



WHAT'S IN THE WORKS

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A bi-monthly publication from the Walworth County Public Works Department.

Contact us at 262.741.3114 or Fax us at 262.741.3117

or Email llandon@co.walworth.wi.us



HIGHWAY UPDATE



The Science of Winter Storm Management

Why do we salt the roadways in the winter?

Salt is used to make the roadways safer during the winter. It lowers the freezing point of snow and ice and keeps the snow "workable" so it is more easily removed. Salt can be used for anti-icing, de-icing, or melting. Anti-icing is a technique where a chloride is applied to the roadway prior to a storm to prevent the snow/ice from bonding to the pavement. De-icing and melting is when a chloride is applied after the storm has begun in order to break up ice and snow pack or to melt glare/black ice.

What are the limitations of road salt?

The minimum practical application range for salt is a pavement temperature of 15-20°F and above. While salt will melt snow and ice down to a pavement temperature of -6°F, it can melt over five times as much ice at 30°F as at 20°F. Thus the effectiveness of salt is sensitive to small differences in pavement temperature. Counties will attempt to apply only the amount required for temperature, time and use. Too little and the roadway will refreeze, too much is a waste of money and resources.

Wind conditions must also be considered when deciding on whether to apply salt or other de-icing agents. As the temperatures drop and the snow becomes dryer, the wind can begin to blow the snow across the pavement. If there is a chemical residue left on the pavement from a previous salt application, blowing snow can be attracted to the residue and stick to the pavement creating hazardous conditions that would not have existed if no de-icing agents were previously applied. This is why counties are sometimes reluctant to apply salt or chemicals when the pavement temperatures are below 15°F. The effectiveness of salt can also be affected by the type of pavement. For example, salt works better on new asphaltic (blacktop) pavements than on concrete pavements.

The salt being used today typically includes other ice melting de-icing agents to increase its effectiveness at lower temperatures and to help it better adhere to the pavement. Adding other de-icing agents to the salt also reduces the number of applications needed. WisDOT is always looking for new ways to reduce the amount of chlorides needed to return the roadways to safe winter driving conditions. Sometimes counties use sand and other abrasives at lower temperatures to improve friction on the roadway. Abrasives have no ice melting properties and thus their use is limited.

Why doesn't the department use more sand?

Our experience, on the use of sand, indicates the benefits of abrasives (sand) applied to roadways are very minimal. Abrasives are easily displaced from the roadway by traffic and they have no ice melting properties. There are also negative environmental consequences such as air pollution and siltation of waterways. And after you factor in the higher application rates, frequency of applications, costs of sweeping and disposal, sand costs more than salt does.

What is the importance of pavement and subsurface temperatures? Why can't you just use air temperatures?

The ability of de-icing agents to melt snow and ice depends on the temperature of the roadway and not the air temperature. During the fall the pavement is often kept warmer than the surrounding air because of the warm soil. During the spring the reverse may be true. The pavement temperatures can be colder than the air because the soil is still frozen from the low winter temperatures. The sun also has a strong influence on the pavement temperatures. It can help heat the pavement and speed the melting process. Air and pavement temperatures can often differ by as much as 20 degrees Fahrenheit. For example, on a recent bitterly cold early winter day the air temperature was below 4°F and the pavement or surface temperature was 24°F, primarily because the subsurface temperature had not yet dropped below freezing.

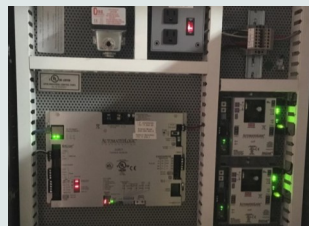
- Mike Sierakowski



FACILITY & FLEET

Recent Upgrades throughout Walworth County Complex

New Automated Logic HVAC Controls installed at the Government Center



New Heat Exchanger installed on Boiler #2 at the Government Center



DPW Break Room Remodel Project performed by our Facilities staff



- Brent Brooks



FINANCE COUNTS

Finance is busy working on 2017 year end tasks for financial reporting. Year end is one of the busiest times for Finance staff equaled only by budget season.

Public Works is also working on the continuing implementation of AssetWorks. While AssetWorks is still in the testing phase, Facilities staff has been utilizing the system on a daily basis filling out work orders and approving time. Full implementation of the software is expected later in the year.

- Penny Bishop

Walworth County Parks

In order to earn his Eagle Scout badge, Tyler Faulkner of Boy Scout Troop 236 constructed several agility items for the dog park at Price Park—3 dog training obstacles.

Once again, Tyler and his Scout friends did an excellent job for which Walworth County is extremely thankful. These young men present a very positive outlook for our nations future and we wish them all the success in wherever life leads them.



Thank you again to Tyler and company!

- Gerry Abbe



- Photographs taken by Steve Messick



MARCH IS PURCHASING MONTH

The work of procurement officers usually goes unnoticed by the public they serve. Government procurement has a significant impact on our infrastructure, including the presence of airports, housing, roads, parks, schools, hospitals, utilities, law enforcement, defense and environmental protection. The process affects everyone every single day.

Whether driving to work, flying to another city, attending a public school or university, receiving protection from peace officers, reading at a library, visiting a park or calling for a fire truck, a government officer arranged the situation by procuring goods or services to meet your needs.

Public procurement refers to government purchasing of the goods and services needed to operate, from office supplies to high-tech equipment. Public procurement seeks to ensure that the purchase of goods and services provides the needed value and purpose for the money spent.

Procurement in the public sector plays a critical role in the execution of a democracy, according to NIGP. Procurement focuses on support of its internal customers to ensure they effectively achieve the agency's missions, while serving as stewards of the public whose tax dollars bring to life the political will of its representing governing body.

When handled professionally, public procurement benefits a government and its citizens by supplying goods and services at the lowest cost possible to maximize the expenditure of tax dollars. It is equally important that the process be fair, open and accountable.

Public procurement in the United States accounts for more than 30 percent of our gross domestic product, so the importance of having professional and effective purchasing systems is unquestionable. Government agencies and departments expend \$6.3 trillion per year.

With ever-increasing demand for services and generally static tax bases across the country, public procurement plays an important role in maximizing allocated tax dollars. Public procurement also can help keep taxes lower by reducing the need for additional revenues to the highest extent possible.

Good procurement dramatically increases public confidence in government. NIGP has established the values and guiding principles of public procurement to which all governments should ascribe — accountability, ethics, impartiality, professionalism, service and transparency.

Professional public procurement promotes honesty and exposes and removes corruption, favoritism, fraud and waste by conducting the process in an open manner consistent with the rules and good business sense. It also ensures every qualified business has an equal opportunity to win government contracts.

During the month of March, community leaders across the United States are recognizing the profession at all government levels. It truly affects all of us, and when conducted properly, adds great value to governance.

No projects were awarded during December and January committee meetings.

- Nick Cramer

Sources: Opinion Section., Knoxville News Sentinel 3/12/206



PUBLIC WORKS 2018 CALENDAR



JANUARY	DIVISION	FEBRUARY	DIVISION
Joseph Leedle—21 years	Highway	Eric Flom—24 years	Facilities
Gary Melahn—18 years	Highway	Buddy Buckau—15 years	Highway
Nick Cramer—12 years	Purchasing	Dale Poggensee—11 years	Highway
Brenton Stettner—1 year	Fleet	Amy Limones—8 years	Highway
		Heather Lee—1 year	Finance

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