OPERA
Local Operational Research Assistance Program

Minnetonka "Winter Green" Initiative

Project Number 2010-09

Project Leader Tom Struve

Agency City of Minnetonka
14600 Minnetonka Boulevard
Minnetonka, MN 55345

Phone 952-988-8400

Problem Officials at Nine Mile Creek Watershed District notified the City of Minnetonka that it was exceeding its maximum chloride loading standards for Nine Mile Creek, which runs through the city.

Solution The City of Minnetonka began a "Winter Green" initiative. The initiative included an aggressive and comprehensive training program as well as the purchase and installation of upgraded equipment. The city's goal was to achieve ongoing winter chemical reduction while maintaining safe roads and meeting citizen expectations.

Procedure The city implemented a training program that included presentations on snow and ice control by Kathy Shaefer, an instructor with the Minnesota Circuit Training and Assistance Program (CTAP); Kevin Bigalke with Nine Mile Creek Watershed; and Connie Fortin of Fortin Consulting. The city purchased and installed pre-wetting systems with wireless electronic monitoring capabilities and ground-oriented spreading equipment for all city vehicles performing winter maintenance in the watershed. The city also installed additional pre-wetting tanks, purchased a calibration scale, updated existing Force America 5100 controllers in city trucks, installed sending units, and installed software and a wireless receiving center at Minnetonka Public Works.

Results The initiative has been enormously successful to date. The Nine Mile Creek representatives set a target of 4.2 tons of salt per lane mile annually in the watershed. The city's operators embraced the challenge and did very well in all phases of training. The new equipment allowed the city to aggressively pre-wet and carefully monitor application rates. The city also installed an electronic geo-fence around the Nine Mile Creek Watershed in Minnetonka to accurately track material usage for the year.

The total result for the winter of 2010–2011 was 7.033 tons per mile in the Nine Mile Creek Watershed. This represents achievement of the goal set by the watershed considering that winter snow volume was approximately 180 percent of normal.

Approximate Cost $35,000

OPERA Funding $5,000

Implementation All aspects of this effort have been fully implemented by the city and continue to yield positive results.

Status Complete

Prepared by:
Minnesota Local Technical Assistance Program (LTAP)
Center for Transportation Studies
University of Minnesota
200 Transportation and Safety Building
511 Washington Avenue S.E.
Minneapolis, MN 55455-0375
Phone: 612-626-1077
Fax: 612-625-6381
E-mail: mnltap@umn.edu
Web: www.mnltap.umn.edu

Local OPERA Program partners: Minnesota Local Road Research Board (LRRB), Minnesota Department of Transportation (MnDOT), and Minnesota Local Technical Assistance Program (LTAP) at the Center for Transportation Studies, University of Minnesota.