals, such as sheep and goats. Animals would be trucked in and out of the Project Area depending on the amounts of vegetation and the need for grazing. Corrals, barns or other structures would not be required, though watering troughs would be necessary. Herbicide restrictions for the interval between application and grazing would be followed. Increased efficiency can be achieved by following mechanical control of giant reed with grazing. Sheep and goats have been found to survive for extended periods on giant reed, though both will also eat woody vegetation such as willows if left unprotected. Sheep are generally more selective than goats preferring forbs and grasses before woody plants and tend not to graze an area uniformly. They also tend to avoid wet or muddy areas (such as the wetland areas during intermittent flows in the Project Area). Goats typically eat larger quantities of woody vegetation as well as forbs and tend to eat a greater variety of plants than sheep. A grazing management plan would be prepared as part of this alternative.

2.6 ALTERNATIVES CONSIDERED BUT ELIMINATED

2.6.1 Vegetation Conversion

This alternative would convert the vegetation in the Project Area to native plant species. Establishing a suitable assemblage of native vegetation appropriate to the area could reduce opportunities for invasive species to colonize. However, untimely and uncontrollable flooding, sediment deposition, and seed transport would negatively impact vegetation conversion efforts. Furthermore, native vegetation could grow to sufficient height and density as to create the same obstruction to sight lines currently posed by the mix of non-native and native vegetation. In addition, the abundant tall growing black willows and arroyo willows would remain and continue to limit sight lines. Therefore, this alternative would not meet the stated purpose and need of the Proposed Action.

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3.0 AFFECTED ENVIRONMENT AND CONSEQUENCES

This section of the EA describes the natural and human environment that exists within the Project Area and region of influence (ROI), and the potential impacts of the Proposed Action, No Action Alternative, and other two alternatives outlined in **Section 2.0** of this document. The ROI for this project is San Diego County. Only those resources with the potential to be affected by the Proposed Action are described, per CEQ regulation (40 CFR 1501.7 [3]). The impact analysis presented in this EA is based upon existing regulatory standards, scientific and environmental knowledge, and best professional opinions. Impacts (consequence or effect) can be either beneficial or adverse, and can be either directly related to the action or indirectly caused by the action. Direct impacts are those effects that are caused by the action and occur at the same time and place (40 CFR 1508.8[a]). Indirect impacts are those effects that are caused by the action and are later in time or further removed in distance, but are still reasonably foreseeable (40 CFR 1508.8[b]). Cumulative and other effects are discussed in **Section 4**. All potentially relevant resource areas were initially considered in this EA. Some were eliminated from detailed examination because of their inapplicability to this Proposed Action. General descriptions of the eliminated resources and the basis for elimination are described in **Section 3.1**.

The following discussion elaborates on the nature of the characteristics that might relate to impacts on resources.

- **Short term or long term.** These characteristics are determined on a case-by-case basis and do not refer to any rigid time period. In general, short-term effects are those that would occur only with respect to a particular activity or for a finite period or only during the time required for improvement and reconstruction activities. Long-term effects are those that are more likely to be persistent and chronic.
- **Direct or indirect.** A direct effect is caused by and occurs contemporaneously at or near the location of the action. An indirect effect is caused by a Proposed Action and might occur later in time or be farther removed in distance but still be a reasonably foreseeable outcome of the action. For example, a direct effect would occur on soils during the installation of low-flow drainage structures at wash crossings, whereas an indirect effect would occur on soils after construction and downstream because the drainage structures would decrease erosion and downstream sedimentation.
- **Negligible, minor, moderate, or major.** These relative terms are used to characterize the magnitude or intensity of an impact. Negligible effects are generally those that might be perceptible but are at the lower level of detection. A minor effect is slight, but detectable. A moderate effect is readily apparent. A major effect is one that is severely adverse or exceptionally beneficial.
- **Adverse or beneficial.** An adverse effect is one having unfavorable, or undesirable outcomes on the man-made or natural environment. A beneficial effect is one having positive outcomes on the man-made or natural environment. A single act might result in adverse effects on one environmental resource and beneficial effects on another resource.
- **Significance.** Significant effects are those that, in their context and due to their intensity (severity), meet the thresholds for significance set forth in CEQ regulations (40 CFR Part 1508.27).
- **Context.** The context of an effect can be localized or more widespread (e.g., regional).

- **Intensity.** The intensity of an effect is determined through consideration of several factors, including whether an alternative might have an adverse impact on the unique characteristics of an area (e.g., historical resources, ecologically critical areas), public health or safety, or endangered or threatened species or designated critical habitat. Effects are also considered in terms of their potential for violation of federal, state, or local environmental law; their controversial nature; the degree of uncertainty or unknown effects, or unique or unknown risks; if there are precedent-setting effects; and their cumulative effects (see **Section 4.0**).

3.1 RESOURCE AREAS NOT REQUIRING DETAILED IMPACT ANALYSIS

This section presents the characteristics of the affected environment and an analysis of the potential direct and indirect impacts each alternative would have on the affected environment. Cumulative and other impacts are discussed in **Section 4.0**. All potentially relevant resource areas were initially considered in this EA. In accordance with NEPA CEQ regulations, and DHS Instruction Manual 023-01-001, Rev. 1., the following evaluation of environmental effects focuses on those resources and conditions potentially subject to effects, on potentially significant environmental issues deserving of study, and deemphasizes insignificant issues. Some environmental resources and issues that are often analyzed in an EA have been omitted from detailed analysis. The following provides the basis for such exclusions.

3.1.1 Air Quality

The Federal Clean Air Act (CAA) and subsequent amendments provide the authority and framework for USEPA regulation of emission sources and the establishment of requirements for the monitoring, control, and documentation of activities that would affect ambient concentrations of certain pollutants that may endanger public health or welfare. Under the CAA, each state or delegated permitting authority has the responsibility to achieve and maintain air quality that meets the National Ambient Air Quality Standards. USEPA regulates activities affecting air quality of federal lands and most Indian lands. In addition to the Federal CAA, air quality is also regulated at the state level by the California Air Resources Board and at the local level by the San Diego County Air Pollution Control District.

The transport, operation, and use of trucks and equipment would release a small amount of emissions into the atmosphere. Herbicides would be applied directly to plants under non-windy conditions with minimal chance for release into the atmosphere. Therefore, the Proposed Action would result in a negligible release of pollutants, without an adverse impact on air quality or public health and welfare.

3.1.2 Climate Change

On August 1, 2016, the CEQ issued a memorandum detailing the recommended approach to climate change consideration in EA and EIS NEPA documents. Specifically, agencies should consider (1) potential effects of a proposed action on climate change as indicated by assessing GHG emissions (e.g., to include, where applicable, carbon sequestration), and, (2) effects of

climate change on a proposed action and its environmental impacts¹. Although GHG emissions are not currently regulated under the CAA, the USEPA has indicated that GHG emissions and climate change are issues that need to be considered. More recently however, an Executive Order² rescinded the guidance provided in the CEQ memorandum. GHGs are produced by the burning of fossil fuels and through industrial and biological processes. GHG emissions from the Proposed Action would be extremely limited as vegetation removal would be short lived and would not use large amounts of GHG generating equipment. The level of emissions associated with this project is not expected to affect the climate.

3.1.3 Floodplains

According to the Federal Emergency Management Agency Flood Insurance Rate Maps 06073C2162G and 06073C2166G, the Project Area is located predominantly within the 100-year floodplain of the Tijuana River. Under EO11988 all federal agencies are required to take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare. As no grading or earth moving activities are proposed, elevations within the Project Area would not be impacted and the floodplain would not be altered. In addition, the project does not include construction of any structure that could be damaged or offices/housing that could result in injury or death during flooding. Impacts to flood control would not be expected as the Proposed Action would only result in beneficial changes to flood control by reducing water flow friction caused by obstructions and vegetation in the flood channel. Further, any changes in the extent of vegetation would be addressed from an engineering standpoint, such that flood control of the area would not be compromised.

3.1.4 Human Health and Safety

Human health and safety is largely a matter of adherence to regulatory requirements imposed for the benefit of personnel and implementation of operational practices that reduce risks of illness, injury, death, and property damage. The Occupational Safety and Health Administration (OSHA) and the USEPA issue standards that specify the amount and type of training required for industrial workers, the use of protective equipment and clothing, engineering controls, and maximum exposure limits with respect to workplace stressors.

Project personnel would be exposed to safety risks from the inherent dangers of traversing the site, operating tools and equipment, and herbicide application. Contractors would be required to establish and maintain safety protocol, including appropriate handling of tools and equipment. All crew members would have the PPE when handling herbicides. As the Proposed Action would not introduce new or unusual safety risks, and assuming all safety protocols would be followed and implemented, a detailed examination of safety is not included in this EA.

3.1.5 Land Use

No change in land use would occur, and no effects on land use plans or policies would be expected from the Proposed Action. The Proposed Action would be compatible with the existing land use categories and therefore would not result in any changes to land use plans. The Coastal

¹ Council on Environmental Quality. 2016. Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews.

² Executive Order, Promoting Energy Independence and Economic Growth. March 28,2017

Consistency Determination shows the project is consistent to the maximum extent practicable with the California Coastal Management Program, pursuant to the requirements of the Coastal Zone Management Act of 1972, as amended.

3.1.6 Land Resources (Geology and Soils)

The Project Area occurs on two soil types both within the Natural Resources Conservation Service-described Chino series. The Chino series soils are somewhat poorly drained and occur on alluvial fans. They are formed in sedimentary alluvium, on 0 to 2 percent slopes, at low elevations of 5 to 200 feet. The soil is moderately alkaline and calcareous throughout. A majority of the Project Area occurs on Chino silt loam, while a small portion at the southern end of the Project Area occurs on Chino fine sandy loam, which has a slightly lower saline content (USDA 2015).

Vegetation control activities would largely occur above-ground, although some disking and root extraction would take place. Many herbicides, such as glyphosate, break down quickly and have very temporary effects on soil microbes. These activities would have a negligible short term impact on soils in the Project Area.

3.1.7 Noise

Noise from the Proposed Action (e.g., operation of tools and equipment) would occur in relatively remote locations far from sensitive noise receptors. San Ysidro is the closest community and is buffered from the Project Area by a levee and roadway. Due to the topography and remote location of the Project Area away from sensitive noise receptors, noise impacts would not be expected to occur as a result of the Proposed Action.

3.1.8 Prime and Unique Farmland

No prime or unique farmland, as defined by the Farmland Protection Policy Act of 1981, is located within or adjacent to the Project Area. The Project Area is designated as "other land," those lands not included in any other mapping category and inclusive of brush, timber, wetland, and riparian areas not suitable for livestock grazing.

3.1.9 Roadways and Traffic

The system of roadways and highways within and near the Project Area would not be adversely affected by the Proposed Action. Traffic resulting from the Proposed Action would be limited to site access and hauling of materials. This would have a negligible short-term impact on traffic, and no long-term impact on traffic.

3.1.10 Utilities and Infrastructure

Any utilities and infrastructure located in the Project Area would be completely avoided by the Proposed Action, and thus impacts on utilities and infrastructure would not be expected. The Proposed Action would not require municipal power, water supply, or sanitary sewer system infrastructure. No impacts related to utility delivery would occur.

3.1.11 Wild and Scenic Rivers

The proposed vegetation removal would not affect any reach of a river designated as Wild and Scenic, as none are located in the vicinity of the Proposed Action.

3.1.12 Socioeconomic Resources, Environmental Justice, and Protection of Children

Due to the location of the Project Area, the Proposed Action would not have an impact on demographics or economic activity. No residential or commercial displacements would occur, and the project would not affect employment or household income in the general area. Furthermore, the project is buffered from residential and commercial development by the sod farm and industrial uses. When completed, the Proposed Action would not have any new effect on socioeconomic resources. Because the Proposed Action would be located in a sparsely populated area with no displacement of existing developments, no disproportionate effects on minority and low income communities under Executive Order (EO) 12898 would occur. Similarly, the Proposed Action would not pose a disproportionate environmental health risk or safety risk to children, as protected by EO 13045.

3.2 AESTHETICS AND VISUAL RESOURCES

Aesthetic resources are evaluated according to the visual context of the Project Area and whether or not the project would improve or diminish the visual character of the site, the setting and/or the quality of life in the area. Visual resources are the various elements of the landscape that contribute to the visual character of a place, either natural or human-made, include the natural character of the landscape, buildings and objects, designated scenic resources such as vistas, parks and highways, and the results of human activity.

3.2.1 Affected Environment

The Project Area itself is currently adversely affected by illegal immigration traffic, consequent CBP enforcement activities, and large volumes of trash that are flushed down the Tijuana River from upstream. Trash caught in vegetation is a common sight within the wash bottoms. The visual character of the Project Area includes the modified flood control channel and levees, segments of the tall international border fence to the south, the International Water Treatment Plant to the southwest, the dense vegetation of the Tijuana River Regional Park to the west, and the sod farm to the north. Interstate 5 to the northeast is eligible as a California Scenic Highway, but is not adjacent to the Project Area and does not provide immediate views towards the project.

3.2.2 Environmental Consequences

3.2.2.1 Alternative 1: No Action Alternative

Under the No Action Alternative, existing methods of vegetation control would be utilized; therefore, no new impacts, either beneficial or adverse, would occur on aesthetic resources within the Project Area.

3.2.2.2 Alternative 2: Proposed Action

Degradation of the aesthetic value of the Project Area would occur during vegetation control under the Proposed Action. Under the Proposed Action, CBP would thin native vegetation to about 35% of the current density. The proposed site is adjacent to the U.S./Mexico border, which has been heavily degraded due to illegal vehicle/foot traffic and subsequent CBP actions required to monitor and halt illegal activities. A minor to negligible visual impact would be noticeable at the western end of the site only, as the native vegetation there would be thinned by about 65%, while the remaining 35% would remain in place and continue to grow. Thus, no major impacts on aesthetics and visual resources within the project corridor are expected.

3.2.2.3 Alternative 3

Alternative 3 would prune native willows and remove new growth below approximately 10 feet in height up to 200 yards downstream of the Dairy Mart Road Bridge to maintain visual access. The addition of utilizing herbicides would reduce the ability for vegetation to regrow in disked areas. A minor to negligible visual impact would occur as the canopy of trees would remain in place. Thus, no major impacts on aesthetics and visual resources in the project corridor are expected.

3.2.2.4 Alternative 4

Alternative 4 would not include any component that alters the visual landscape of the Project Area. The addition of utilizing herbicides or grazing techniques would merely reduce the ability for vegetation to regrow in disked areas; therefore, no new impacts, either beneficial or adverse, would occur on aesthetic resources within the Project Area.

3.3 **BIOLOGICAL RESOURCES**

This section identifies the vegetation and wildlife resources that are found within and adjacent to the Project Area. Vegetative resources include all plants that are found within the region of analysis. Wildlife resources include native or naturalized terrestrial animals and the habitats in which they exist. Species addressed in this section include those that are Federal-listed as threatened or endangered, other sensitive wildlife species, and migratory birds. The biological resource investigation and analysis for this EA was conducted by qualified biologists working for WRA, Inc. (WRA).

3.3.1 *Affected Environment*

3.3.1.1 Vegetation

WRA biologists conducted biological evaluations through multiple field site visits in 2014 and 2015 for a wetland delineation, breeding bird survey, and native plant flagging activities. Prior to the site visits, data from the Web Soil Survey (USDA 2015) and aerial photographs of the site were examined to determine whether any unique soil types that could support sensitive plant communities and/or aquatic features are present in the Project Area. No sensitive plant communities or aquatic features were observed within the Project Area.

Biological communities observed in the Project Area were classified based on existing plant community descriptions discussed in *A Manual of California Vegetation* (Sawyer et al. 2009), NatureServe's Classification of Ecological Communities (NatureServe 2015), and the Vegetation Classification Manual for Western San Diego County (Sproul et al. 2011) as shown in Figure 4. These references describe communities down to the alliance or association level, the two lowest levels of vegetation community classification, with associations being more specific than alliances. In some cases it is necessary to describe a community that is not described in the literature. Recognized vegetation communities are predominantly designed for native vegetation, and one non-native stand in the Project Area, the *Helianthus annuus* (Common Sunflower) Semi-Natural Stand, does not fit into a described alliance, association, or semi-natural stand. Non-native communities or species are ranked according to the California Invasive Plant Council (Cal-IPC) ranks of High, Moderate, or Limited ecological impacts (Cal-IPC 2015).

Sensitive biological communities include habitats that fulfill special functions or that have special values. Natural communities considered sensitive are those identified in local or regional plans,

policies, or regulations or by the California Department of Fish and Wildlife (CDFW). The CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in the California Natural Diversity Database (CNDDDB) (CDFW 2015). CNDDDB vegetation alliances are ranked one through five based on NatureServe's (2014) methodology,

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Tijuana River
Vegetation
Control EA



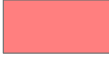










San Diego County,
California

Figure 4.

Vegetation
Communities



End of concrete channel

	Project Area		Mediterranean California Naturalized Annual and Perennial Grassland (5.16 acres)
Vegetation Communities			
	Arundo donax Semi-Natural Stand (2.65 acres)		Mesembryanthemum spp.-Carpobrotus spp. Ruderal Herbaceous Alliance (0.36 acre)
	Brassica (nigra) and Other Mustards Semi-Natural Herbaceous Stands (129.07 acres)		Salix gooddingii Association (2.72 acres)
	Glebionis coronaria Semi-Natural Stands (1.90 acres)		Salix lasiolepis Association (0.23 acre)
	Helianthus annuus (0.23 acre)		Salix lasiolepis/Baccharis salicifolia Shrubland Association (1.53 acres)
	Iva annua - Xanthium strumarium Temporarily Flooded Ruderal Herbaceous Vegetation (1.88 acres)		Schoenoplectus americanus Association (0.48 acre)
			Concrete (6.55 acres)



Map Prepared Date: 5/4/2017
Map Prepared By: smortensen
Base Source: Esri Streaming Imagery
Data Source(s): WRA

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with those alliances ranked globally (G) or statewide (S) as one through three considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or U.S. Fish and Wildlife Service (USFWS) must be considered and evaluated under the California Environmental Quality Act (California Code of Regulations Title 14, Div. 6, Chap. 3). Specific habitats may also be identified as sensitive in city or county general plans or ordinances. .

Vegetation communities within the Project Area can be roughly divided into two areas: least Bell's vireo (LBV, *Vireo bellii pusillus*) critical habitat and non-critical habitat. The *Salix gooddingii*, *S. lasiolepis*, *S. lasiolepis/Baccharis salicifolia* Shrubland Associations only occur within the LBV critical habitat, where native plants have been left intact and disking is heavily restricted. Outside the LBV critical habitat, where frequent mowing and disking prevent woody or more delicate plants from growing, non-native plant species including the *Brassica (nigra)* and Other Mustards Semi-Natural Herbaceous Stands and the Mediterranean California Naturalized Annual and Perennial Grasslands alliance are dominant. All areas contain *Glebionis coronaria* and *Arundo donax* Semi-Natural Stands, although the stands outside the LBV critical habitat are smaller and more infrequent. At the time of the site visits, Fennel (*Foeniculum vulgare*) Stands only occurred within the LBV critical habitat; however, individual fennel plants were found throughout the Project Area and may form dense stands in subsequent years pending site conditions. Environmental and man-made conditions may inhibit or promote such non-native plant colonization and establishment throughout the Project Area such as flooding, timing of vegetation control, and precipitation. The vegetation community descriptions below are based on field visits in September 2014 and April 2015.

3.3.1.2 Non-native Species

Non-native species are defined as:

...those present in a specified region only as a direct or indirect result of human activity. Other terms that are often used as synonyms for non-native include alien, exotic, introduced, adventive, non-indigenous, and non-aboriginal.

(NatureServe 2015)

From a conservation perspective, non-native plant species may be very harmful to the biodiversity of a landscape, as many non-native species negatively affect native species through their invasive nature. Non-native species can form dense monocultures that prevent native plant establishment or can hybridize with native plants and by modifying the local ecosystem processes they depend on (NatureServe 2015). The Cal-IPC ranks non-native plant species for their ability to invade wildlands as High, Moderate, or Limited. This ranking is based on 13 criteria divided into three main categories: the ecological impacts of a species, the species' ability to invade natural vegetation, and the species' current ecological amplitude and extent of invasion.

The Project Area and the floodplain in which it is situated contain a high prevalence of non-native plants species. Table 1 lists all of the non-native species observed during site visits and their respective Cal-IPC ranking. Two non-native animals were observed in the Project Area: feral domesticated cats (*Felis catus*) and dogs (*Canis lupus familiaris*), both of which can act as predators to native animals.

Table 1. Non-Native Species Observed

Common Name	Scientific Name	Cal-IPC Rank
<i>Plant Species</i>		
Giant reed	<i>Arundo donax</i>	High
Slender wild oat	<i>Avena barbata</i>	Moderate
Black mustard	<i>Brassica nigra</i>	Moderate
Ripgut grass	<i>Bromus diandrus</i>	Moderate
Crown daisy	<i>Glebionis coronaria</i>	Moderate
Poison hemlock	<i>Conium maculatum</i>	Moderate
Brass buttons	<i>Cotula coronopifolia</i>	Limited
Artichoke thistle	<i>Cynara cardunculus</i>	Moderate
Bermuda grass	<i>Cynodon dactylon</i>	Moderate
Crab grass	<i>Digitaria sanguinalis</i>	---
Rye grass	<i>Festuca perennis</i>	Moderate
Fennel	<i>Foeniculum vulgare</i>	Moderate
Prickly lettuce	<i>Lactuca serriola</i>	---
Bull mallow	<i>Malva nicaeensis</i>	---
Cheeseweed	<i>Malva parviflora</i>	---
Bur medic	<i>Medicago hispida</i>	Limited
Yellow sweetclover	<i>Melilotus indicus</i> or <i>officinalis</i>	---
Crystalline iceplant	<i>Mesembryanthemum crystallinum</i>	Moderate
Tree tobacco	<i>Nicotiana glauca</i>	Moderate
Harding grass	<i>Phalaris aquatica</i>	Moderate
Common plantain	<i>Plantago major</i>	---
Rabbit's-foot grass	<i>Polypogon monspeliensis</i>	Limited
Wild radish	<i>Raphanus sativus</i>	Moderate
Castor bean	<i>Ricinus communis</i>	Moderate
Curly dock	<i>Rumex crispus</i>	Limited
Russian thistle	<i>Salsola australis</i>	Limited
Tumblemustard	<i>Sisymbrium</i> sp.	Some species are Moderate
Common sow thistle	<i>Sonchus asper</i>	---
Johnson grass	<i>Sorghum halepense</i>	---
Saltcedar	<i>Tamarix ramosissima</i>	High
Rose clover	<i>Trifolium hirtum</i>	Limited
Nasturtium	<i>Tropaeolum majus</i>	---
Dwarf nettle	<i>Urtica urens</i>	---
Mexican fan palm	<i>Washingtonia robusta</i>	Moderate
<i>Wildlife Species</i>		
Domestic dog	<i>Canis lupus familiaris</i>	--
Domestic cat	<i>Felis catus</i>	--

Cal-IPC Ranks:

High – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate – These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Limited – These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

3.3.1.3 Federal-Listed Species

Special-Status Plants

Eleven Federal-listed species have been documented within the Project Area vicinity. The Project Area lacks suitable habitat to support these species due to extensive disturbance to the soils and vegetation and therefore, they have unlikely potential to occur within the Project Area.

Special-Status Wildlife

Birds

Over 600 bird species have been documented in San Diego County (SDNHM 2014), and between 76 and 104 breeding bird species have been documented in the vicinity of the Project Area (Unitt 2004). Many of these documented occurrences are migratory birds that do not nest in the area but still rely on stop over locations to feed and rest during their migration. The Migratory Bird Treaty Act of 1918 (MBTA) was created to protect these transitory birds across international borders. EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, outlines the great ecological and economic value of migratory birds to the United States. It cites their ecological importance as well as the human activities that they enable such as studying, watching, feeding, and hunting.

An evaluation of all Federal- or State-listed birds that have been documented within the same U.S. Geological Survey (USGS) 7.5 minute quadrangle was performed (WRA 2017). Species documented to occur within the quadrangle have been evaluated for their potential to occur within the Project Area including: western snowy plover (*Charadrius alexandrinus nivosus*), western yellow-billed cuckoo (*Coccyzus americanus*), Belding's savannah sparrow (*Passerculus sandwichensis beldingi*), California least tern (*Sternula antillarum browni*), coastal California gnatcatcher (*Polioptila californica californica*), light-footed Ridgway's rail (*Rallus obsoletus levipes*), southwestern willow flycatcher (*Empidonax traillii extimus*), and LBV.

Mammals

Seventy-five species of mammals have been documented in San Diego County (SDNHM 2014). While only one Federal- or State-listed mammal has been documented within the same USGS 7.5 minute quadrangle as the Project Area, it has not been documented in the area in over 75 years and is believed to be extirpated.

Reptiles and Amphibians

Eighty species of reptiles and amphibians have been documented in San Diego County (SDNHM 2014). However, only one Federal- or State-listed species, the green turtle (*Chelonia mydas*), occurs within the same 7.5 minute USGS quadrangle and this species is strictly a marine animal with no potential to occur within the Project Area (WRA 2017).

Invertebrates

San Diego County contains a large diversity of invertebrate species with over 140 species of butterfly recorded in San Diego County (SDNHM 2014). Two Federal- or State-listed invertebrate species of fairy shrimp were documented within the same 7.5 minute USGS quadrangle are species, both of which require vernal pool habitat. Because the Project Area contains no vernal pools, there is no potential for either species to occur in the Project Area (WRA 2017).

3.3.2 *Environmental Consequences*

3.3.2.1 Alternative 1: No Action Alternative

Vegetation

Under the No Action Alternative, CBP would continue current maintenance activities. Because these maintenance activities would occur entirely within previously disturbed areas, no adverse effect to vegetation above existing conditions would be anticipated as a result of the No Action Alternative. Adverse effects to vegetation are ongoing in the No Action Alternative because invasive species continue to grow and removal practices can contaminate areas downstream.

General Wildlife

Under the No Action Alternative, CBP would continue to use current vegetation removal practices, as needed. Because these activities are already occurring within the Project Area, the No Action Alternative would not affect general wildlife species above existing conditions. Impacts to Federal-listed species and other species of concern are identified below.

Federal-Listed Species

LBV is the one Federal-listed species likely to occur within the Project Area (WRA 2017). The remaining Federal-listed species known to occur within the vicinity are unlikely, or have no potential to occur within the Project Area. With the No Action Alternative, CBP would continue to use current mechanical vegetation removal methods and would continue to restrict vegetation removal in areas where the native vegetation provides critical LBV habitat. As such, the same amount of critical LBV habitat would remain and recurring non-native vegetation removal would continue. Because these activities are already occurring within the Project Area, the No Action Alternative would not affect Federal-listed species above existing conditions.

Special-Status Species

The No Action Alternative would have no additional adverse effects to special-status species known to occur within the vicinity of the Project Area. Because vegetation management activities are already occurring within the Project Area, the No Action Alternative would not affect special-status species above existing conditions.

Migratory Bird Treaty Act

The No Action Alternative would have no adverse effect on migratory birds above existing conditions, because removal of vegetation, outside of existing, approved, methods would not occur without MBTA nest monitoring.

3.3.2.2 Alternative 2: Proposed Action

Vegetation

Outside of the LBV critical habitat identified within the Project Area, the Proposed Action would permanently impact approximately 143 acres of predominantly non-native vegetation. Within the LBV critical habitat portion of the Project Area (15.99 acres), about a quarter of the area (4.1

acres) contains the appropriate native vegetation suitable for LBV habitat. The Proposed Action would include removal of all the native vegetation suitable for LBV habitat on the east side of the Dairy Mart Bridge, or 2.56 acres of permanent impacts to native vegetation. Communities of discrete non-native vegetation within this area would also be permanently removed. With the Proposed Action, vegetation thinning would have a short-term, moderate, direct *adverse* effect to native vegetation growing on approximately 2.56 acres, whereas the remaining 1.54 acres of native vegetation, on the west side of the bridge, would be allowed to grow in an area where invasive species would be managed, which would be a long-term benefit to the remaining native vegetation. This, when viewed in combination with the permanent management of non-native, invasive species throughout project area, the project as a whole would have moderate, direct *beneficial* effects for the long-term, over 145.05 acres, a considerably larger area. Therefore, the Proposed Action is anticipated to have an overall beneficial effect to the quality of vegetation within the Project Area.

General Wildlife

The Proposed Action would have long-term minor direct adverse impacts on general wildlife species, primarily from the permanent removal of vegetation that provides habitat for these species, including nesting habitat for birds. However, these species have been subject to ongoing clearing activities, and the Proposed Action would change the methods in which these species are affected. Mechanical disking, thinning, herbicide application and related activities (predominantly occurring outside the nesting bird season, see “Migratory Bird Treaty Act” below) are expected to have negligible adverse effects, as wildlife would avoid the impacts while these activities were occurring. The permanent removal of the vegetation would be expected to have a minor adverse effect, since general wildlife species observed or potentially present within the Project Area are common, and suitable habitat of various types exists in relative abundance in the vicinity of the Project Area. Therefore, the Proposed Action is expected to have a negligible effect to common wildlife species with potential to occur in the Project Area.

Federal-Listed Species

LBV is the only Federal-listed species with potential to occur within the Project Area (WRA 2017). The remaining Federal-listed species known to occur within the vicinity are unlikely or have no potential to occur within the Project Area.

The LBV is a summer (breeding) resident in southern California that nests in riparian vegetation, most typically vegetation patches in an early successional state. Nests are usually placed within three feet of the ground³. LBV has been observed singing within the Project Area by WRA biologists. It is therefore possible that LBV nesting occurs within the Project Area where riparian vegetation (e.g., willows, mulefat) is dense and contiguous.

The Proposed Action would permanently remove about 65% of the riparian vegetation within the Project Area, which is expected to have short- and long-term, moderate, direct and indirect adverse effects to LBV due to the removal of suitable nesting habitat. The effect would not exceed the moderate effect threshold since the area that would be affected is not particularly large and was regularly cleared as recently as 2009. Of the 885 acres of critical LBV habitat located within

³ WRA, Inc. 2015. Biological Survey Report. Prepared for U.S. Customs and Border Protection.

the Tijuana River Valley, the Project Area consists of 15.99 acres of critical LBV habitat. Within the project area 4.1 acres contain the appropriate native vegetation suitable for LBV habitat, over half, or 2.56 acres of which are planned for removal⁴. If vegetation removal and subsequent removal of resprouts occurs during the LBV nesting season, there would be potential for the disruption of nesting activities if birds are present, including the harm or destruction of active nests, eggs and/or young. Any such disruption would be considered “take” under the Endangered Species Act. Adult LBVs are unlikely to be injured or killed as a result of the Proposed Action, since they would presumably be able to flee acute disturbances. Thus, riparian vegetation removal and subsequent removal of resprouts during the nesting season may result in short- and long-term, moderate to major, direct and indirect adverse effects to LBV. Additionally, removal within the LBV critical habitat portion of the Project Area may have short- and long-term, minor to moderate, direct and indirect adverse effects to this critical habitat, since vegetation removal/control activities would presumably eliminate about 65% of the potential for LBV nesting within the affected area.

BMP implementation would minimize impacts to LBV habitat in Alternative 2. BMPs would include continued CBP coordination with the appropriate federal agencies, and implementation of species impact minimization and avoidance measures including: conducting advance nest surveys if vegetation removal occurs during nesting season, selection of diseased or less healthy native vegetation for removal, prohibition of any pets within the Project Area, cleaning maintenance equipment prior to entering/departing the Project Area to minimize the spread and establishment of nonnative invasive plant species, and restricting the clearing of native vegetation to occur outside of the breeding season and under the guidance of a qualified biologist.

Mitigation for loss of 2.56 acres of LBV habitat would include purchase of mitigation bank credits at a likely ratio of 3:1, credits to impacts. Other options for mitigation include funding of research or eradication of LBV predators and funding for research on the shot-hole-borer which is currently causing broad declines in riparian vegetation in the Tijuana River Valley and surrounding areas. Formal consultation with the USFWS is ongoing regarding potential impacts to LBV and LBV critical habitat and would be completed prior to implementation of the Proposed Action. The Biological Opinion issued after consultation with the USFWS would likely require mitigation at a ratio of 3:1 for permanent losses to LBV habitat.

Implementation of BMPs and mitigation measures described above would serve to expand LBV habitat at a protected mitigation bank where the scale of habitat preservation would triple that impacted by the project in order to support more reproducing populations of LBV, and where maintenance would be funded for long-term habitat protection. In addition, the existing remaining habitat would benefit from funding made available by the project to research methods to minimize the broad scale impacts currently caused by the Kuroshio shot hole borer affecting LBV habitat in the Tijuana River Basin and to develop/ implement new techniques to limit impacts to riparian vegetation.

⁴ WRA, Inc. 2017. Biological Assessment. Prepared for U.S. Customs and Border Protection.

Special-Status Species

The Proposed Action would decrease availability of low quality riparian habitat and would not result in a trend toward loss of viability of individual species. The Proposed Action may have a minor adverse effect to individuals of special-status species.

Migratory Bird Treaty Act

A variety of bird species protected by the MBTA are expected to nest within the Project Areas. The Proposed Action would remove vegetation within the Project Area and would consequently remove habitat for nesting birds. The thinning of native vegetation would decrease the extent of nesting habitat available within this vegetation. If initial vegetation removal (i.e. thinning and disking) and related activities occur during the nesting bird season (February 15 to September 1), a pre-construction nesting bird survey would be performed to avoid disruption of bird nesting activities. All active nests (for covered species) found during the survey would be protected by respective exclusion buffers in which no project-related work may occur until all young in the nest have fledged or the nest has otherwise become inactive (e.g., due to predation). The size of suitable exclusion buffers would be determined by the biologist(s) conducting the surveys, in consultation with the USFWS. Therefore, with the implementation of pre-construction nesting bird surveys, the Proposed Action would result in negligible effect to migratory birds.

3.3.2.3 Alternative 3

Vegetation

Expected potential effects to vegetation are similar to those described under Alternative 2 above. Outside of the LBV critical habitat identified within the Project Area, Alternative 3 would permanently impact approximately 143 acres of predominantly non-native vegetation. Within the LBV critical habitat portion of the Project Area (approximately 16 acres), Alternative 3 would have limited impacts to discrete non-native vegetation within the willow riparian area that would be permanently removed. This alternative would have limited permanent impacts to native vegetation such as willow trees that would be left intact but trimmed to approximately 10 feet off the ground. As with Alternative 2, the permanent removal of non-native, invasive species would have moderate, direct beneficial effects for the long term. Therefore, Alternative 3 is anticipated to have an overall beneficial effect to the quality of vegetation within the Project Area.

General Wildlife

Expected potential effects to general wildlife are similar to those described under Alternative 2 above. The permanent removal of the vegetation (including willow trimming) would be expected to have a minor adverse effect, since general wildlife species observed or potentially present within the Project Area are common, and suitable habitat of various types exists in relative abundance in the vicinity of the Project Area. The willow trees would remain, but would be trimmed to approximately 10 feet off the ground for Alternative 3. Therefore, Alternative 3 is expected to have a short-term negligible effect to common wildlife species with potential to occur in the Project Area.

⁵ WRA, Inc. 2015. Biological Survey Report. Prepared for U.S. Customs and Border Protection.

Federal-Listed Species

Expected potential effects of Alternative 3 to LBV habitat would be caused by trimming of willows and other native vegetation to a height of 10 feet rather than thinning of about 65% of the native vegetation, as described in Alternative 2. Thus approximately 4.1 acres of LBV nesting habitat, which is 3 feet from the ground, would be eliminated in Alternative 3 from the Project Area, as compared to 2.56 acres, or a 65% reduction, in Alternative 2. Alternative 3 would also remove or trim mulefat and other riparian-affiliated plant species. Because there is viable LBV habitat just to the west of the Project Area, Alternative 3 is expected to have moderate, short- and long-term, direct and indirect, adverse effects to LBV nesting habitat.

As with Alternative 2, if vegetation removal (including willow trimming to 10 feet) occurs during the LBV nesting season, there is potential for the disruption of nesting activities if birds are present, including the harm or destruction of active nests, eggs and/or young. Riparian vegetation removal and alteration during the LBV nesting season is expected to result in short- and long-term, moderate to major, direct and indirect adverse effects to LBV. Additionally, as with Alternative 2, Alternative 3, within the LBV critical habitat portion of the Project Area, is expected to have short- and long-term, moderate, direct and indirect adverse effects to this critical habitat. This alternative would also implement the BMPs and mitigation measures identified in Alternative 2.

Special-Status Species:

Alternative 3 would decrease the available low quality riparian habitat and would not result in a trend toward loss of viability of species. Alternative 3 may have a permanent minor adverse effect to individuals of special-status species.

Migratory Bird Treaty Act

Expected potential effects to species covered under the MBTA are similar to those described under Alternative 2 above. However, willow trees would be trimmed rather than thinning of native vegetation, and thus the riparian vegetation present would be left more intact. The riparian habitat provides the highest overall value to wildlife of any vegetation community present within the Project Area. If initial vegetation removal or alteration occurs during the general nesting bird season, a pre-construction bird survey would be conducted and avoidance measures implemented as described under Alternative 2. Therefore, with the implementation of pre-construction nesting bird surveys, Alternative 3 would have negligible effect to migratory birds.

3.3.2.4 Alternative 4

Vegetation

Expected potential effects to vegetation are similar to those described under Alternative 3 above. Goat grazing would result in similar effects to the riparian vegetation as would the Alternative 3, although the portions of willow trees left relatively intact may be lower to the ground than approximately 10 feet, as would be the case for the proposed trimming. If goat grazing is allowed into the willow riparian habitat, livestock will graze both native and non-native plant species unless they are controlled. Alternative 4 is anticipated to have a short-term adverse effect to the quality of vegetation within the Project Area and a long-term beneficial effect to vegetative quality.

General Wildlife

Expected potential effects to general wildlife are similar to those described under Alternative 2 above. Grazing would presumably result in similar effects to the riparian vegetation as would the proposed trimming, though the portions of willow trees left relatively intact may be lower to the ground (than approximately 10 feet, as would be the case for trimming). Alternative 4 is expected to have a short-term negligible effect to common wildlife species with potential to occur in the Project Area.

Federal-Listed Species

Expected potential effects to LBV for Alternative 4 are similar to those described under Alternative 3 above. Grazing would result in similar effects to the riparian vegetation as would the proposed trimming, since LBVs typically nest within 3 feet of the ground, and grazing would likely result in the removal of this riparian layer. Alternative 4 would potentially have short-term adverse effects to LBV. This alternative would also implement the BMPs and mitigation measures identified to be used under Alternative 2 and Alternative 3.

Special Status Species

Alternative 4 activities may impact individuals but are not likely to result in a trend toward federal listing or loss of viability. Alternative 4 may have a permanent minor adverse effect to individual special-status species.

Migratory Bird Treaty Act

Expected potential effects to species covered under the MBTA are similar to those described under Alternative 2 above. Grazing would presumably result in similar effects to the riparian vegetation as would the proposed trimming, though the portions of willow trees left relatively intact may be lower to the ground (than approximately 10 feet, as would be the case for trimming). If initial vegetation removal or alteration occurs during the general nesting bird season, a pre-construction bird survey would be conducted and avoidance measures implemented as described under Alternative 2. Therefore, with the implementation of pre-construction nesting bird surveys, Alternative 4 would have negligible effect to migratory birds.

3.4 CULTURAL RESOURCES

3.4.1 Affected Environment

Archaeological evidence reveals that San Diego County has a long cultural history beginning approximately 10,000 years ago⁶. A brief summary of the major trends in each of the main periods of occupation is provided below.

Mexican Period (1821-1848)

In 1821, Mexico won its independence from Spain and San Diego became part of the Mexican state of Alta California. The fort on Presidio Hill was abandoned, while the town of San Diego

⁶ Northland Research, Inc. 2015. Cultural Resource Survey, Vegetation Management Plan. Prepared for U.S. Customs and Border Protection

grew up on the level land below Presidio Hill. The Mexican Period includes the initial retention of Spanish laws and practices until shortly before secularization of the missions in 1834, a decade after the end of Spanish rule. Although several grants of land were made prior to 1834, vast tracts of land were dispersed through land grants offered after secularization. Cattle ranching prevailed over agricultural activities, and the development of the hide and tallow trade increased during the early part of this period. The Pueblo of San Diego was established and transportation routes were expanded. The Mexican Period ended in 1848 as a result of the Mexican-American War.⁷

American Period (1848 to Present)

The American Period began when Mexico ceded California to the United States under the Treaty of Guadalupe Hidalgo. Terms of the treaty brought about the creation of the Lands Commission, in response to the Homestead Act of 1851 that was adopted as a means of validating and settling land ownership claims throughout the state. Few Mexican ranchos remained intact because of legal costs and the difficulty of producing sufficient evidence to prove title claims. Much of the land that once constituted rancho holdings became available for settlement by immigrants to California. The influx of people to California and the San Diego region resulted from several factors including the discovery of gold in the state, the conclusion of the Civil War, the availability of free land through passage of the Homestead Act, and later, the importance of San Diego County as an agricultural area supported by roads, irrigation systems, and connecting railways. The growth and decline of towns occurred in response to an increased population and the economic boom and bust. San Diego is currently the eighth-largest city in the United States and second-largest in California. San Diego is the birthplace of California and is known for its mild year-round climate, natural deep-water harbor, extensive beaches, a long association with the U.S. Navy, and recent emergence as a healthcare and biotechnology development center.⁸

Cultural Resources Survey

No cultural resources were located during a cultural resources survey of the Project Area completed by Northland Research Inc. (Northland 2015). The 2014 Programmatic Agreement (PA) states that the CBP would satisfy all requirements pursuant to Section 106 for identified undertakings. Pursuant to Section VI of the PA, this undertaking would be considered exempt and require no further review.⁹ Though ground visibility was limited during the survey, frequent flooding of the Tijuana River Valley has severely altered the Project Area. Flood deposits, including modern trash, blanket the Project Area to a depth of more than two feet. Further, frequent floods that have impacted the Project Area, both historically and throughout the modern era, have effectively scoured any evidence of earlier occupations of the Project Area. Moreover, past vegetation clearing activity—that included mechanical disking—has further impacted the ability to recognize any possible in situ cultural resources that may have been within the Project Area.

⁷ Ibid.

⁸ Ibid.

⁹ U.S. Customs and Border Protection. 2014. *Programmatic Agreement Regarding CBP Undertakings in States Located Along the Southwest Border of the United States*. Federal, State and Tribal agreement signed September 2014.

3.4.2 Environmental Consequences

Adverse effects on cultural resources can include physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; introducing visual or audible elements that are out of character with the property or that alter its setting; neglecting the resource to the extent that it deteriorates or is destroyed; or the sale, transfer, or lease of the property out of agency ownership (or control) without adequate legally enforceable restrictions or conditions to ensure preservation of the property's historic significance. Vegetation clearing and potential ground-disturbing activities associated with the implementation of the Proposed Action constitute the most relevant potential impact on cultural resources.

3.4.2.1 Alternative 1: No Action Alternative

Under the No Action Alternative, existing methods of vegetation control would be utilized; therefore, no new impacts to cultural resources would occur within the Project Area.

3.4.2.2 Alternative 2: Proposed Action

Under the Proposed Action, CBP would thin native vegetation to about 65% of the current density (mostly woody willows and mulefat). The Proposed Action would also remove over half the native vegetation suitable for LBV habitat, or 2.56 acres of permanent impacts to native vegetation on the east side of Dairy Mart Road Bridge. Communities of discrete non-native vegetation within this area would also be permanently removed. The remaining 2.56 acres of native vegetation, on the west side of the bridge, would be allowed to grow in an area where invasive species would be managed. Herbicides would also be applied. These activities are not anticipated to cause new impacts to cultural resources beyond those that already occur, as the extent of ground disturbing activities would not be significantly expanded. Coordination letters were sent to Native American tribes and the Native American Heritage Commission. Based on the findings of the records review, site survey, and coordination, CBP has made a determination of no historic properties present or affected for the Proposed Action. Furthermore, CBP has determined that, in accordance with Stipulation IV of the *Programmatic Agreement Regarding CBP Undertakings in States Located along the Southwest Border of the United States*, (CBP 2014) this undertaking is within the scope of Stipulation VI.D.3 and is therefore exempted from further review. No further consultation with Native American tribes or the California State Historic Preservation Officer (SHPO) is required at this time.

Furthermore, if important previously unidentified cultural resources are encountered, the contractor would stop all ground disturbing activities in the vicinity of the discovery until officials from CBP, the IBWC, and the California Office of Historic Preservation (OHP) are notified and the nature and significance of the find can be evaluated. If human remains are encountered during construction activity, construction would stop and the OHP would also be notified per the Native American Graves Protection and Repatriation Act, and the California Public Resources Code Section 5097.98., and appropriate tribal organizations would be consulted. Thus no impacts to cultural resources in the Project Area are expected.

3.4.2.3 Alternative 3

Under Alternative 3, CBP would prune native willows and remove new growth below approximately 10 feet in height up to 200 yards downstream of the Dairy Mart Road Bridge to maintain visual access. Herbicides would also be applied. These activities are not anticipated to

cause new impacts to cultural resources beyond those that already occur, as the extent of ground disturbing activities would not be significantly expanded.

The addition of utilizing herbicides would have no adverse impact on the extent of ground disturbing activities; therefore, no new impacts to cultural resources would occur within the Project Area.

3.4.2.4 Alternative 4

Alternative 4 involves the addition of utilizing herbicides and grazing techniques within the Project Area. The addition of herbicides and grazing would have no adverse impact on the extent of ground disturbing activities; therefore, no new impacts to cultural resources would occur within the Project Area.

3.5 GROUNDWATER

3.5.1 Affected Environment

Depending on stream flow, accumulated rainfall, and groundwater pumping, water table elevations vary from year to year and between wet and dry seasons. Sustained high rates of groundwater extraction during the 1950s resulted in a decline in groundwater levels of 23 to 30 feet or more in the Tijuana River Valley. By the early 1960s, groundwater table elevations across much of the valley had fallen below sea level, resulting in the intrusion of seawater and highly saline groundwater from underlying and adjacent marine sediments into the alluvial aquifer (Rempel 1992). By 1967, seawater intrusion had affected most wells up to the United States-Mexico border. This saltwater degradation of the aquifer contributed to the declining demand for groundwater from the Tijuana River Valley. As rates of natural recharge exceeded rates of consumption, the resulting annual surplus of water began to overcome years of accumulated deficits, and water levels began recovering (USIBWC 2007).

Groundwater in the Tijuana River Valley is characterized by high levels of sodium chloride and total dissolved solids. These high salinity levels prevent the current use of well water for the irrigation of salt-sensitive crops cultivated within the valley. As a result of lowered groundwater levels and seawater intrusion, groundwater total dissolved solids concentrations along the coast have exceeded 27,000 milligrams per liter (mg/L) (concentration generally ranges between 1,000 and 1,500 mg/L) (USIBWC 2007). In the Department of Water Resources Bulletin 106-2 (State of California 1967), the Tijuana River Valley groundwater was rated generally inferior for domestic use because of its high sulfate and high fluoride concentrations. It was also rated generally inferior for irrigation purposes because of high electrical conductivity, high chloride levels, and high percentage of sodium in the vicinity of Spooner's Mesa. In addition to seawater intrusion problems, the poor quality of the groundwater is also attributed to sodium chloride leaking from the San Diego Formation, irrigation return, and groundwater movement from beyond the international boundary (USEPA 1988).

3.5.2 Environmental Consequences

3.5.2.1 Alternative 1: No Action Alternative

Under the No Action Alternative, CBP would continue current maintenance activities. Because these maintenance activities would occur entirely within the previously disturbed areas, no new effects to groundwater would be anticipated as a result of the No Action Alternative.

3.5.2.2 Alternative 2: Proposed Action

The recharge potential of the Lower Tijuana River aquifer would not change as a result of Alternative 2. Potential effects to groundwater quality could come from herbicides leaching through the soils into groundwater. BMPs outlined in **Sections 5.4 and 5.7** would limit the potential effects on groundwater resources.

There are three physical properties which, when combined with site conditions such as climate and geology, determine the leaching potential of a herbicide. They are:

- **Persistence** - Persistence is the length of time a chemical stays active. It is measured by its half-life. The longer the half-life of a chemical, the more persistent it is. The half-life is affected by many variables, including sunlight, microorganisms, chemical degradation, etc.
- **Soil Adsorption** - Soil adsorption is the tendency of a chemical to bind to soil particles. Soil adsorption is expressed as: $K(oc) = \text{conc. adsorbed} / \text{conc. dissolved} / \text{percent organic carbon in soil}$.
- **Solubility** - Solubility is the tendency of a chemical to dissolve in water. Solubility is expressed as the amount of a chemical dissolved in a known amount of water measured in mg/l (ppm).

Herbicides have to be relatively persistent in order to have potential for leaching (non-persistent herbicides do not stay active long enough to create a risk). If an herbicide has a high soil adsorption, it is more likely to run off with soil movement. If it has low soil adsorption, it is more likely to leach down through the soil. Even if an herbicide has leaching potential, the likelihood of it reaching a water body also depends on site characteristics such as climate and geology. Application technique can also have a slight impact on leaching and runoff potential. Applications that are applied to an area (broadcast and aerial techniques) tend to also have herbicide applied to soils and are more likely to leach than techniques that apply herbicide to the plant only (spot or localized techniques).

Herbicides used at the level and intensity typical for giant reed vegetation control do not tend to pose substantial risks of leaching into groundwater. Furthermore, San Diego County receives low levels of precipitation, approximately 9.9 inches a year.¹⁰ The application of herbicides as part of the Proposed Action would directly apply the herbicide to the plant, limiting the potential for leaching. Overall, current aquifer conditions are likely to continue in the future in terms of aquifer recharge and water quality.

3.5.2.3 Alternative 3

Expected potential effects to groundwater are similar to those described under Alternative 2

¹⁰ San Diego County Water: Rainfall, Authority <http://www.sdcwa.org/rainfall>

above. Herbicide application would be performed in the same manner under both alternatives.

3.5.2.4 Alternative 4

Alternative 4 would have the same effects as Alternative 2 in regards to herbicide application. The addition of grazing techniques within the Project Area would have no effect on groundwater recharge or water quality.

3.6 HAZARDOUS MATERIALS AND WASTE MANAGEMENT

3.6.1 *Affected Environment*

3.6.1.1 Herbicides

All herbicides sold or distributed in the United States must be registered by the USEPA. This means that the USEPA must conclude that the particular agent in question can be used without posing unreasonable risks to people or the environment, based on scientific evidence. Current law also mandates that older registered herbicides be reregistered based on advances in scientific knowledge.

USEPA lists recently reregistered herbicides in a Reregistration Eligibility Decision. USEPA also imposes these regulations by including controls for proper use, safety requirements, toxicity data, and application on container labels to direct the proper use of an herbicide. It is illegal not to follow label instructions and restrictions.

3.6.2 *Environmental Consequences*

3.6.2.1 Alternative 1: No Action Alternative

No impacts would occur related to hazardous materials and waste management upon implementation of the No Action Alternative as no changes to existing conditions would occur under this alternative.

3.6.2.2 Alternative 2: Proposed Action

The concern with herbicide application is accidental exposure to the compounds (herbicides, carriers, dyes, and adjuvants). Exposure can occur from being accidentally sprayed, from entering areas soon after treatment, within 72 hours of application¹¹ (eating berries or other foods collected from the right-of-way, touching sprayed vegetation), drinking contaminated water, or accidental exposure to downwind drift. However, Glyphosate has poor absorption rates through skin.¹²

Short-term effects of excessive exposure to herbicides include nausea, dizziness, or reversible abnormalities of the nervous system (reversible neuropathy). In extreme cases of prolonged, repeated, and excessive exposure (resulting from careless and/or negligent work habits), longer-term health problems can result, including: organ damage, immune system damage, permanent

¹¹ National Pesticide Information Center Technical Factsheet on: GLYPHOSATE, <http://npic.orst.edu/factsheets/glyphotech.pdf>

¹² *Ibid.* 3

nervous system damage, production of inheritable mutations, damage to developing offspring, and reduction of reproductive success.

Occupational exposure to herbicides varies with the method of application. The greatest risk occurs when the worker must directly handle and/or mix chemicals. Spot and localized herbicide applications including use of backpack sprayers, aerial mixers/loaders, and stem injection require the most hands-on use of herbicides and, therefore, carry the greatest risk of exposure (and require the greatest amount of worker precaution and use of safety equipment, such as respirators). Under all application categories, workers can be exposed to herbicides from accidental spills, splashing, leaking equipment, contact with the spray, or by entering treated areas. Exposure can occur either through skin or through inhalation. Adherence to operational safety guidelines, use of protective clothing, equipment checks, and personal hygiene can prevent incidents from occurring. BMPs outlined in **Section 5.7** would ensure that no adverse effect would occur from using hazardous materials.

Misapplications and spills are caused by failure of the applicator to follow label instructions and restrictions and by applicator carelessness. Most experts agree that misapplications and spills are the leading cause of impacts on non-target resources. The impacts of herbicide spills would depend on the persistence and mobility of the spill, as well as on how quickly and thoroughly a spill is cleaned up. BMPs outlined in **Section 5.7** would ensure that no adverse effect would occur from misapplication or spills.

3.6.2.3 Alternative 3

Expected potential effects to hazardous materials and waste management are similar to those described under Alternative 2 above. Herbicide application would be performed in the same manner under both alternatives.

3.6.2.4 Alternative 4

Alternative 4 would have the same effects as Alternative 2 in regards to herbicide application. The addition of grazing techniques within the Project Area would have no effect on hazardous materials and waste management.

3.7 SURFACE WATERS AND WATERS OF THE UNITED STATES

3.7.1 Affected Environment

3.7.1.1 Clean Water Act Section 401

Section 401 of the Clean Water Act (CWA) requires the acquisition of a Federal license or permit for any action that could potentially result in discharge into navigable waters prior to the start of the proposed action. Procurement of such permit requires proof of certification from the state in which the discharge will originate. Certification of the state will require that all effluents will comply with applicable sections of 301, 302, 303, 306 and 307 of the CWA. These sections reference water quality standards centered on effluent limitations and toxic pollutants. Several alternatives involve herbicide application within the project site as a method of vegetation control, which could potentially effect water quality. As the project site is a potential Section 404 Waters and its associated floodplain contains two kinds of potential Section 404 Wetlands, an Aquatic Pesticide Application Plan should be prepared.

3.7.1.2 Clean Water Act Section 404

Section 404 of the CWA gives the USEPA, RWQCB, and the Corps regulatory and permitting authority regarding discharge of dredged or fill material into “navigable waters of the United States.”¹³ Section 502(7) of the CWA defines navigable waters as “waters of the United States, including territorial seas.” Section 328 of Chapter 33 in the CFR defines the term “waters of the United States” as it applies to the jurisdictional limits of the authority of the Corps under the CWA. A summary of this definition of “waters of the U.S.” in 33 CFR 328.3 includes (1) waters used for commerce; (2) interstate waters and wetlands; (3) “other waters” such as intrastate lakes, rivers, streams, and wetlands; (4) impoundments of waters; (5) tributaries to the above waters; (6) territorial seas; and (7) wetlands adjacent to waters. The limits of Corps jurisdiction under Section 404 of the CWA as given in 33 CFR Section 328.4 are as follows: (a) *Territorial seas*: three nautical miles in a seaward direction from the baseline; (b) *Tidal waters of the U.S.*: high tide line or to the limit of adjacent non-tidal waters; (c) *Non-tidal waters of the U.S.*: ordinary high water mark (OHWM) or to the limit of adjacent wetlands; (d) *Wetlands*: to the limit of the wetland.

3.7.1.3 California Coastal Commission

The California Coastal Act (CCA) defines wetlands as:

Wetland means lands within the Coastal Zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.

Public Resources Code Section 30121

California Coastal Commission (CCC) Administrative Regulations (Section 13577 (b)) provide a more explicit definition:

Wetlands are lands where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent or drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salt or other substance in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deepwater habitats.

The CCC considers this definition as requiring the observation of one diagnostic feature of a wetland, such as wetland hydrology, dominance by wetland vegetation (hydrophytes), or presence of hydric soils, as a basis for asserting jurisdiction under the CCA.

¹³ The addition of fill materials into navigable waters of the United States is not a specific element of the Proposed Action and Section 401/404 permits may not be necessary to implement the Proposed Action, however this determination is pending approval from USACE and the RWQCB.

3.7.1.4 California Department of Fish & Wildlife Code Section 1602

The Project Area is located on Federal Lands owned by the IBWC and is managed by CBP. Projects undertaken on federal land and managed by federal agencies are not required to follow CDFW Section 1602 jurisdiction. Issues related to CDFW Section 1602 are not discussed again in this analysis.

Based on the findings of the wetland delineation, the Project Area contains approximately 68.43 acres of potential jurisdictional wetlands and 11.79 acres of potential Jurisdictional Waters of the United States. The Tijuana River is a potential Section 404 Waters and its associated floodplain contains two kinds of potential Section 404 Wetlands: Seasonal floodplain wetland (managed/herbaceous) and Seasonal floodplain wetland (forested/shrub). Figure 5 provides a map of these areas and Table 2 details the acreages. The floodplain wetlands contained indicators of wetland vegetation, hydrology and soils. The Tijuana River displayed an OHWM and is linked to “navigable waters of the U.S.” (Pacific Ocean) and therefore is potentially jurisdictional under Section 404 of the CWA (WRA 2014).

Table 2. Potential CWA Section 404 Jurisdictional Areas

Potentially Jurisdictional Features	Acres (Linear Feet)
<i>Waters</i>	
Tijuana River channel	11.79 (9,725 l.f.)
<i>Wetlands</i>	
Seasonal floodplain wetland (managed/herbaceous)	63.06
Seasonal floodplain wetland (forested/shrub)	5.37
TOTAL	80.22 (9,725 l.f.)

Wetlands Vegetation Summary

For the purposes of the wetland delineation, a simple division of the vegetation in the wetlands of the Project Area was made below. Figure 5 shows these two areas: inside the LBV critical habitat and outside it.

Seasonal Floodplain Wetland (managed/herbaceous)

The majority of the Tijuana River floodplain within the Project Area was classified as seasonal floodplain wetland (managed/herbaceous). It is dominated by non-native emergent herbaceous vegetation. The majority of the vegetation in this section is mowed and disked, effectively eliminating shrub and tree stratum.

Seasonal Floodplain Wetland (forested/shrub)

Within the LBV critical habitat, native woody vegetation has not been controlled to the same level as that of the area upstream. The vegetation within this critical habitat consists of tall stands of

giant reed, mulefat, willow species, and a sparse herbaceous understory. Large stands of giant reed and herbaceous understory vegetation are controlled by frequent mechanical control (mowing) within this area. This area is dominated by native riparian vegetation (willows and mulefat). The vegetation control program in place prevents the cutting of native trees and shrubs within this area in order to provide potential nesting and foraging habitat for the LBV, a Federal- and State-listed endangered species. This reduction in mowing and vegetation control allows native riparian vegetation to develop.

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Tijuana River
Vegetation
Control EA

San Diego County,
California

Figure 5.

Preliminary Section
404 Jurisdictional
Features and
California Coastal
Commission
Jurisdictional Areas



Legend

- Least Bell's Vireo Critical Habitat (15.99 acres)
- Project Area
- Control Point

Data Points

- Wetland Data Points
- Upland Data Points

Potential Section 404 and California Coastal Commission Jurisdictional Areas

Waters

- Tijuana River (11.79 acres; 8,519 linear ft.)
- Seasonal Floodplain Wetland (forested/shrub) (5.37 acres)
- Seasonal Floodplain Wetland (managed/herbaceous) (63.06 acres)

Wetlands

- Seasonal Floodplain Wetland (managed/herbaceous) (63.06 acres)

Flood Control

- Concrete (6.55 acres)

N
W —+— E
S

0 500 1,000 Feet

Map Prepared Date: 5/4/2017
Map Prepared By: Scott Mortensen
Base Source: USGS EROS 2013
Data Source(s): WRA

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3.7.2 Environmental Consequences

3.7.2.1 Alternative 1: No Action Alternative

Under the No Action Alternative, existing methods of vegetation control would be utilized; therefore, no new impacts to Surface Waters and Waters of the United States would occur within the Project Area.

3.7.2.2 Alternative 2: Proposed Action

Pertinent federal and state permits and certifications would be obtained for any work that would occur in jurisdictional drainages within the Project Area. The estimated acres of Waters of the United States that may be adversely affected by the Proposed Action are 80.22 acres (9,725 l.f.). Short-term, negligible to minor, direct, adverse impacts would occur to Surface Waters and Waters of the United States from the application of herbicides, tree trimming and disking within the Project Area. Proper maintenance of equipment and the use of BMPs during construction activities would minimize the possibility of accidental spills of petroleum, oil, and lubricants that, if they occurred, could affect surface water and groundwater quality. The application of herbicides as part of the Proposed Action would directly apply the herbicide to the plant, limiting the potential for runoff into jurisdictional waters.

Standard BMPs listed in **Section 5.4** would be adopted to maintain water quality in jurisdictional waters and would minimize the potential for adverse effects.

3.7.2.3 Alternative 3

Expected potential effects to Surface Waters and Waters of the United States are similar to those described under Alternative 2 above. Herbicide application would be performed in the same manner under both alternatives.

3.7.2.4 Alternative 4

Expected potential effects to Surface Waters and Waters of the United States are similar to those described under Alternative 2 above. Herbicide application would be performed in the same manner under both alternatives. The addition of grazing techniques within the Project Area could create a new potential adverse impact if grazing animals are not kept out of jurisdictional water areas. BMPs listed in **Section 5.4** would ensure that all grazing animals are effectively screened from accessing these areas. Therefore, an adverse effect is not anticipated.

3.7.2.5 Identification of the Preferred Alternative

CBP has identified its Preferred Alternative as Alternative 2.

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4.0 CBP HAS IDENTIFIED ITS PREFERRED ALTERNATIVE AS ALTERNATIVE 2.CUMULATIVE IMPACTS

NEPA regulations define cumulative impacts as an “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR 1508.7). Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time by various agencies (federal, state, and local) or individuals. Informed decision making is served by consideration of cumulative impacts resulting from activities that are proposed, under construction, recently completed, or anticipated to be implemented in the reasonably foreseeable future.

This cumulative impacts analysis summarizes expected environmental effects from the combined impacts of past, current, and reasonably foreseeable future activities that affected, affect, or will affect any part of the human or biological environment impacted by the Proposed Action. Activities were identified for this analysis by reviewing CBP documents, news/press releases and published media reports, and through consultation with planning and engineering departments of local governments, and state and federal agencies.

4.1 U.S. CUSTOMS AND BORDER PROTECTION PROJECTS

USBP has been conducting law enforcement actions along the U.S/Mexico border since its inception in 1924, and has continually transformed its methods as new missions, cross-border violators’ modes of operations, agent needs, and National enforcement strategies have evolved. Development and maintenance of training ranges, station and sector facilities, detention facilities, and roads and fences have affected hundreds of acres of resources in southern California, including the climate and landscapes that support native plants and animals, as well as socioeconomic conditions in border communities.

All CBP actions have been in support of the agency’s mission to gain and maintain control of the United States’ borders. Infrastructure projects have supported the operational methods determined to be the most effective approach to achieving the agency’s mission. Each of these projects has been compliant with NEPA, or subject to a waiver of NEPA and other environmental laws by the Secretary of DHS pursuant to Section 102(c) of the Illegal Immigration Reform and Immigrant Responsibility Act. Measures to avoid, minimize, or mitigate for the adverse effects on the human and natural environment have been developed and implemented on a project-specific basis. With continued funding and implementation of BMPs developed as part of past, ongoing, and future actions, including environmental education and training of its agents, use of biological, water quality and archaeological monitors, and restoration activities, the direct impacts of these projects have been and would be prevented or minimized.

4.2 PRIVATE/OTHER AGENCY/ORGANIZATION PROJECTS

Two projects have been identified as either ongoing or proposed near the Project Area that could have a cumulative impact when combined with the Proposed Action Alternative, including:

- **USIBWC EA for the Rehabilitation of the TFCP Levee System.** Currently the EA is being prepared for a project that would improve the levee on the north side of the Vegetation Control project area, including the following project components.
 - North Levee enlargement – increase the height of the levee upstream of Dairy Mart Road for about 2,250 feet by placing embankment fill on the top and the landside slope of the existing levee.
 - North Levee embankment protection – place buried riprap below the riverside toe in a localized area near the 90-degree bend in the levee.
 - Rodent burrow repair and mitigation – repair damaged levees and prevent additional burrowing of rodents.
 - Removal of sediment and debris – remove sediment and debris from the concrete-lined portion of the low flow channel.
- **Tijuana River Valley Wetlands Mitigation Project, Under Construction:** 40-acre mitigation project in old agricultural field in Tijuana River Valley close to and downstream of Dairy Mart Bridge by the San Diego Water Quality Authority.

4.3 IDENTIFICATION OF CUMULATIVE EFFECTS ISSUES

Impacts on each resource can vary in degree or magnitude from a slightly noticeable change to a total change in the environment. For the purpose of this analysis, the intensity of impacts will be classified as negligible, minor, moderate, or major. These intensity thresholds were previously defined in **Section 3.1**.

4.3.1 Aesthetics and Visual Resources

Actions that cause the permanent loss of the characteristics that make an area visually unique or sensitive would be considered to cause a major impact. No major impacts on visual resources would occur from implementing the Proposed Action, due in part to the nature of Proposed Action (i.e., vegetation thinning, herbicide application, and disking). While the Tijuana River Valley Wetlands Mitigation Project is located within the same viewshed as the Proposed Action, it is dispersed sufficiently enough to not contribute to an adverse cumulative aesthetics impact. Furthermore, as a restoration project it would provide a net benefit to cumulative aesthetics in the region.

4.3.2 Biological Resources

Cumulative development contributes to an incremental reduction in the amount and connectivity of existing natural communities and wildlife habitat. BMPs in **Sections 5.2-5.7** recommended to mitigate the Proposed Action's potential impacts on sensitive natural resources would address the project's contribution to cumulative impacts. Some species may disperse through the habitat on the Project Area, but most wildlife presently using the site do so as part of their normal movements for foraging, mating, and caring for young. However, given the limited nature of potential impacts discussed below, cumulative impacts would be considered negligible to minor.

Vegetation

Overall, vegetation thinning would have a minor adverse effect to native vegetation, whereas the permanent removal of vegetation dominated by non-native, invasive species would have a moderate beneficial effect. Therefore, cumulative impacts on vegetation would be considered negligible to minor.

General Wildlife

The removal of vegetation, and hence wildlife habitat, would occur on approximately 143 acres of predominantly non-native vegetation. General wildlife species observed or potentially present within the Project Area are common, and suitable habitat of various types exists in relative abundance in the vicinity of the Project Area. Therefore, cumulative impacts on general wildlife would be considered negligible to minor.

Federal-Listed Species

A major impact on special status species would occur if a substantial reduction in ecological processes, communities, or populations that would threaten the long-term viability of a species or result in the substantial loss of a sensitive community that could not be offset or otherwise compensated. Of these species, all are unlikely or have no potential to occur within the Project Area with one exception, the LBV (WRA 2017). The permanent removal and/or routine trimming of riparian vegetation within the Project Area may have potential for short- and long-term, negligible to moderate, direct and indirect adverse effects to LBV due to the removal of suitable nesting habitat. These effects are not expected to exceed the moderate effect threshold since the area to be effected is not particularly large and is adjacent to the Tijuana River Valley Regional Park which has large areas of riparian habitat suitable for LBV. Therefore, when the Proposed Action Alternative is combined with the other projects in the vicinity, moderate cumulative impacts on special status species would occur.

Migratory Bird Treaty Act

A major impact on species protected by the MBTA would occur if a substantial reduction in ecological processes, communities, or populations that would threaten the long-term viability of a species or result in the substantial loss of a sensitive community that could not be offset or otherwise compensated. A variety of bird species protected by the MBTA are expected to nest within the Project Area. Potential effects to these species are expected to be short- and long-term, negligible to moderate, direct and indirect, adverse effects. The permanent removal of vegetation and within the Project Area would remove habitat for virtually all nesting birds. The thinning of native vegetation to about 65% of the current density would limit the extent and quality of nesting habitat available within these willows, though would not completely eliminate it. If vegetation removal and related activities must occur during the nesting bird season, a pre-construction nesting bird survey would be performed to minimize impacts on migratory birds. Therefore, when the Proposed Action Alternative is combined with the other projects in the vicinity, negligible cumulative impacts on migratory birds would occur.

4.3.3 Cultural Resources

The Proposed Action would not affect cultural resources or historic properties. Therefore, this action, when combined with other existing projects in the vicinity in the region, would result in a negligible cumulative impact on cultural resources or historic properties.

4.3.4 Groundwater

The implementation of BMPs would reduce the potential for leaching to occur during the Proposed Action. In the Department of Water Resources Bulletin 106-2 (State of California 1967), the Tijuana River Valley groundwater was rated generally inferior for domestic use because of its high sulfate and high fluoride concentrations. It was also rated generally inferior for irrigation purposes because of high electrical conductivity, high chloride levels, and high percentage of sodium in the vicinity of Spooner's Mesa. In addition to seawater intrusion problems, the poor quality of the groundwater is also attributed to sodium chloride leaking from the San Diego Formation, irrigation return, and groundwater movement from beyond the international boundary (USEPA 1988). Therefore, when the Proposed Action is combined with the other projects in the vicinity, negligible cumulative impacts on groundwater would occur.

4.3.5 Hazardous Materials

The Proposed Action includes measures to reduce the potential effects of pollutants associated with the handling of hazardous materials, and would have a minor cumulative effect on hazardous waste.

4.3.6 Surface Waters and Waters of the United States

Surface Waters and Waters of the United States could be affected cumulatively through increased surface water runoff and water temperatures, reduced nutrients in water, potential groundwater and surface water contamination, and potential wetland degradation. BMPs listed in **Section 5.4 and 5.7** would limit the potential for an adverse effect to occur. Binational initiatives currently underway to improve water quality of the Tijuana River upstream of the international border are expected to reduce sewer overflows, considered a major component of contaminant load reaching the Tijuana River estuary, and improve storm water quality by upstream watershed control of non-point pollution sources (USIBWC 2005). Therefore, when the Proposed Action is combined with the other projects in the vicinity, negligible to minor cumulative impacts on Surface Waters and Waters of the United States would occur.

5.0 SUMMARY OF MITIGATION MEASURES AND BEST MANAGEMENT PRACTICES

It is CBP's policy to reduce impacts through a sequence of avoidance, minimization, mitigation, and compensation. This chapter describes those measures that would be implemented to avoid, reduce, eliminate or mitigate potential adverse impacts on the human and natural environment. Many of these measures have been incorporated as standard operating procedures by CBP on past projects. BMPs are presented for each resource category potentially affected.

5.1 PROJECT PLANNING/DESIGN – GENERAL CONSTRUCTION

CBP would ensure that all construction would follow DHS Directive 025-01 for Sustainable Practices for Environmental, Energy, and Transportation Management.

CBP would incorporate BMPs relating to Project Area delineation, water sources, waste management, and site restoration into project planning and implementation for construction and maintenance.

5.2 GENERAL CONSTRUCTION ACTIVITIES

Within the designated disturbance area, CBP would minimize the area to be disturbed by limiting deliveries of materials and equipment to only those needed for effective project implementation.

CBP would avoid contamination of ground and surface waters by storing any water that has been contaminated with construction materials, oils, equipment residue, etc., in closed containers on-site until removed for disposal. This wash water is toxic to wildlife. Storage tanks must have proper air space (to avoid rainfall-induced overtopping), be on-ground containers, and be located in upland areas.

In the event that CBP contaminates soil or water resources as a result of the Proposed Action, the contaminated soil or water would be remediated as per DHS requirements.

CBP would place drip pans under parked equipment and establish containment zones when refueling vehicles or equipment.

5.3 BIOLOGICAL RESOURCES

The following BMPs would apply for Biological Resources:

- Apply all appropriate minimization and avoidance measures outlined in the Section 5.4 Surface Waters and Waters of the United States.
- Coordinate with the appropriate federal agency for potential impacts on and appropriate minimization and avoidance measures for species.
- If clearing activities are scheduled during nesting season (February 15 through September 1), surveys would be performed to identify active nests. If an active nest is found, a buffer would be established and the nest avoided or CBP would consult with USFWS.
- CBP would not, for any length of time, permit any pets inside the Project Area or adjacent native habitats. This BMP does not pertain to law enforcement animals.
- Maintenance equipment would be cleaned prior to entering and departing Project Areas to minimize the spread and establishment of nonnative invasive species.
- Clearing of native vegetation would take place outside of the breeding season and under the guidance of a qualified biologist. Contractor to consult with CBP to ensure that

adequate sight lines are created to ensure CBP is better able to fulfill its mission efficiently and safely.

The goals of mitigation are to replace the lost habitat so as to minimize impacts to LBV and to fund research and eradication of the Kuroshio shot hole borer which is causing broad scale impacts to LBV habitat in the area.

The following mitigation measures would also apply to Biological Resources.

- Mitigation bank credits would be acquired to offset permanent impacts to native habitat at a 3:1 ratio at an approved mitigation bank within the San Diego area, and/or
- Funding as determined in consultations with the USFWS would be provided for Kuroshio shot hole borer research and eradication.

Implementation of BMPs and mitigation measures described above would serve to expand LBV habitat at a protected mitigation bank where the scale of habitat preservation would triple that impacted by the project in order to support more reproducing populations of LBV, and where maintenance would be funded for long-term habitat protection. In addition, the existing remaining habitat would benefit from funding made available by the project to research methods to minimize the broad scale impacts currently caused by the Kuroshio shot hole borer affecting LBV habitat in the Tijuana River Basin and to develop/ implement new techniques to limit impacts to riparian vegetation. .

5.4 SURFACE WATERS AND WATERS OF THE UNITED STATES

To protect Surface Waters and Waters of the United States, CBP would comply with all conditions pursuant to Section 401 of the Clean Water Act (CWA), would prepare required plans and acquire all necessary permits and certifications. All beneficial uses of surface water would be protected with standard BMPs, such as erosion control and water quality protection measures during construction to minimize the potential for impacts to Surface Waters and Waters of the United States. CBP would work under the Corp's Regional General Permit to remove vegetation from waters of the United States.

CBP would comply with the General NPDES Permit for Residual Aquatic Pesticide Dischargers from Algae and Aquatic Weed Control Applications issued by the State Water Resources Control Board as Water Quality Order No. 2013-0002-DWQ, General Permit No. CAG990005. (State of California 2013). Consistent with the requirements of the NPDES, CBP would prepare and implement an Aquatic Pesticide Application Plan (APAP) designed to reduce impacts to surface water quality during project implementation.

5.5 CULTURAL RESOURCES

Should any archaeological artifacts be found during implementation of the Proposed Action, an appropriate CBP archaeologist or cultural resources specialist shall be notified immediately. All work would cease until an evaluation of the discovery is made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values.

5.6 NOISE

All applicable OSHA regulations and requirements would be followed. On-site activities would be restricted to daylight hours, to the greatest extent practicable. All equipment would possess properly working mufflers and would be kept properly tuned to reduce backfires.

5.7 HAZARDOUS MATERIALS

As stated in **Section 5.4**, CBP would work with the General NPDES Permit for Residual Aquatic Pesticide Dischargers from Algae and Aquatic Weed Control Applications issued by the State Water Resources Control Board as Water Quality Order No. 2013-0002-DWQ, General Permit No.CAG990005 (State of California 2013).

The NPDES APAP may include but is not limited to the following BMPs, which would be implemented as standard operating procedures during all vegetation removal activities, and would include proper handling, storage, and/or disposal of hazardous and/or regulated materials.

1. To minimize potential impacts from hazardous and regulated materials, all fuels, waste oils, and solvents would be collected and stored in tanks or drums within a secondary containment system that consists of an impervious floor and bermed sidewalls capable of containing the volume of the largest container stored therein. The refueling of machinery would be completed in accordance with accepted industry and regulatory guidelines, and all vehicles would have drip pans during storage to contain minor spills and drips. Although it is unlikely that a major spill would occur, any spill of reportable quantities would be contained immediately within an earthen dike, and the application of an absorbent (e.g., granular, pillow, sock) would be used to absorb and contain the spill.
2. CBP would ensure that all herbicide applicators have received training and are licensed in appropriate application categories.
 - a. CBP would follow all herbicide and material safety data sheet instruction regarding worker safety standards. These include the following:
 - b. Wear appropriate protective equipment;
 - c. Do not eat, drink, or smoke when handling herbicides;
 - d. Avoid spilling herbicides on skin or clothing (promptly change any clothing substantially contaminated by a herbicide);
 - e. Cleaning and wash protective equipment daily;
 - f. Have ready access to clean water and first aid supplies;
 - g. Have access to emergency medical facilities;
 - h. Observe specified restricted entry intervals; and
 - i. Use self-contained herbicide handling equipment when appropriate and available to reduce worker exposure during herbicide mixing and handling.
3. CBP would contain non-hazardous waste materials and other discarded materials, such as construction waste, until removed from the construction and maintenance sites. This would assist in keeping the Project Area and surroundings free of litter and reduce the amount of disturbed area needed for waste storage.

4. CBP would minimize site disturbance and avoid attracting predators by promptly removing waste materials, wrappers, and debris from the site. Any waste that must remain more than 12 hours should be properly stored until disposal.
5. All waste oil and solvents would be recycled. All non-recyclable hazardous and regulated wastes would be collected, characterized, labeled, stored, transported, and disposed of in accordance with all applicable federal, state, and local regulations, including proper waste manifesting procedures.
6. Solid waste receptacles would be maintained at the construction staging area. Non-hazardous solid waste (trash and waste construction materials) would be collected and deposited in on-site receptacles. Solid waste would be collected and disposed of by a local waste disposal contractor.

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