

OTHER INFRASTRUCTURE

Buckman Road would be upgraded to a 24-foot-wide gravel surface with ditches on both sides and culverts where necessary. The road improvements would provide year-round all-weather access to the new facilities. Generally, the gas and electric utility lines needed to service the proposed structures is already in place.

OTHER WATER SUPPLY PROJECTS

Although a number of water supply projects are occurring along the Rio Grande (for example, Albuquerque's drinking water project), locally two independent projects are being considered to meet separate purposes from the Buckman Diversion. For one of these projects, a proposal has been made by the City to add supplemental wells to the Buckman well-field in 2002 and 2003 because existing water supply facilities are not able to meet the current demand in drought years. The other project will analyze the long-term demand required for the City's and County's future water management strategy. These other proposals will be considered as appropriate during the effects analysis phase of planning. However, the Buckman Water Diversion project would serve an independent utility from either the short-term solution presented by the additional wells, or any long-term solutions that result from regional planning.

THE PLANNING PROCESS

The Forest Service and BLM will lead the process to analyze the environmental effects of this proposal. An environmental impact statement (EIS) will disclose the physical, biological, and socio-economic consequences of the project where the level of impacts may be significant. This EIS will also evaluate alternatives to the proposed project, including a no action alternative.

A key part of the process is setting the boundaries of the analysis by identifying at an early stage the significant environmental issues deserving of study and deemphasizing insignificant issues in order to narrowing the scope of the environmental impact statement. Public participation is essential to help the agencies find the appropriate scope of the analysis. The NEPA decision to be made by FS and BLM officials is whether or not to authorize the construction and operations/maintenance of the Buckman water diversion project facilities on FS and BLM managed lands as proposed by the Applicants. The decision makers could also adopt an alternative to the proposed facilities.

HOW CAN THE PUBLIC GET INVOLVED?

The Forest Service and BLM are committed to providing early and regular opportunities for stakeholder involvement in development of the EIS.

Announcements of meetings and availability of draft environmental impact statement for review will be advertised in local newspapers and community advisories. In addition, the Forest Service and BLM will maintain a mailing list of stakeholders who request information on the *Buckman Water Diversion Project*. Mailings of meeting notices and project updates will be sent to people on these lists.

All of the documents generated for the Buckman Water Diversion Project as a result of the NEPA process can be accessed at all of the following locations:

Santa Fe:

Santa Fe Public Library-Main Library
145 Washington Street
Santa Fe, New Mexico 87501

Oliver La Farge Branch
1730 Llano Street
Santa Fe, New Mexico 87501

Library Bookstop at Villa Linda Mall
4250 Cerrillos Road
Santa Fe, New Mexico 87501

Española:

Española Public Library
313 North Paseo de Oñate
Española, New Mexico 87532

Los Alamos:

Mesa Public Library
2400 Central Avenue
Los Alamos, New Mexico 87544

For more information regarding the *Buckman Water Diversion Project* contact:

Mr. Sandy Hurlocker
NEPA Coordinator, USDA-FS, Española Ranger District
P.O. Box 3307, Española, New Mexico 87533
E-mail: shurlocker@fs.fed.us
Phone: (505) 753-7331 Fax: (505) 753-9411

Buckman Water Diversion Project Overview



Buckman Water Diversion Project EIS

INTRODUCTION

The City of Santa Fe, Santa Fe County, and Las Campanas Limited Partnership have identified a critical and immediate need for developing a reliable and sustainable means of accessing surface water supplies. Continuing water shortages in the City of Santa Fe and surrounding area, has resulted in this need.

Consequently, they have proposed to use federal lands for the construction and operation of a surface water diversion system and associated infrastructure. The projected date for having the system functioning is by late 2006.

The proposed system would consist of an intake structure on the east bank of the Rio Grande, low-head submersible pumps, a set of two sedimentation ponds, five booster stations (with high-head pumps and water tanks), two water treatment plants and the pipelines necessary to convey the water between these system components. A map on the inside of this brochure presents the project layout as proposed.

Applications have been submitted to the Forest Service (FS) and Bureau of Land Management (BLM) to authorize this use. The National Environmental Policy Act (NEPA) requires that an analysis of the impacts of the proposed project must be completed before a decision is made to grant (or not grant) a special-use permit. At the early stages of the analysis, interested and potentially affected members of the public play a key role in helping the agencies define the scope of this analysis.

THE WATER

The City, County, and Las Campanas (referred to collectively as the Applicants) need to access a combined total of 8,730 acre-feet per year (afy) of water from the Rio Grande. Estimated water diversion quantities used for analysis are based on annual demand projections that extend to the year 2010 for the City and County, while the demand for Las Campanas is projected for a longer period (e.g. to community build out). These projections translate to approximately 5,230 afy for the City; 1,700 afy for the County; and 1,800 afy for Las Campanas.

Most of this water (about 75 percent) is imported into the Rio Grande basin through the San Juan-Chama Project, with the remainder being native to the Rio Grande basin.

Peak water removal rates from the river are estimated to be 15 million gallons per day (mgd) for the City/County system and 3.25 mgd for the Las Campanas system, for a total peak of 18.25 mgd. This means that peak diversion rates would be about 28 cubic feet per second.

THE SHARED STRUCTURES

The Intake Structure: All three Applicants would operate the river intake, proposed as a low-profile structure made of concrete that would extend about 15 feet out into the river from the east bank (about half that length would be above the water service, the rest underwater). This structure would be built approximately 300 feet south of the western terminus of Buckman Road. As proposed, the intake would have six screened intake panels that are 3.5 feet high and 6 feet wide. The screens would prevent objects larger than 2 millimeters from passing through them. Water would flow into the intake structure at a maximum speed of one-third of a foot per second, which meets key criteria for fish screens in similar water bodies. Pumps would then convey the water to the sand removal facility.

Sedimentation Ponds: Water would be pumped from the intake structure into one of two proposed sedimentation ponds. Each pond would be 50 feet wide by 100 feet long. During operations, the pond would settle particles greater than 0.3 millimeters in size out of the water. This keeps these sand-sized particles from damaging the high-head pumps, tanks and other parts of the system.

The ponds would be located on a terrace approximately 1,000 feet east of the intake structure and river. Each pond would be capable of handling a peak flow of 32 cubic feet per second (cfs) so that the other pond could be off-line for maintenance. Water would be drawn from the surface of the active sedimentation pond and transported by a gravity feed pipeline to a new booster station (1A) nearby.

The sand-free raw water would then be pumped into the distribution system at a rate of up to 28 cubic feet per

second. The remaining water (up to 3.8 cubic feet per second) would return through a pipe to the river.

THE SHARED BOOSTER STATIONS

Overview: The buildings for booster stations 1A and 2A would be shared structures, but the pumps housed within them would be operated separately. Beginning at the first new booster station, water for distribution to Las Campanas would be transported separately from the water bound for the City and County. The Las Campanas pipeline would be buried beneath the Buckman Road alignment while the City/County pipeline would be buried within the existing Buckman corridor right-of-way. Up until Dead Dog Well, each of the pipelines would roughly parallel each other within their proposed alignments. Southeast of Dead Dog Well, the Las Campanas pipeline would continue beneath Buckman Road toward the existing Buckman well-field Booster Station 4. The pipeline conveying water to the City and County would continue south within an existing powerline/gas utility corridor on to a proposed new water treatment plant located near the Municipal Recreation Complex (MRC).

Booster Station 1A: Containing a proposed eight pumps, this new booster station would be a structure 50 feet wide and 100 feet long, located near the sedimentation ponds. To serve Las Campanas, three of the pumps—each capable of delivering 1,100 gallons per minute (gpm)—would discharge into a 16-inch diameter pipeline buried beneath Buckman Road. One of these three pumps would be a backup. The other five pumps would serve the city/county system. These pumps would consist of two natural gas-powered variable-speed pumps capable of delivering 1,600 to 2,800 gpm each, and three electric-powered constant-speed pumps capable of delivering up to 2,400 gpm each. One of the electric pumps would serve as a backup. The City/County pumps would discharge into a 36-inch diameter pipeline that would be buried next to the existing pipeline from the Buckman well-field.

Booster Station 2A: The two pipes would transport the untreated water to a 500,000-gallon tank constructed next to proposed Booster Station 2A. Booster Station 2A would be located next to the existing Buckman well-field Booster Station 2, about 3.75 miles from Booster Station 1A. This new booster station would serve the same function as Booster Station 1A and look the same, except for the water tank, which is not necessary at

Booster Station 1A. The water tank would provide a reservoir for the pumps to draw from and protect against surges between pump stations.

DISTRIBUTION TO THE CITY/COUNTY

City/County Water Treatment Plant: From Booster Station 2A, a 36-inch pipeline would transport untreated river water bound for the City and County to the proposed new water treatment plant near the Municipal Recreation Complex. The conventional treatment process will include rapid mix, flocculation,

sedimentation, settled water ozonation, gravity filtration, ultraviolet (UV) disinfection, and chlorination or chloramination. The new facility would also include numerous chemical feed processes and solids treatment and handling processes. To dry any solids produced in the treatment plant, sludge lagoons are also included in the current proposed design. The facility (along with booster stations) would occupy approximately 20 acres of land.

Booster Stations 4A and 5A: Located with the proposed new City/County water treatment plant, two

additional new booster stations would pump the treated water from the new water treatment plant to the existing City/County distribution systems. Booster Station 4A would be capable of delivering up to 8.9 million gallons per day (mgd) to the existing Buckman well-field Booster Station 3, where it would be combined with well-field water and transported to the City distribution system. Booster Station 5A would be capable of delivering up to 15 mgd to the south distribution system serving the City and County southeast of the City. The pipelines from the two new booster stations would vary in size as necessary, with a maximum size of 30 inches in diameter.

DISTRIBUTION TO LAS CAMPANAS

Booster Station 3A: From Booster Station 2A, raw water bound for Las Campanas would be carried in a 16-inch pipe to a 100,000 gallon tank, constructed next to the new Booster Station 3A. This station would be located next to the existing Buckman well-field Booster Station 3. Booster Station 3A would consist of a building 30 feet wide by 40 feet long containing three 1,100 gpm electric pumps identical to those dedicated to Las Campanas in the first two new booster stations, including one pump as backup

Golf Course Irrigation Supply: From Booster Station 3A, a 16-inch pipeline would transport water to a point mid-way between the Buckman well-field Booster Stations 3 and 4. At this point, an irrigation supply pipeline serving the Las Campanas golf course would be connected to the system. A 12-inch-diameter pipeline would transport the remaining water on to a proposed new water treatment plant located at Las Campanas, next to the existing Buckman well-field Booster Station 4 adjacent to Buckman Road.

Las Campanas Water Treatment Plant: The proposed water treatment plant at Las Campanas would consist of a building 80 feet wide by 100 feet long, as well as either lagoons or sand drying beds for handling solids removed from the water. This will occupy about one acre of land. The current design of the water treatment plant for Las Campanas residents is a modified conventional treatment plant that contains a "packaged" unit combining rapid mix, flocculation, sedimentation, filtration, and most chemical feed processes in one pre-assembled unit. Treated water would be pumped from the plant directly into the existing Las Campanas distribution system.

