



# CITY OF ESPAÑOLA & BUREAU OF RECLAMATION

## DRINKING WATER PROJECT ENVIRONMENTAL ASSESSMENT NEPA SCOPING MEETING

July 25, 2002

### INFORMATION SHEET

#### Background

The City of Española (City) has historically relied exclusively on ground water wells for the supply of water for its residents. Since 1986, the City has been forced to abandon seven (7) of the City's thirteen (13) ground water production wells due to either contamination or well failure. The sources of contamination include solvents, fluoride and nitrates either naturally occurring or from on-site wastewater disposal systems located throughout the Española Valley. One of the existing production wells (Well No. 4) has been severely impacted by fluoride. In order to salvage this well, the City has reduced the production by 75 percent from its initial capacity. Additionally, one of the City's best wells (Well No. 2) is showing elevated levels of fluoride, which will eventually limit the amount of water that can be pumped.

The City recently completed the construction of a new well to replace an older well (Well No. 6). The results of the hydro geological investigation conducted for this well indicate that the City is facing tremendous challenges in its ability to provide potable water with ground water sources in sufficient quantities to meet even basic demand requirements. These investigations reveal that the ground water near the ground surface is generally contaminated with nitrates from on-site wastewater disposal systems while ground water at deeper zones is contaminated with naturally occurring fluoride. The regional aquifer also has high levels of naturally occurring arsenic. Fluoride and arsenic treatment at high concentrations could be prohibitively expensive.

The City has imposed either strict or severe water conservation measures through the City's Water Conservation Ordinance for the past several years. Although these water conservation measures have reduced the demand on the water system, the City has concerns for public safety and welfare due to the lack of water production capacity in the existing water system. The current water system is producing approximately 1,100 gallons per minute less than is needed to meet current system demands. With the ground water contamination that has been documented in the area, the City needs an alternative source of water supply to meet the needs of the residents and commercial establishments in the City's water service area.



The City's imported San Juan-Chama Project (SJ-C) water is an integral part of the City's long-term water resources program. The City entered into a water service contract with the Bureau of Reclamation in 1978 for 1,000 AF of SJ-C water. The contract is renewable upon expiration December 31, 2018. The City is currently seeking to amend its contract with Reclamation to a repayment contract that would not expire. The City's contract does not permit the carryover of storage for any unused water to any subsequent calendar year.

Española currently uses its SJ-C allocation under New Mexico State Engineer Permit RG-3067 et al approved on December 17, 1980. Under the permit's conditions of approval, Española is allowed to annually divert (i.e., pump) 2,000 ac-ft and consume 1,000 ac-ft from its wells. To offset the depletion effects from ground water pumpage on the Rio Grande, Española uses releases of its SJ-C water and treated effluent. In addition to using SJ-C water for the purpose of offsetting stream depletion effects, Española has also leased unused water to Reclamation for its supplemental water program.

In the future, Española needs to resolve its inadequate water supply and deterioration of the deep aquifer. Diverting and directly consuming its full supply of SJ-C water would allow the City to conjunctively manage its surface and groundwater resources. Surface water would be fully consumed during peak months of May-October and groundwater would be conserved for sustainable use during winter months. The City's wells would be better managed with respect to both issues of water quality and rates of production. The long-term viability of the aquifer could be assured.

## **DRINKING WATER PROJECT INFORMATION**

### **Project Location**

The City of Española Drinking Water Project (project) would be built on City-owned property just north of the City and a portion of construction work would include upgrades to the Los Vigiles Ditch north to the Rio Grande. Since the project would divert and fully consume imported San Juan-Chama (SJ-C) water owned by the City, operating the project would encompass related water management activities from Heron Dam on the Chama River downstream to the City's discharge of treated effluent near the southern City limit.

### **Purpose and Need**

The purpose of the proposed project is to construct a new drinking water treatment plant and transmission lines on City-owned property that would allow the City to make full use of its SJ-C water allocation to provide a safe and sustainable drinking water supply for its community. The City would divert surface water through an existing diversion and would upgrade an existing conveyance ditch. The proposed project is needed because the City is currently unable to meet its daily peak demand for potable water. Dependency on a ground water supply that has deteriorated in quantity and quality is not acceptable.

### **Federal Reclamation Action**

The Bureau of Reclamation, Albuquerque Area Office, proposes to provide partial federal funding to develop a drinking water project for the City under Title XVI of Public Law 102-575.



### **Proposed Project**

The City's proposed project is estimated to cost approximately \$16.7 million. It consists of the following construction and operational features:

- I. Divert SJ-C water (approx. 1,000 AF) and a like amount of native water (approx. 1,000 AF) at an existing diversion facility, the Los Vigiles Diversion Dam. (The SJ-C water would be consumed and the native water would re-enter the Rio Grande at the wastewater treatment plant outfall);
- II. Improve and upgrade, including concrete-lining, a segment (what length?) of the existing Los Vigiles Ditch system to convey water from the diversion location to a new water treatment plant;
- III. Construct a new water treatment plant with a capacity of 2.5 mgd. This would include:
  - a. pre-sedimentation basins for removal of sediment
  - b. an influent pump station to supply water into the treatment facilities
  - c. a pretreatment facility
  - d. filtration facilities
  - e. finished water storage facilities
  - f. finished water booster pump station, and
  - g. sludge dewatering facilities.
- IV. Construct additional new potable water transmission lines (approx. 3,600 linear ft. of 16" pipe) to connect into the City's existing water distribution facilities; and
- V. On an annual basis, the City would take delivery of its SJ-C allocation (1,000 AF) from Heron Dam, store it either in El Vado Reservoir or Abiquiu Reservoir, and release it from storage as needed and in compliance with State law in a manner that satisfies its diversion requirement and water treatment plant capacity. SJ-C water and a like amount of native Rio Grande water would be diverted at the Los Vigiles Diversion Dam and conveyed in the Los Vigiles Ditch to a new water treatment plant location. Water would be settled in settling ponds, treated to Safe Drinking Water Act standards, and delivered to the community to meet potable water demand. Approximately ½ of the water diverted would be returned to the Rio Grande as treated wastewater roughly 4 miles downstream from the point of diversion.

### **No Action Alternative**

If the project is not built, the City would continue to rely solely on groundwater to meet its potable water demands. The City's water system is currently inadequate. It provides about 1100 gpm less than current demand, which could raise concerns about public health and welfare. The City would have to develop new wells and the regional aquifer would continue to deteriorate. Expensive treatment for the removal of naturally occurring fluoride and arsenic would be required. The City would also have to accelerate its program to acquire native Rio Grande water rights to offset groundwater pumping effects, resulting in the retirement of substantial acreages on the traditional acequias.