

## North Shore Water Filtration Plant

The North Shore Water Filtration Plant was placed in service in 1963 and has a current capacity of 18 mgd. Because of the age of the plant and changes in water quality regulations, the North Shore Water Commission retained Carollo to perform an optimization study prior to commencing the next round of modification and upgrade projects for the plant. The optimization study's purpose was to determine the operating methods and physical modifications necessary to eliminate deficiencies and improve the operation of the plant to meet current and future water quality standards. Work included:

- ▶ Preparing a regulatory analysis to determine the plant's compliance with existing regulations and projected compliance with future regulations.
- ▶ Performing bench-scale pretreatment evaluations to optimize chemical pretreatment.
- ▶ Evaluating the existing process facilities and made recommendations to improve deficiencies identified for flash mixing, flocculation, sedimentation, filtration, disinfection, residuals handling, and chemical feed facilities.

Carollo has since assisted North Shore in upgrading their flash mix facilities. This effort involved installing a new pump diffusion flash mix at the plant, which reduced coagulant costs by over 30 percent. Carollo is currently designing UV disinfection facilities for the plant, which should be on-line by 2003.

### HIGHLIGHTS

Optimization study for 18-mgd water treatment facility to improve deficiencies.

Bench-scale pretreatment evaluations to optimize chemical pretreatment.

New pump diffusion flash mix, reducing coagulant costs by over 30 percent.

UV disinfection design.



*Carollo is currently assisting the North Shore Water Filtration Plant in implementing UV disinfection.*

