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DuPage River Salt Creek Workgroup

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DuPage River Salt Creek Workgroup

Letter from the President

Winter 2014

As 2013 draws to a close, it’s a good time to reflect upon all that we’ve accomplished this past year. Our comprehensive monitoring has continued to provide the data needed to better identify and understand the stressors to aquatic life in our rivers and streams. This understanding allows us to develop programs that are effective, efficient and under local control. Inside this issue, we’ll provide updates on chloride management and a funding initiative that fit that description.

Chlorides have been in the spotlight this year. Deicing operations unavoidably result in chloride runoff, a primary barrier to meeting aquatic biological goals. We hold annual deicing workshops for both municipal staff and private contractors to promote best management practices for salt storage and operations. Participants learn that anti-icing not only reduces costs and chloride runoff, but enhances safety as it prevents ice bonding to the pavement at the onset of a storm.

The environmental impact of chlorides is a major concern with the Elgin O’Hare Western Access project (EOWA, see page 2). As originally proposed, the project would have increased area chloride pollution proportional to adding a large municipal entity the size of Wheaton or Villa Park. We foresaw that the costs of mitigating that pollution would be passed on to the local governments. We were pleased to enter into an agreement with the Tollway that creates a framework to offset any increase in chlorides due to the project. Under this agreement, the Tollway will increase funding for chloride reduction activities in EOWA watersheds. Activities will be documented and impacts evaluated by in-stream monitoring. As a result of our involvement, chlorides will be held in check and EOWA remained on schedule.

We continue working with Illinois EPA and US EPA to reach an agreement that provides DRSCW members time to analyze and implement phosphorous reduction measures in phases. In exchange, our members would commit a significant portion of resulting annual savings toward targeted watershed projects. These projects have been carefully selected to maximize benefits for aquatic biology, a core Clean Water Act objective. Based on our analyses, we are confident that additional reductions to pollutants in wastewater effluent will not accomplish the positive biological response promised by these projects. This agreement would create a win-win for all stakeholders involved.



Dave Gorman, President



Elgin-O’Hare Western Access—Groundbreaking Chloride Offset Initiative



On October 29<sup>th</sup>, Governor Quinn broke ground on the \$3.4 billion dollar Elgin O’Hare Western Access project (EOWA). The project will convert the existing Elgin O’Hare Expressway to a Tolled facility while extending it eastward to O’Hare International Airport as Illinois Route 390. A bypass on the western side of the airport will connect I-90 to the North and I-294 to the South. Post construction estimates predict significant reductions in travel times and congestion in the region.

Following analyses of EOWA’s environmental impact the DRSCW concluded that the impacts of the project’s future winter deicing

operations had been seriously underestimated. Due to ongoing water quality violations, many of the watersheds impacted by EOWA are under a State-drafted Total Maximum Daily Load requirement for chloride (the active ingredient of roadway deicing products). EOWA will release a projected 4,000 tons of road salt every year with approximately half of that being into the DRSCW’s program area. Concern that this additional pollution would make state water quality standards unreachable, the DRSCW and Tollway staff set about creating a framework that would protect aquatic resources while meeting Tollway permitting requirements.

Under the framework, the Tollway is reviewing its winter deicing program to identify efficiencies in current application practices. Initial estimates suggest that application rates can be reduced by as much as 20% without affecting service or safety. In addition, to fully offset the additional chloride loadings caused by EOWA, the Tollway, in a first-of-its-kind agreement, will cooperate with communities located within the project’s watersheds to provide funding for training, promoting alternative deicing practices and upgrading equipment. These practices will be tracked and documented as they are implemented to ensure that the additional chloride pollution is offset by a factor of 1.25 to 1. The goal is to achieve the offset by the 2015/2016 winter season, the first winter season that portions of EOWA will be open to traffic. The partners will also implement a stream monitoring system to gauge the program’s success.

NPDES Permit Fee Proposal—Alternative Funding Update

The DRSCW endeavored over the last few years to have our Agency members’ future NPDES permit fees returned to the program area to be spent as they were intended - on improving water resource quality (SB 2081). After the Senate unanimously approved SB2081, the Governor’s staff offered to assign \$2.54M from an existing capital appropriation bill to DRSCW projects, the equivalent of three years of our members’ NPDES permit fee payments. We learned that NPDES permit fees fund staff positions at Illinois EPA and agreed to accept the offer. It has been two years and we have not received the funds.

We would like to thank our supporters, including but not limited to, Illinois Senate President John Cullerton; Illinois State Senators Tom Cullerton and Kirk Dillard; Illinois State Representative Darlene Senger; Illinois House Majority Leader Barbara Flynn Currie; DuPage County Board Chairman Dan Cronin; Metropolitan Water Reclamation District-Greater Chicago Executive Director David St Pierre. We will continue our efforts and remain optimistic that the promised funding will be received.

A Guidance System for Winter Maintenance

If you read the title of this article and thought I was talking about a high tech GPS sort of gizmo, sorry to disappoint you! The guidance most critical for winter maintenance does not involve much high tech at all; it is much simpler, but even more important for ensuring that your winter maintenance gets to where it should be going.

That guidance system comes from establishing well-defined levels of service for winter maintenance. Creating levels of service involves a few steps. First, you must decide whether your whole road system will have the same level of service, or if some parts require higher levels of service.

Throughout the United States, levels of service vary for different roads, with three or four levels of service being fairly typical for a whole road system or network. Levels of service are most commonly based on daily average traffic, with higher traffic roads receiving a higher level of service. Often, special roads such as approach roads to hospitals or school bus routes are given high levels of service regardless of their traffic levels. The key point is that every road segment you take care of has a level of service assigned to it.

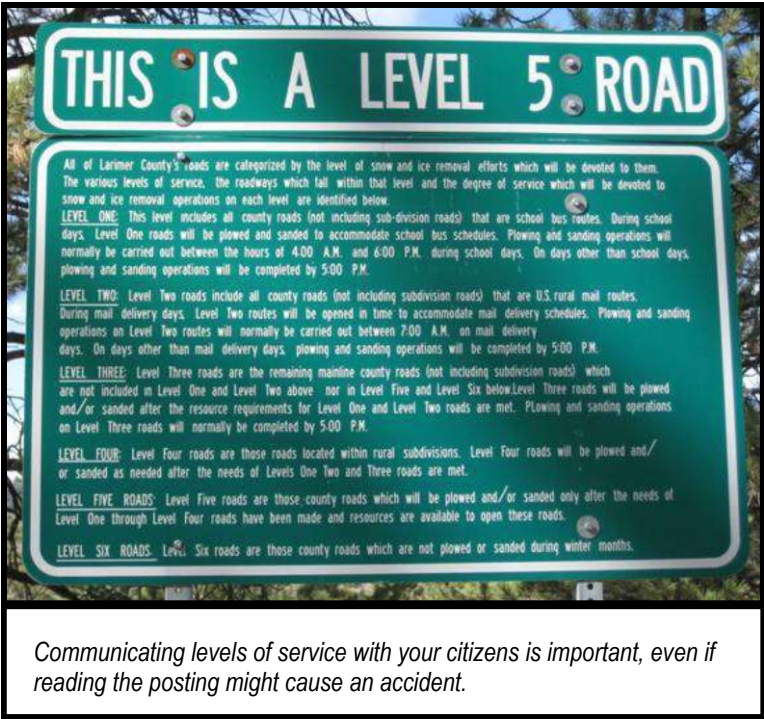
OK, so now what? You have assigned a level of service for each road segment, at least in terms of a number. For example, I have created a system with priority 1 roads (the highest level of service), followed by priority 2, then 3, and so on. Now I have to decide what a priority 1 road should be like after (or possibly even during) a storm. There are two general ways to do this. The first considers the output or effort that you will apply to the road, the second considers the outcome – the result of the efforts you have applied. Of the two methods, the outcome approach is a bit more rigorous, but having either one is better than having neither!

The output based approach is often expressed in terms of how often a plow will travel the route (this is sometimes also called a cycle time). Thus you might say that for priority 1 routes, you will have a cycle time of 2 hours or less, for priority 2, your cycle time might be 3 hours or less, and for priority 3 your cycle time would be 4 hours or less. The attraction of this approach is that it is easy to see how it relates directly to the equipment that you have available to you. This makes it easy to establish a system based on this approach.

The outcome based approach sets a road condition and a time after the end of the storm when that road condition will be reached for a given priority of road. The sort of road conditions typically used include: “bare pavement,” most of the pavement is free of ice and snow; “bare wheeltracks,” two tracks on each side of the road are substantially free of ice and snow; “groomed snow pack,” the road is covered with snow and ice, but that the snow and ice has been plowed to provide a relatively smooth (although roughened to minimize skidding) driving surface. Then for each road priority type, you assign a time range after the end of the storm when the road condition will be met. For example, an agency might say that they will achieve bare wheeltracks on their priority 2 roads between 4 and 6 hours after the end of a typical winter storm.

That last phrase “typical winter storm” is very important. You probably still remember the blizzard a couple winters ago; your levels of service should not be written with such extreme conditions in mind! You should also note that the level of service expressed in this way indicates the strategies you will use to achieve that level of service. You will not be able to achieve bare pavement if you do not use ice control chemicals as part of your winter maintenance activities, for example.

There is so much more that can be said about levels of service. Most agencies that make levels of service central to their winter operations find themselves revisiting them pretty much every year. The most important thing is that they are a guide for your winter operations – they tell you where you should be going. As the old saying has it, “If you don’t know where you’re going, you’ll end up somewhere else.”



Communicating levels of service with your citizens is important, even if reading the posting might cause an accident.