



Station 6 Groundwater Treatment Plant Fact Sheet

Overview

The New York City Department of Environmental Protection (DEP) is developing plans for a groundwater treatment plant at Station 6. This state-of-the-art facility will produce high quality drinking water and control groundwater flooding while providing educational resources and community meeting space. The conceptual design for this facility (shown above) incorporates a variety of forms and textures to create a building that is both functional and symbolic of the natural elements that are a vital part of the water treatment process.

Location

The new Station 6 plant will replace DEP's existing facility located at 110th Avenue and 164th Place in Jamaica, Queens.

Station 6 Capacity

Station 6 will provide up to 10 million gallons per day of drinking water with the potential to expand to 12 million gallons per day in the future. Pumping at 10-12 million gallons per day will alleviate local groundwater flooding.

Pilot Plant

In order to test various treatment technologies, collect water quality data, and develop design criteria for a full-scale plant, DEP established a pilot testing facility in February 2002. Located at 108th Avenue and 165th Place, the pilot plant operated for a 13-month period. The results generated from this successful program were used to determine the most effective treatment processes for the new Station 6 facility.

Community Outreach

As part of the Station 6 project, DEP has implemented a comprehensive community outreach program. This ongoing program includes small group meetings, large public forums, distribution of informational materials, and a Citizens Advisory Committee that meets on a monthly basis.

Inside Station 6

A three-level design is proposed for the Station 6 Groundwater Treatment Plant. The *lower level*, which will be slightly below ground, will include pumps, motors and other machinery. The *middle level* will house DEP offices, a visitor's center and community meeting space. Most importantly, this level will include the equipment required to perform the following water treatment processes:

- **Oxidation and Filtration** to remove iron and manganese. These metals, which are found naturally in groundwater, are non-toxic but affect the color, and to a lesser extent, the taste of water. They can also stain plumbing fixtures and laundry. The removal of iron and manganese requires a two-step process: 1) oxidation (adding oxygen-containing compounds, in this case ozone) to create large iron and manganese particles; and 2) removal of these particles using membrane filters.
- **Air Stripping Towers** to remove volatile organic compounds from the groundwater. These compounds are chemicals, including gasoline and cleaning fluids, that are known to have potential health impacts.
- **Reverse Osmosis Membranes** to soften the water by removing calcium and magnesium, naturally-occurring minerals that cause hardness in water. While these minerals are non-toxic, their deposits often leave a white build-up on plumbing fixtures and cooking pots and can make soap lathering difficult. The reverse osmosis membranes also remove sodium, nitrates and other compounds found in groundwater.

The *top level* will feature a walkway and an area from which the public can view the treatment processes described above.

Next Steps

Many steps must be taken before construction of the Station 6 Groundwater Treatment Plant can begin. Over the next several months, the project team will focus on detailed design of the plant's interior and exterior, along with required agency coordination and permitting activities. Throughout this period and beyond, DEP will continue to review and incorporate community recommendations concerning architectural details and other aspects of the facility. Construction will not begin until 2007 at the earliest.



The Brooklyn-Queens Aquifer Feasibility Study is a multi-phase project to explore the use of groundwater to supplement New York City's drinking water supply. Sponsored by DEP, the project is also addressing groundwater flooding and the remediation of the West Side Corporation site. For further information, contact:

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Community Outreach

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www.nyc.gov/dep/html/news/bqa.html