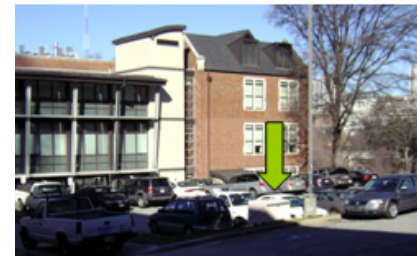


Water Project: 4001

Chiller Water Wells

Replace potable water used in chiller plants with well water from 2 newly dug wells

Project Completion Date: December, 2007



Project Overview:

The objective of this project was to perform reduce the amount of potable water used for the two main chiller plants. Two wells were dug and pumps, etc plumbed.

Pre-Project Considerations:

- The idea of wells came from attending an industry conference
- Georgia and Atlanta in particular has a lot of underground granite which meant that a well might be difficult to dig and might not produce the volumes of water anticipated
- North Georgia, including the Atlanta area, does not typically use a lot of underground water, approximately 98% of our water use is surface water. Georgia Tech's use of well water relieves the surface water/City of Atlanta water use which is under so much pressure from the drought. (South Georgia with its higher agricultural watering needs is tapping wells heavily)

The Project Process

- Each well would be located near the chiller plant
- Exact location of each well was determined by a consultant
- Full production on each well was not reached for a few weeks after it began pumping

Well #1 – Holland Plant
 – 8" dia. down to 320'
 – 6" dia. from 320' – 720'
Well #2 – 10th Street Plant
 – 6" dia. down to 720'
Well Draw
 – Holland - 25 GPM
 – 10th Street - 50 GPM

Lessons Learned

- The first well site did not work as well as hoped but after making adjustments, a good well site and setup was achieved

- There are more minerals in the well water which means the efficiency of chilling the chiller water is different
- Water savings are significant and worth the investment

PROJECT SNAPSHOT

Description: chiller plants using well water instead of City Water

Departments: Facilities, Plant Operations

Plant Manager: Harold Cash

Finances (estimated):

Total Project Cost: \$400,000
 Annual Savings: \$100,000-200,000
 Annual Savings used for calculating Payback: \$150,000
 Payback: 2.67 years

Environmental Impact Reduction:

Reduce amount of City Water consumed by 137,000 gallons/day

Lessons Learned:

1. Well water doesn't chill as efficiently as city water, but with minor adjustments, works well
2. Identifying good well site is not trivial

For More Information Contact:

Warren Page, Director - Facilities Operations & Maintenance, 404-894-1613,

warren.page@facilities.gatech.edu