



Buckman Direct Diversion Project

Environmental Mitigation: Restoring and Improving Natural Habitat Environments

The BDD Project strives to protect the environment through minimizing its impact on land, wildlife, plants, trees and shrubs, the Rio Grande and aquatic life. The Final Environmental Impact Statement (EIS) and the U.S. Fish & Wildlife Services' Biological Opinion on the Effects and Actions of the Assessment of the BDD Project found that for the size and complexity, the BDD Project is expected to have a minor effect on the environment.



More than Restoration – Improving and Enhancing Habitat Environments

The BDD Project will improve approximately 7 acres of habitat along the river floodplain for various wildlife species, including songbirds, amphibians, reptiles, small mammals and raptors. The improvement or “mitigation” plan will also address improving habitat in 25 acres of “upland” areas that are adjacent to the floodplain. Upland improvement will focus on wildlife habitat, but will also emphasize improving vegetation conditions to reduce soil exposure to erosion and to promote better infiltration of rainwater into the groundwater table.

The emphasis of both the floodplain and upland habitat mitigation is restoration of native wildlife habitat through removal of exotic vegetation and planting native plant species in their place.

Land Management Improvements – Controlling Off-Road Vehicle Damage & Livestock Grazing Along the River

The BDD Project is cooperating with the federal land owners (US Forest Service within one mile of the Rio Grande and Bureau of Land Management elsewhere) to improve conditions at the river by providing a toilet and parking lot, helping with clean-up of the area, and contributing funds to improve federal law enforcement of federal restrictions on these federal lands. Grazing and vehicle access to areas of restored native riparian vegetation and habitat, including new seasonal wetland habitat for amphibians, will be restricted and an old ban on shooting within one mile of the Rio Grande on Forest Service land will be better enforced.



A view of bushes transplanted at the Buckman Regional Water Treatment Plant.

Improving Recreational Opportunities and Maximizing the Improvement Benefits – A Collaborative Effort

In order to maximize the benefits of the overall mitigation effort, the BDD Project mitigation team is cooperating with the U.S. Forest Service, Bureau of Land Management, New Mexico Wildlife Federation (NMWF), U.S. Fish and Wildlife Service, New Mexico Department of Game & Fish, and others. The NMWF has been awarded a grant through the State of New Mexico's River Ecosystem Restoration Initiative (RERI). The RERI grant will fund additional removal of non-native vegetation and planting of native species such as cottonwood and willow along the floodplain near the BDD Project.

The BDD Project is actively collaborating to coordinate all BDD Project environmental impact mitigation work with the NMWF's recently proposed Buckman Recreational Area plan and the RERI grant. The Forest Service and BLM are assessing this plan. This plan proposes to complete substantial additional wildlife habitat restoration and recreational improvements near the BDD Project river diversion site and in the nearby Diablo Canyon area. The Forest Service and Bureau of Land Management will be seeking public input as part of a new Environmental Assessment of the Buckman Recreational Area Plan.

LEED Certification

The design/build joint venture, CH2M Hill and Western Summit anticipate LEED Certification of the Operations Building at the new Buckman Regional Water Treatment Plant. During construction, at least 95 percent of the construction waste was recycled, which is considered exemplary performance towards LEED Certification. The Operations Building was designed to achieve exemplary energy and water efficiency, while providing building occupants with a comfortable work environment. Design and construction were aimed at reducing potential air pollutants in the building and taking advantage of natural lighting wherever possible.

BDD Goes Solar

American Capital Energy, Inc. (ACE), a national solar developer which has a Santa Fe office, built and is operating a 1-megawatt solar photovoltaic (PV) plant to produce much of the electrical energy required by BDD's advanced water treatment facility. About 8 acres of solar panels located out-of-view next to the water treatment plant will generate as much as one megawatt of solar electricity. The additional costs of the solar electricity will be offset by incentives. Additionally, the solar developer bears all the risks of solar electricity production.

During the first year of operation, ACE expects to generate and sell more than 2.34 million kWh of solar electricity to the Buckman Regional Water Treatment Plant, supplying most of the water treatment plant electricity at peak production and about 30% of total energy needs. A signed Solar Energy Agreement between the BDD Board and ACE provides for a 20-year fixed solar electricity price of \$0.155 per solar kilowatt hour (kWh). ACE financed, designed, built, and is operating and maintaining the photovoltaic plant. Significant benefits to BDD customers include fixed price solar electricity for 20 years, no upfront capital costs, reduced carbon footprint, and economic benefits from the construction and 20 years of maintenance.

The BDD will receive all the Renewable Energy Certificates (RECs) and other environment credits for sale to PNM under the utilities' current large solar PV program. Under this PNM program and the relatively low ACE price for clean solar energy, the solar electricity will cost slightly less than purchase of the same amount of electricity from PNM. These savings are expected to grow as energy costs increase. The BDD Project is looking to secure more solar energy.

