

## Road Salt Meeting Report

Date: April 25, 2008

Location: United Water Delaware Filter Plant, Stanton, Delaware

### Attendees:

United Water DE: Joe Manning  
Newark Water: Bill Zimmerman  
City of Wilmington: Matthew Miller  
DelDOT: Andy Bowman, Marianne Walch, Randy Cole  
DHSS-ODW: Ed Hallock  
DNREC: Hassan Mirsajadi, Doug Rambo

### DISCUSSION:

Mr. Rambo opened the meeting at 9:05 AM and thanked everyone for their attendance on such short notice. He explained why he was not able to convene a meeting of the working group over the fall and winter months.

### SOURCE WATER PROTECTION IMPLEMENTATION GRANT

He then went over the group's effort, last September, at securing a Source Water Protection Implementation Grant from the Trust for Public Lands (TPL) for public education on salting commercial and residential properties during winter storms. Delaware was not one of the three states chosen for the inaugural round of grants for this program. Mr. Rambo explained that the primary reason was that we did not include in our package, a statement from the Governor or the Department Secretaries that they were in full support of the effort being undertaken between the state agencies and the water providers. He indicated that the TPL would be offering up to three more grants in 2008 based upon the interest in the program, and that Delaware would try again when the time came.

### WINTER 2007 – 2008 REPORTS

(Prior to the meeting Mr. Rambo asked the water suppliers if they could research their data for the months November – April for the years 2004 through 2008 to see what their chloride levels were and to see if there was any way to correlate the data to the number of complaints received during the same time period.)

### UNITED WATER DELAWARE

Joe Manning reported for United Water and handed out graphs for the years 2004 – 2008 showing the company's maximum finished water chloride readings for the period, the daily average finished water chloride readings, precipitation, and number of taste/odor complaints. There was not enough data to support any real correlation between elevated chlorides and customer complaints as only a few complaints fell near dates where

problems would be expected. He indicated that the precipitation data provided came from the weather monitoring station set up outside of the filter plant on the grounds of UWDE. Joe also reported that ferric chloride is added during treatment which raises their chloride readings by approximately 20ppm/sample.

**NEWARK WATER DEPARTMENT**

Bill Zimmerman reported for the City of Newark and indicated that the City has had minimal impacts from chlorides. He stated that there is some development upstream of their intakes, but it is pretty limited in the Delaware portion of the White Clay Creek (WCC) watershed.

Chloride inputs to the WCC in Delaware are most likely the bridge on Chambers Rock Road and at Hopkins Bridge Road during winter months; however the loading coming into Delaware from SE Pennsylvania is a question mark. The effect to the City is determined by storm duration and a storm that lasts less than 24 hours may not be noticed in any sampling. The new reservoir for the city is helping their system deal with stream quality issues. The City is going to look at monitoring of chlorides in raw water in the future.

**CITY OF WILMINGTON**

Matt Miller provided information from the City of Wilmington. Mr. Miller was unable to report any information on complaints because the city has not computerized their water quality complaints as of yet. Matt reported the following data:

- Average chloride reading for the city falls in the 30’s-40’s (mg/l)
- Highest monthly average is 47 mg/l (February)
- Highest one time reading: 530 mg/l (February 27, 2007- Brandywine Plant)

**DELDOT**

Randy Cole provided a table of Road Salt Usage for the North District for the years 2002 – 2007. Mr. Cole explained that the DelDOT salt calendar runs December thru March, therefore the 2002 year is actually December 2001 – March 2002.

2001 – 2007 DelDOT Salt Usage			
Year	DelDOT (Tons/yr)	Private Contractor (tons/yr) ESTIMATE	Total (tons/yr)
2002	18,489	4,622	23,111
2003	5,672	1,418	7,090
2004	15,273	3,818	19,091
2005	25,129	6,282	31,411
2006	5,124	1,281	6,405
2007	13,014	3,254	16,268
<b>Average/Year</b>	<b>13,784</b>	<b>3,446</b>	<b>17,229</b>

Mr. Cole indicated that DeIDOT's trucks have been upgraded with the ground speed controlled applicator devices; however the driver still has the discretion to manually override the system to salt dangerous areas (bridges, intersections, off ramps, etc). DeIDOT can now monitor application rates from trucks to see how often manual override is applied during storm events.

Randy stated that private contractors apply salt to development roads – accounting for approximately 25% of the roads in the North District. Mr. Cole estimated that the private contractors use about 25% of the salt on an annual basis. Mr. Bowman indicated that this number might be a little high, but it is a conservative estimate.

#### DHSS OFFICE OF DRINKING WATER

Ed Hallock reminded everyone that Chloride is a secondary drinking water standard (250 mg/l) and that just because a water system has a violation it doesn't mean that the system is in violation of the standard. A violation would only occur if the results from an average of samples over a period of time exceeded the 250 mg/l maximum contaminant level (MCL) would the system be placed on notice until the water quality issue was addressed.

#### GENERAL DISCUSSION

It was asked if we should consider asking PennDOT to attend future meetings of this group. Andy Bowman said that PennDOT has limited coverage upstream of the areas we are looking at and that municipalities and townships are responsible for roads in their jurisdictions in PA.

Bill Zimmerman sad that he would ask the City of Newark's Director of Public Works to attend future meetings of the committee as the city does salt roads and bridges through its jurisdiction.

#### DNREC 319-GRANT DISCUSSION

Mr. Rambo informed the committee that he was interested in submitting a Non Point Source Program grant application for a study of road salting and drinking water related issues for the Red Clay Creek Watershed. He indicated that he would like to put together a study that looks at some background chloride data and measures chlorides entering the creek after winter storm events.

Hassan Mirsijadi, DNREC, pointed out that the narrative for the grant application should mention that chlorides are applied to the ground for safety reasons, however they become a watershed issue once introduced into the ecosystem. He indicated that an effective proposal will include some test best management practices (BMP's) to evaluate during the study.

Marianne Walch, DeIDOT, indicated that she doesn't believe that the grant will fund sampling towards the project.

Mr. Bowman stated that DeIDOT is already implementing the ground speed application devices in their trucks in the North District, but was not sure if other municipalities have switched to this

application process. He also indicated that DelDOT has two road sensors placed in the North District that monitor roadway temperature and assist in the evaluation of road conditions. The two sensors are outside of the study area, but DelDOT could investigate what the costs would be to install one as a BMP in the study area.

The question was asked if there is a standard for road salting. Mr. Bowman indicated that the American Association of State Highway Transportation Officials (AASHTO) has a standard for roadway salting.

Mr. Miller asked if funds were allowed to be spent in PA from a grant? Ms. Walch stated that she believed so, as long as there was cooperation from Pennsylvania.

A question was asked about alternatives to road salt on the highways. Mr. Cole stated that there are other products that the department has investigated; however the costs associated with those products were prohibitive for the results expected, or the environmental side effects to applying them were more of a problem than using the salt and sand mix that is currently employed.

Mr. Rambo stated that he would forward a copy of the grant application to everyone for comments and suggestions along with a meeting summary in the weeks to follow. Another meeting would be scheduled during the late summer or early fall.

Meeting adjourned at 11:00 AM