

VILLAGE OF
WAPPINGERS FALLS

WATER PLANT & SYSTEM
DEVELOPMENT PROPOSAL

SUMMARY

The existing Village Water Plant facilities in their current state cannot produce and treat enough water to meet the needs of the Village. If the Village is going to maintain its own water source, improvements must be made at the well field and water plant.

The following is an overview of the proposed improvement plan. Through these improvements, the village will turn the existing well field into a safe, sustainable, and economic long-term water supply source

GOAL:

To design and construct Phase I Improvements utilizing existing Well No. 3 and Well No. 7 to meet peak daily demand (i.e. 700 GPM). Due to water quality issues, it is not initially proposed to use Well No. 4 or construct water quality filters for the well field.

VILLAGE WATER NEEDS:

Currently:

- 510,00 – 550,000 Gallons
On an Average Day
- 750,000 – 800,000 Gallons
On a Peak Day.

Future:

- 610,00 – 650,000 Gallons
On an Average Day
- 950,000 – 1,000,000 Gallons
On a Peak Day

The existing Village Water Plant was designed to soften 500 gallons per minute, maximum. The existing operational production well (No. 3) on the site can pump approximately 250 gallons per minute, maximum.

The plant facility must be expanded and new well(s) must be constructed to meet current needs and future needs.

Limitations of Existing Facilities:

- The existing well cannot produce enough water to meet Village needs.
- The existing plant cannot process enough water to meet Village needs.
- The Plant does not provide adequate chlorine contact time for disinfection.
- There is no emergency backup power supply.
- Site Security is non-existent.
- The existing water softener equipment is near the end of its design life.
- The lack of process control/telemetry limits plant operation.

Proposed Improvements:

- Complete Construction & Connection of Well No. 7.
- Drill & Complete New Well No. 7A
- Replace & Expand Water Softeners.
- Install new UV Disinfection System as primary disinfection method.
- Chlorine Disinfection System for residual disinfection of distribution system only.
- Replace & Reconfigure Plant Piping.
- Expand existing buildings for the new plant systems.
- Install Backup Power Generator.
- Install Automated Control System and Telemetry.
- Replace existing electric lines with new underground service.
- Install new security features (such as fences & lights).
- Upgrade all existing water meters with "radio-read" meters.

The plant and well field were originally built many years ago. Subsequent past improvements were designed & built to meet past regulations and, to a certain extent in recent years, the facility was allowed to operate as a "legacy" system.

As per State and Local regulators, the Village must upgrade and improve their well field facilities to meet present and known future regulations in order to use the well field as the primary water source.

These proposed improvements will meet these regulations and provide a platform for continued compliance with future regulations.

Estimated Costs:

To construct the proposed improvements as shown:
\$3,750,000

This figure includes all construction costs as well as design, legal, inspection, regulatory approval, and other "soft" costs. The improvements are eligible for some financial assistance with bonding through the New York State Environmental Facilities Corporation and the Drinking Water State Revolving Fund (DWSRF).