
Meeting Date: November 19, 2014
Staff Contact: Rick Shean, Water Quality Hydrologist

TITLE: OB-14-19 - Status Update for the Kirtland Air Force Base Bulk Fuels Facility

SUMMARY:

The Water Authority continues monitor the progress of corrective action activities being conducted by the Kirtland Air Force Base (KAFB) and the Air Force Civil Engineering Center (AFCEC) to address the Bulk Fuels Facility Spill that has contaminated the aquifer near the Ridgecrest Well Field. Recent activities have included the following:

- Continued drilling of the sentinel wells by the U.S. Geological Survey on behalf of AFCEC;
- Planning for drilling of additional monitoring wells to further characterize the depth and length of the dissolved phase ethylene dibromide (EDB) plume;
- AFCEC has begun solicitation for a contractor to install the first phase of a “pump and treat” system that will begin collapsing the EDB plume closer to the KAFB boundary and away from the Ridgecrest well field.

Also, some members of the public have raised concerns regarding the potential impacts to the entire Water Authority service area in the event the KAFB Bulk Fuels Facility contamination enters a drinking water well. The Water Authority Governing Board recently passed resolution R-14-11 that declares that the Water Authority will not allow EDB at any detectable level to enter the drinking water system. If a production well or wells need to be shut down due to the contamination from the fuel spill or other unforeseen event, there is sufficient redundancy in supply to provide full service to customers in the short-term, while permanent replacement supplies are acquired. Although arsenic is a natural occurring substance that occurs in the middle Rio Grande Basin above drinking water standards, the Water Authority has initiated several water resource development activities and protection measures to ensure the community’s potable water supply remains safe to drink and sustainable.

FISCAL IMPACT:

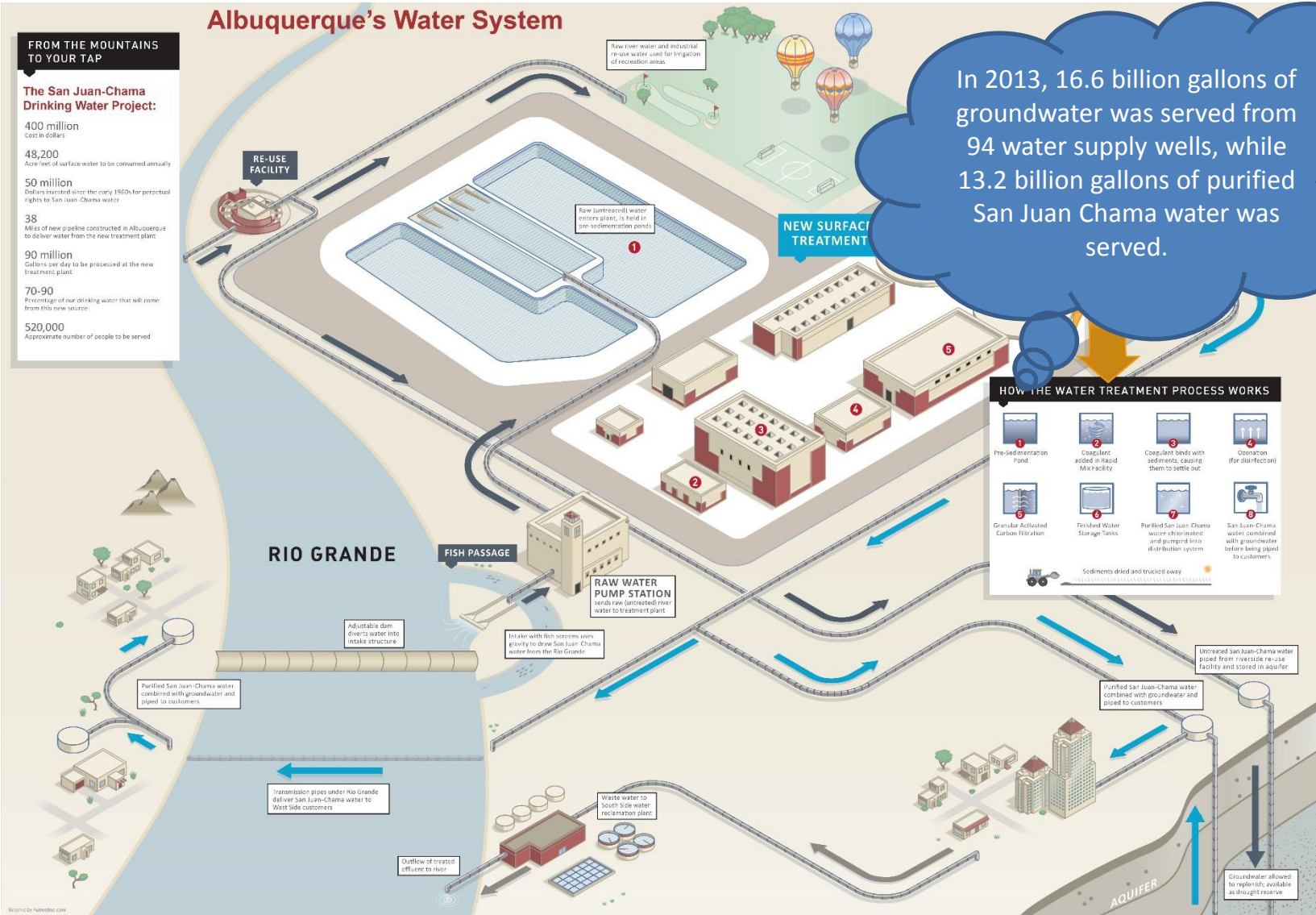
None

Status Update for the KAFB Bulk Fuels Facility Spill

Rick Shean, Water Quality Hydrologist
November 19, 2014

- Sentinel Wells
 - U.S. Geological Survey continuing to drill sentinel wells between KAFB Bulk Fuels Facility Spill dissolved phase ethylene dibromide (EDB) / plume and Ridgecrest Well Field.
- Monitoring Wells
 - KAFB / contractor to begin drilling of additional monitoring wells to further characterize depth / length of plume in December.
- Plume “Collapse” Proposal
 - Air Force Civil Engineering Center currently soliciting for contractor to install extraction wells to begin collapse of EDB plume in 2015.
- Ongoing technical meetings to discuss potential interim measure and investigation activities.

Drinking Water System (DWS)



FROM THE MOUNTAINS TO YOUR TAP

The San Juan-Chama Drinking Water Project:

- 400 million Cost in dollars
- 48,200 Acre feet of surface water to be consumed annually
- 50 million Dollars invested since the early 1960s for perpetual rights to San Juan-Chama water
- 38 Miles of new pipeline constructed in Albuquerque to deliver water from the new treatment plant
- 90 million Gallons per day to be processed at the new treatment plant
- 70-90 Percentage of our drinking water that will come from this new source
- 520,000 Approximate number of people to be served

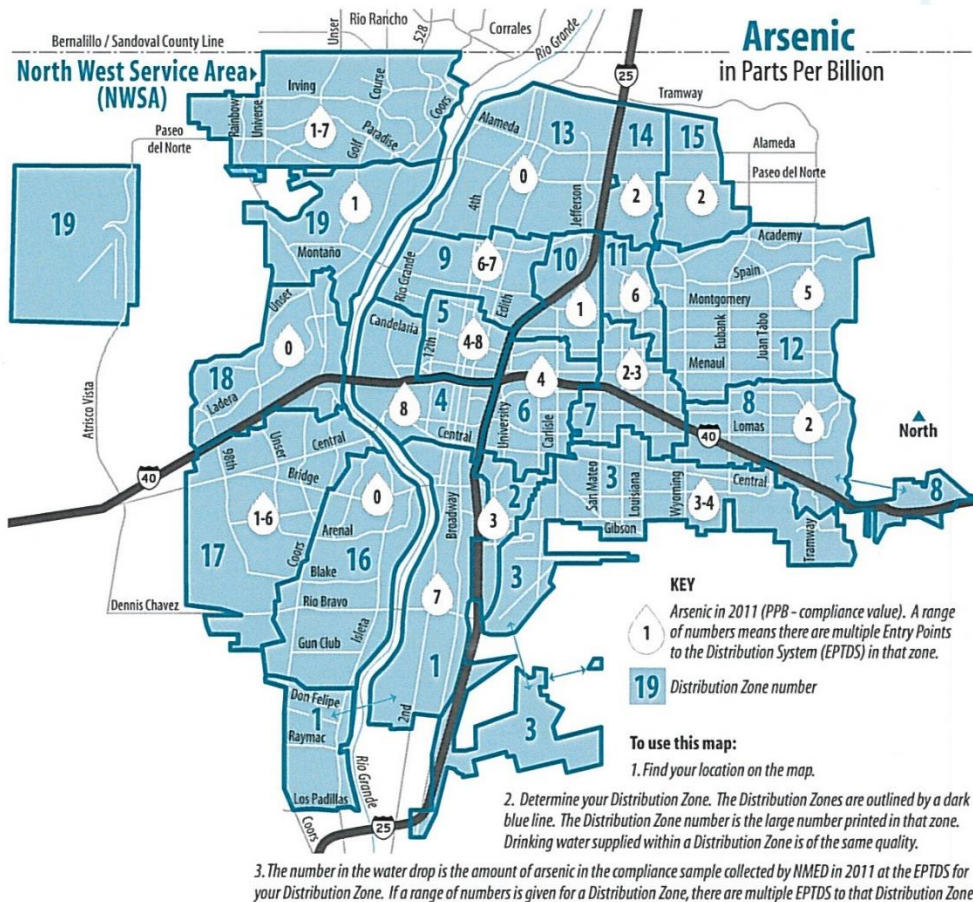
In 2013, 16.6 billion gallons of groundwater was served from 94 water supply wells, while 13.2 billion gallons of purified San Juan Chama water was served.

HOW THE WATER TREATMENT PROCESS WORKS

1. Pre-sedimentation Pond
2. Coagulants added in Rapid Mix Facility
3. Coagulant flocs with sediments, causing them to settle out
4. Clarification for disinfection
5. Granular Activated Carbon Filtration
6. Finished Water Storage Tanks
7. Purified San Juan-Chama water chlorinated and pumped into distribution system
8. San Juan-Chama water combined with groundwater before being piped to customers

Sediments dried and trucked away

Arsenic Management



- EPA’s Maximum Contaminant Level (or “drinking water standard”) is 10 parts per billion (ppb).
- System wide average is 4 ppb.
- Distribution Area 3 average is 3-4 ppb.
- Water Authority typical operations scenario – pumping from wells with 8 ppb or less of arsenic.
- DWS can handle up to 146 million gallons per day (mgd) at this concentration.
- Ridgecrest Wells are not used for any arsenic blending or supplemental water activities.
- Average annual drinking water demand is ~80 mgd, typical peak use is ~120 mgd.

Protecting Our Supplies

- Conservation efforts have lowered per capita demand 45% since mid 1990's.
- There is sufficient redundancy to supply water at greater than average demand.
- Sentinel wells are being drilled to track plume's approach to Ridgecrest well-field
- Arsenic treat water to the Maximum Contaminant Level of 10 parts per billion (ppb) or lower (current system average is 4 ppb).
- System interconnectivity – Can easily move water from east side to west side.
- Increased nonpotable system use can maximize use of potable supplies.
- Aquifer storage and recovery projects will increase drought reserve.

Thank you!

Any questions?