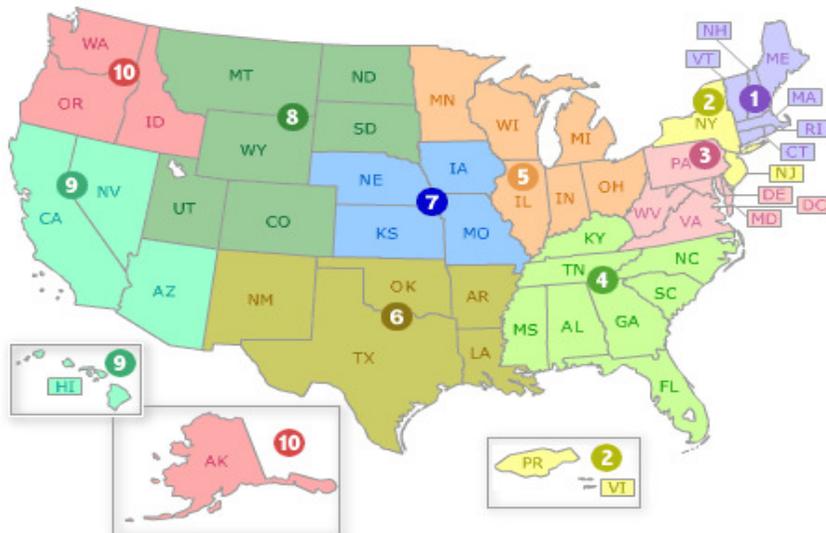




Left to Right: David Shin, EPA, Juanita Gilman, Office Manager, Joe Sarto, Assistant Operator, Joel Furmanick, Assistant Operator in training, Jesse Lamos, Chief Operator, Jeffrey Chartier, Superintendent, Elizabeth Corrow, Town Manager, Joe Denning, Selectman, Justin Pimpare, EPA

The Wastewater Facility in the Town of Bristol NH was chosen as the 2007 EPA Region 1 recipient of most Improved Operation and Maintenance Award. Region one, as shown on the map includes Connecticut, Maine, New Hampshire, Massachusetts, Rhode Island and Vermont.



This Award is given to wastewater facilities that have shown major improvements over the year or past several years. The State of NH Department of Environmental Services had nominated Bristol’s Wastewater facility based on improvements in process control as well as many innovative devices that had been designed and

implemented at the facility such as “Heated splashguard”, boat shrink-wrap cover for the clarifier, and a sight gage for the sludge tank. All of these improvements, however rudimentary they may be, worked well for the facility and allowed for the time previously spent in dealing with a frozen solid rotor on the oxidation ditch or frozen surface on the clarifier, for the staff to concentrate on operations and process control.

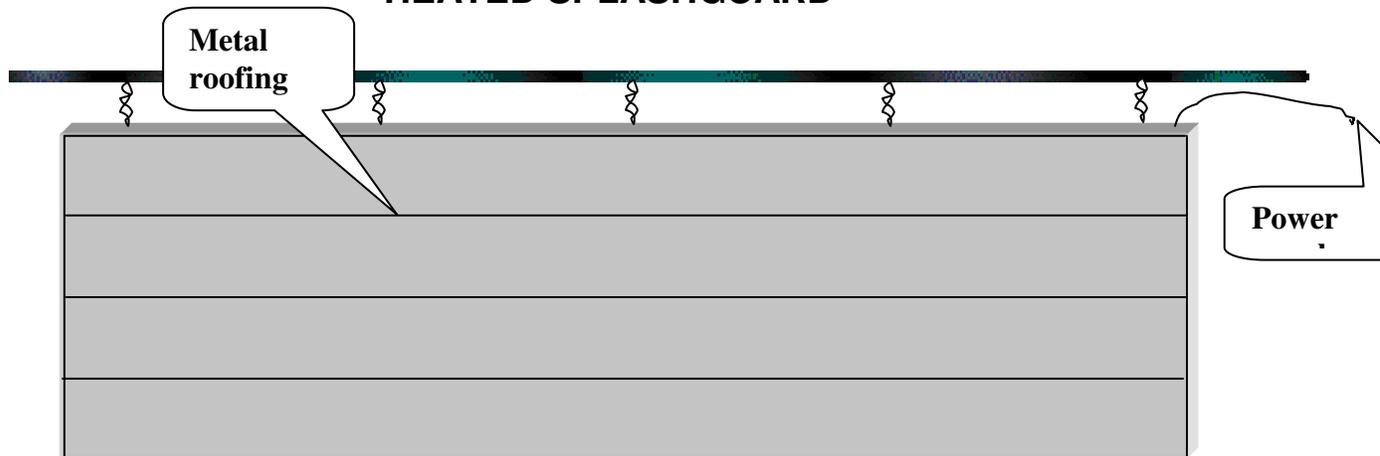


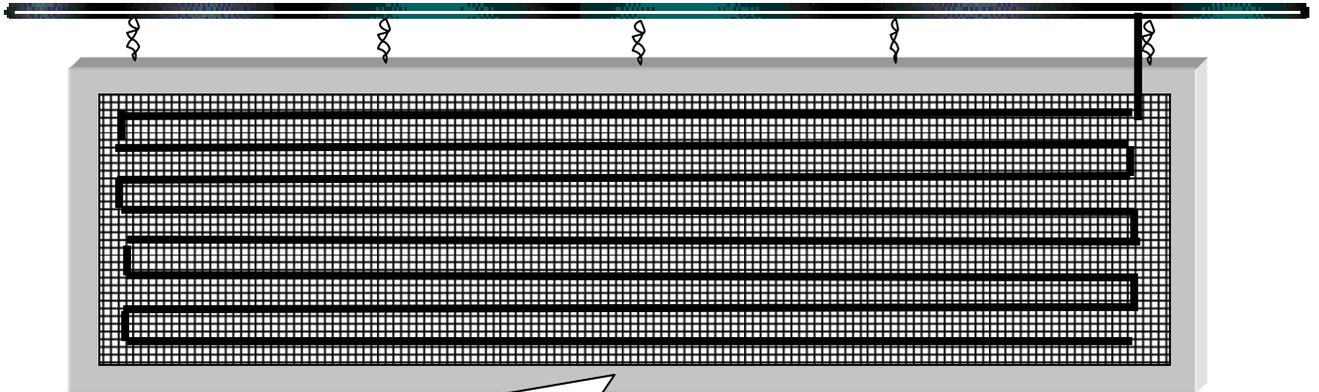
The frozen Rotor on the Oxidation ditch prior to the development and installation of the Heated Splashguard



Heated splashguard at work.

HEATED SPLASHGUARD





Internal view showing heated wire attached to wire fencing surrounded by a 2x4 and Styrofoam

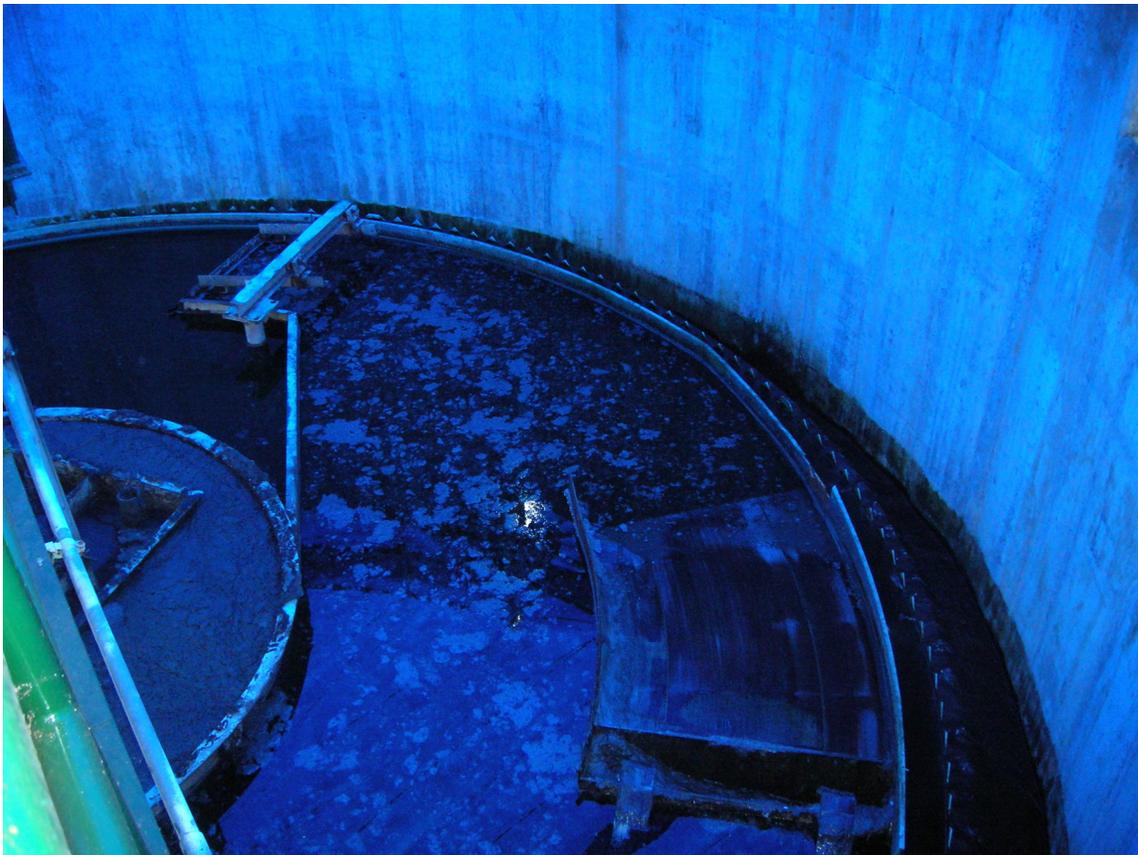


This is the frozen clarifier prior to the installation of the shrink-wrap cover. Ice would form at times up to 1 inch per hour on the surface. The staff would need to

physically chop the ice ever 3-4 hours and remove.



This photo shows the large clarifier with a cover made with boat shrink-wrap the framing was done by facility staff and the cover was put on by West Shore Marine with the help of Wild Horse Welding's boom service. The cover protects the clarifier from freezing in the winter as well as preventing the growth of algae in the summer. This cover will be replaced with a more permanent cover during our 2008 facility upgrade.



The clarifier now, after the installation of the shrink-wrap cover.

Bristol's facility had been in violation many times prior to 2004 due to a failed ultraviolet disinfection system. Many attempts by the staff and outside agencies to correct and assist the system with a temporary chlorination/dechlorination system failed during higher flows through the facility. As a result of these violations the Town went under an administrative order to correct the failed disinfection system. The Town contracted the engineering firm of Camp Dresser & McKee Inc. to design a permanent chlorination/dechlorination system. The system has been on line since 2004 and continues to work very well.



Chlor/Dechlorination building

Chlorination tanks

Dechlorination tank

The Facility will be undergoing an upgrade this year to address several issues:

Replacement of two new clarifier covers.

Variable frequency drives (VFD) installed on new electric motors for both oxidation ditches as well as the blower motor for the 60,000-gallon sludge aeration tank. These VFDs enable us to control the speed of the motors for better process control.

New belt press filtrate pump station. Currently the facility dewateres the sludge by means of a belt press. The water that is squeezed out flows into two 55 gallon drums and is pumped back into the treatment process. The new pump station will provide us with a larger volume tank outside the press building with a backup pump.

The sludge that is dewatered is transported outside the pressroom and into the sludge dumpster building via an old converted lumber conveyor that had been donated by RP Williams many years ago. We have kept this conveyor working over the years, however, the conveyor belt freezes to the rollers and it becomes very time consuming to keep the operation productive. This conveyor will be replaced with a new shaftless screw conveyor allowing for insulation around the conveyor housing preventing freezing.

A new climate controlled laboratory will be installed within a building shell that was constructed during the 2004 upgrade. The facility has been working with the original 1969 laboratory that is out of date and very limited in space.



Filtrate 55-gallon drums to be replaced with new pump station



The old lumber conveyor converted to sludge conveyor



Location of the future Laboratory room



One of two oxidation ditches that will be receiving new VFD controlled motors.



Shown here is the 60,000-gallon aerated sludge holding tank that will have a new VFD controlled blower motor.