

SECTION 4.0
BEST MANAGEMENT PRACTICES AND MITIGATION MEASURES

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It is CBP’s policy to reduce impacts through the sequence of avoidance, minimization, mitigation, and finally, compensation. Mitigation efforts vary and include activities such as restoration of habitat in other areas and implementation of appropriate BMPs. CBP coordinates its environmental design measures with the appropriate Federal and state resource agencies, as appropriate. Both general BMPs and species-specific BMPs have been developed during the preparation of this ESP.

This section describes those measures that may be implemented to reduce or eliminate potential adverse impacts on the human and natural environment. Many of these measures have been incorporated by CBP as standard operating procedures on past projects. Appendix B contains the BRP, which includes the full list of environmental design measures and BMPs that will be incorporated as part of the Project. Below is a summary of BMPs for each resource category that will be potentially affected. The mitigation measures will be coordinated with the appropriate agencies and land managers or administrators, as appropriate. Table 4-1 provides an overview of BMPs and mitigation measures by specific resource areas.

Table 4-1. Specific Resource Area BMPs and Mitigation

Resource Area	Best Management Practices/Mitigation
Air Quality	Dust Control Plan. Fire Prevention and Suppression Plan. Maintain equipment according to specifications.
Land Use and Aesthetics	No mitigation necessary.
Soils	Dust Control Plan.
Hydrology and Groundwater	SPCCP and CM&R plans.
Surface Waters and Waters of the United States	Mitigation for 0.3 acres of wetlands as appropriate, SWPPP.
Vegetation Resources	Fire Suppression and Prevention Plan. Biological monitor on site during construction to ensure all BMPs and mitigation plans are followed.
Wildlife and Aquatic Resources	No mitigation necessary.
Threatened and Endangered Species	Disease prevention protocols will be employed if the Project is in areas known or likely to harbor chytridiomycosis.
Cultural Resources	Avoidance of sites and mitigation of impacts, as necessary, will be conducted in coordination with the land manager.

4.1 GENERAL CONSTRUCTION ACTIVITIES

BMPs will be implemented as standard operating procedures during all construction activities, and will include proper handling, storage, and/or disposal of hazardous and/or regulated materials. To minimize potential impacts from hazardous and regulated materials, all fuels, waste oils, and solvents will 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 will be completed following accepted industry guidelines, and all vehicles will have drip pans during storage to contain minor spills and drips. Although a major spill is unlikely to occur, any spill of 5 gallons or more will be contained immediately within an earthen dike, and an absorbent (e.g., granular, pillow, sock, etc.) will be applied to contain the spill. Furthermore, a spill of any regulated substance in a reportable quantity will be cleaned up and reported to the appropriate Federal and state agencies. Reportable quantities regulated substances will be included as part of a project-specific SPCCP. An SPCCP will be in place prior to the start of construction and all personnel will be briefed on the implementation and responsibilities of this plan.

All equipment maintenance, laydown, and dispensing of fuel, oil, or any other such activities, will occur in staging areas identified for use in this ESP. The designated staging areas will be located in such a manner as to prevent any runoff from entering WUS, including wetlands. All used oil and solvents will be recycled if possible. All non-recyclable hazardous and regulated wastes will be collected, characterized, labeled, stored, transported, and disposed in manners consistent with EPA standards.

Solid waste receptacles will be maintained at staging areas. Non-hazardous solid waste (trash and waste construction materials) will be collected and deposited in on-site receptacles. Waste materials and other discarded materials contained in these receptacles will be removed from the site as quickly as possible. Solid waste will be collected and disposed of properly.

Once activities in any given construction segment of the Project corridor is completed, active measures will be implemented to rehabilitate the staging areas. CBP will coordinate with the appropriate land managers to determine the most suitable and cost-effective measures for successful rehabilitation.

For successful rehabilitation, all or some of the following measures may be conducted on the part of CBP:

- Site preparation through ripping and disking to loosen compacted soils.
- Hydromulch with native grasses and forbs in order to control soil erosion and ensure adequate re-vegetation.
- Planting of native shrubs as needed.
- Temporary irrigation (i.e., truck watering) for seedlings.

- Periodic monitoring to determine if additional actions are necessary to successfully rehabilitate disturbed areas.

4.2 AIR QUALITY

Mitigation measures will be incorporated to ensure that particulate matter less than 10 microns in size (PM-10) emission levels remain minimal. Measures will include dust suppression methods to minimize airborne particulate matter created during construction activities. Standard construction BMPs, such as routine watering of the construction site and access roads, will be used to control fugitive dust during the construction phases of the Project. Additionally, all construction equipment and vehicles will need to be kept in good operating condition to minimize exhaust emissions.

4.3 SOILS

Proper site-specific BMPs are designed and utilized to reduce the impact of non-point source pollution during construction activities. BMPs include such things as buffers around washes to reduce the risk of siltation, installation of waterbars to slow the flow of water down hill, and placement of culverts, low-water crossings, or bridges where washes need to be traversed. These BMPs will greatly reduce the amount of soil lost to runoff during heavy rain events and ensure the integrity of the construction site. Soil erosion BMPs can also beneficially impact air quality by reducing the amount of fugitive dust.

Areas with highly erodible soils will be given special consideration to ensure incorporation of various and effective compaction techniques, aggregate materials, wetting compounds, and rehabilitation to reduce potential soil erosion. Erosion control measures such as waterbars, gabions, straw bales, and re-vegetation will be implemented during and after construction activities. Re-vegetation efforts will be implemented to ensure long-term recovery of the area and to prevent significant soil erosion problems.

4.4 WATER RESOURCES

Although the Secretary's waiver means that CBP no longer has any specific legal obligations under the CWA, for the TI segments addressed in this ESP, the Secretary committed DHS to responsible environmental stewardship of our valuable natural and cultural resources. CBP supports this objective and has applied the appropriate standards and guidelines associated with the CWA as the basis for evaluating potential environmental impacts and appropriate mitigations.

CBP will require its contractor(s) to prepare and implement a SWPPP to avoid or reduce erosion and sedimentation outside the construction footprint. Coordination with the Regulatory Functions Branch of USACE, Albuquerque District will continue in order to avoid or reduce construction-related impacts to washes and arroyos that are potentially jurisdictional WUS. Compensatory mitigation will be implemented, as appropriate.

All engineering designs and subsequent hydrology reports will be provided to USIBWC prior to start of construction activities for recommendations of measures to avoid an increase, concentration, or relocation of overland surface flows into either the U.S. or Mexico. Furthermore, CBP will routinely check and maintain drainage structures, including low water crossings, and vehicle fence installed within drainages. Such activities may include, but are not limited to, removal of debris that would impede proper conveyance, repair/maintenance of erosional features, installation of energy dissipation measures, and re-vegetation of temporarily disturbed areas.

4.5 BIOLOGICAL RESOURCES

Construction equipment will be cleaned using a high-pressure water system prior to entering and departing the Project corridor to minimize the spread and establishment of non-native invasive plant species. Soil disturbances in temporary impact areas will be rehabilitated. Rehabilitation includes re-vegetation or the distribution of organic and geological materials over the disturbed area to reduce erosion while allowing the area to naturally revegetate. Rehabilitation methods will be outlined in a rehabilitation plan. At a minimum, the rehabilitation plan will include: the plant species to be used, a planting schedule, measures to control non-native species, specific success criteria, and the party responsible for maintaining and meeting the success criteria. Seeds or plants native to Hidalgo County will be used to the extent practicable.

Disturbed and restored areas will be monitored for the spread and eventual eradication of non-native invasive plant species as part of periodic maintenance activities as appropriate.

A qualified biologist (i.e., professional biologist with education and training in wildlife biology or ecology and experience with regional ecology) will monitor construction operations to ensure adherence with the BMPs and provide advice to the construction contractor as needed.

Disease prevention protocols will be employed if the Project is in areas known or likely to harbor chytridiomycosis. CBP is coordinating with land owners and USFWS to identify these areas. In such cases, if construction vehicle/equipment use will occur in more than one Chiricahua leopard frog suitable habitat, that equipment will be cleaned and dried or disinfected before it moves to another location with suitable habitat.

4.6 CULTURAL RESOURCES

Avoidance of sites and mitigation of impacts as appropriate will be conducted in coordination with the land manager.