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Improving Customer Service and Accountability using GIS, GPS, and Web Technologies

In South Windsor we are working with new technology to allow town staff to interact and collaborate with our citizens in an effort to provide project and community event information, better respond to community complaints/issues, and allow the public to view the status of some of our mobile programs. Our software solution, built on ArcGIS by ESRI, displays work ticket locations in real-time via a public website displaying the citizens concerns, staff assignments and the tickets active status. This provides real-time feedback and accountability for all involved. Additionally, we have integrated this mapping technology with our email system to respond to staff and the original requestor to provide feedback thru all critical stages of the work ticket from submittal to closure.

“Our dashboard technology is flexible. Holding ownership of the source code, staff can make modifications and enhancements to current dashboards and produce numerous variations in as little as an hour of time which can be very beneficial in an emergency situation.”

The Citizen Service Request (CSR) dashboard was implemented in January 2012 after intensive use and testing internally by town staff and our project leaders that included Mike Gantick, Director of Public Works.
T2 INFO TO GO is a regular feature of the Connecticut Technology Transfer newsletter that highlights how to access selected materials and resources you’d like to take away with you. In this issue, we focus on Worker and Workplace Safety.

CT TECHNOLOGY TRANSFER CENTER SAFETY BRIEFS
http://www.t2center.uconn.edu/safetybriefs.php#safetybriefs
Current topics include: Chainsaw Safety - Who Should Wear Personal Protective Equipment; Hard Hat Use; New Connecticut Legislation - Fines Doubled in Municipal Work Zones; Noise Induced Hearing Loss; Operational Safety for Public Works Responders; Protecting Workers from Effects of Heat; Protective Equipment for Workers in Hurricane Flood Response; Safe Motor Grader Operations; Skid Steer Loader Safety Tips; and Work Zone Safety.

CT TECHNOLOGY TRANSFER CENTER STREAMING VIDEOS
http://www.t2center.uconn.edu/safetybriefs.php#streamingvideo
Online streaming videos of selected Technology Transfer Center training sessions. Downloadable presentations covering worker safety include: Flagger Safety and Operational Safety for Public Works Responders.

NATIONAL WORK ZONE SAFETY INFORMATION CLEARINGHOUSE PUBLICATIONS
http://www.workzonesafety.org/standards_practices/manuals_guidelines_forms/
A list of construction, maintenance, utility, safety, and traffic control manuals, as well as policies, guidelines and handbooks developed by state departments of transportation and other agencies.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION PUBLICATIONS
http://www.osha.gov/pls/publications/
Printed materials produced by OSHA covering a wide-ranging variety of subject matter.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION GRANTEE PRODUCED TRAINING MATERIALS
http://www.osha.gov/dte/grant_materials/index.html
An array of workplace safety and health hazard training products developed by non-profit agencies through OSHA safety grants.

SAFETY TIPS FOR PUBLIC WORKS
http://safety.cat.com/cda/layout?m=129925&x=7
Free safety checklists, toolbox talks and videos to download from Caterpillar Safety Services.

SAFETY TOOL BOX TALKS
http://safetytoolboxtalks.com/
A free safety resource exchange for safety professionals.

WORKPLACE SAFETY TOOLKIT
A toolkit designed by the Nonprofit Risk Management Center for public sector employers to protect their employees and volunteers. This site includes a workplace safety tutorial, quiz and more than 150 fact sheets, checklists and sample forms.
Public Works Receiving Support to Purchase Critical Emergency Response Equipment

The Public Works Emergency Support Function (ESF#3) in Region 4 recently received grant funding through the Connecticut Department of Emergency Services & Personal Protection (DESPP) to purchase and fill three critically needed traffic control trailers. The natural disasters of 2011 taught us some valuable lessons about having enough equipment on hand to support traffic control during an emergency. The trailers will be housed in Groton, Willington and Brooklyn and will be available for use throughout Region 4. Information on the towns included in Region 4 can be accessed at:


Special thanks go to Kristin Doundoulakis, Town of Groton, for all her hard work and dedication to the Public Works Emergency Response efforts.
Scott Roberts CIO/Director for Information Technology and Dawn Mulholland, GIS Analyst. The list of service requests that the public can submit is quite extensive. Examples are potholes, dead animals, missed trash and recycling and storm related damages. “Now that service requests are stored in one database we are less likely to have requests fall thru the cracks improving service and accountability,” said Gantick.

The public and staff can access the system with any internet browser and work is underway to support other mobile platforms such as the iphone, android phones and even tablets for use out in the field. Increasing the number of devices that can access the CSR Dashboard will improve the overall citizen satisfaction in their government. We have integrated a custom reporting engine that allows for flexibility as staff / department requests change. This ability will improve the visibility and analysis of the data to staff as they provide information for budgeting and program evaluation.

We also have a component of this system that allows town staff to post critical (construction) project information on the dashboard. This allows citizens to view updates to construction activities like detours and progress of construction throughout town. In addition, construction schedules, press releases, photos and links to other valuable website links will be provided. This allows the town staff, contractors and the public to stay informed about the projects in one easy to use location. There is a community events dashboard which displays where an event will be held along with associated information (examples-Hartford Marathon, Hazardous Waste Collection, E-Waste Collection). Here we will provide links to other related website or sources of information as well as road closures, and public viewing locations.

With the integration of GPS technology into the dashboard we are able to display the locations of leaf collection machines, snow plows, and other equipment to better manage and dispatch during programs like leaf collection, snow removal, and other events. During the 2011 October snow storm, we used the GPS tools with our leaf collection program quite extensively. Our GIS Analyst received daily updates from the Town’s debris contractor and overlaid the information with our leaf collection routes. Having the ability to see where the debris had been removed made the scheduling and collection of leaves more efficient and enabled staff to keep the residents updated on the status of both programs. The Town Council and Town Manager’s Office received many positive comments from our citizens on how Public Works managed the debris and collection process. We have recently completed the installation of additional GPS units in our snow plows trucks. Using the new snow plow dashboard, public works managers have the ability to see real-time locations of their trucks and determine operational guidelines are being met with regards to travel speed, centerline clearing or final cleanup. We have installed a tablet computer within the public works supervisor’s truck that allows managers to use the snow dashboard in the field.

During Hurricane Irene and the devastating October 2011 snow storm we made use of the existing citizen service request dashboard to manage the down power lines and road closures in our Emergency Operations Center (EOC). Although the tool was beneficial, we quickly learned more symbology and additional fields of data were needed to manage the events. Based on our experience and feedback from our police and fire officials we have developed an Emergency...
Operations Center dashboard. We have created new symbology for emergency requests and for outside agency crews such as CL&P, Yankee Gas, AT&T, MDC and others. This dashboard allows us to track where crews are, when they arrive and most importantly when they complete their task. With the existing ability to show real-time locations of our public safety vehicles, public works trucks and outside agencies using the GPS technology, our emergency officials can better facilitate response and deliberation.

Our dashboard technology is flexible. Holding ownership of the source code, staff can make modifications and enhancements to current dashboards and produce numerous variations in as little as an hour of time which can be very beneficial in an emergency situation. Our technology is adaptable and allows us to fulfill public requests while meeting the needs of our staff. We are providing tools to allow the public to engage our government 24/7 in an effort to build synergy and teamwork among town staff, and the public. That is the real value of the dashboard technology. And it is only the beginning!!

Info By:

Scott Roberts: CGCIO, GISP
CIO / Director Information Technology

Dawn Mulholland: GIS Analyst

Michael J. Gantick: P.E., Director of Public Works, Town of South Windsor, CT

Smart Phone Applications (Apps)

In today’s society, cell phones have become an essential communication tool for many people. Previously, cell phones were primarily used for calling others, followed by text messaging. Today, cell phones provide users with more than just interpersonal communication. With the installation of mobile applications, users are able to turn their phone into a learning, organizing, and entertainment device.

There are many apps available through the Apple, Android, and Blackberry stores for cell phones. Below are a few transportation related apps you may find beneficial. Please note that this list is far from comprehensive and the Connecticut Technology Transfer Center is not specifically endorsing any of the apps listed below.

**ANDROID APPLICATIONS:**

**CAR LOCATOR:** Can’t find your car in a crowded parking lot? Car Locator can find your car as long as the location has been saved. This application provides a parking timer, map, saved notes, driving directions, location history, and location favorites.

**FUELLOG:** The FuelLog app calculates many useful statistics including fuel consumption and economy of your vehicle, total cost and mileage, average cost per distance or gas amount, and a lot more. You can also track maintenance and services such as monthly insurance, tolls, parking, yearly taxes, and oil changes.

**THEODOLITE:** You can now carry a surveying tool in your pocket. Theodolite allows you to check angles and slopes and calculate distance in the field from your phone. You can also take pictures and map their locations, to help identify where they were taken.

**MUTCD APP:** Need to know where or how high to mount a sign? Are the pavement markings supposed to be yellow or white? When you’re in the field, this tool can help you find those answers and more. This app includes the entire Manual on Uniform Traffic Control Devices in an easy to use format.

**TURNCOUNT:** You need to know how much traffic you have before you can solve many intersection problems, and traffic counting equipment can be expensive. With Turn Count you can turn your phone into a count board that can help you collect turning movement information for cars, bikes, and pedestrians.

**BLACKBERRY APPLICATIONS:**

**SNOW PLOW PREPARATION LIST:** This app serves as a step by step guide for operating a plow truck. It covers everything from the pre-trip inspection to the cleanup at the end of the storm. This tool is geared to everyone who battles snow and ice, regardless of their experience level.

**CONCRETE CALCULATOR:** Unsure how much concrete or asphalt to order? This tool helps you calculate those quantities to help you get your order amount right.

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The CT Technology Transfer Center’s second annual Roadway Safety Poster Contest for Children gained momentum this year and was focused on the theme of “Every Life Counts in Connecticut.” Children across the state in grades kindergarten–6th grade were asked to design posters with messages on how all road users can help to improve safety on our state’s transportation system.

The entries were very creative and many depicted scenes from the recent storms, highlighting how road users can help create a safe environment during storm clean-up efforts. Others focused on distracted driving messages and different types of road users.

Madison Moran, a 5th grader from Tolland Intermediate School, took first place with her distracted driving message. Vanessa Polidoro, a fourth grader from Tolland, took second place with her poster depicting the rules of the road. Olivia Brancati (fifth grade) from Tolland Intermediate School came in third place. An Honorable Mention was given to Aishwarya Benzy, a third grader from Thomas Hooker School in Meriden and Kate McAvoy, a second grader from Center School in Willington, won for the K-2nd grade category with her poster highlighting some of the different types of road users.

Winners were recognized at a ceremony during the 2012 Work Zone Safety Press Conference; an annual recognition and promotion of National Work Zone Safety Awareness week (April 23-27) which was held on April 24, 2012 at the Department of Transportation headquarters in Newington. They all received certificates of recognition as well as prizes for their winning posters.
Upcoming Technology Transfer Center Trainings

JUNE 6: Public Works Academy – Chainsaw Safety and Storm Clean-Up
JUNE 13: Public Works Academy – Safe Operation of a Snow Plow/Winter Operation
JUNE 13: Powers & Responsibilities of a CT Legal Traffic Authority – Windsor
JUNE 14: Powers & Responsibilities of a CT Legal Traffic Authority – Cheshire
JUNE 19: Basics of a Good Road – Bethany
JUNE 20: Basics of a Good Road – Willington
JUNE 21: Basics of a Good Road – Rocky Hill
JUNE 26: Transportation Leadership Program - Conducting Effective Meetings/Public Speaking – Old Saybrook
JULY 17: Defensive Driving for Public Works Employees
JULY 18: Defensive Driving for Public Works Employees
AUGUST 14: Heavy Equipment Training – Safe Operation of a Motor Grader
AUGUST 15: Heavy Equipment Training – Safe Operation of a Motor Grader
AUGUST 16: Heavy Equipment Training – Safe Operation of a Front End Loader
AUGUST 17: Heavy Equipment Training – Safe Operation of a Front End Loader
August 23: RSMS11: A Road System Management Software – Newington, CT
AUGUST 28: Fundamentals of Analyzing & Solving Local Traffic Problems
AUGUST 29: Fundamentals of Analyzing & Solving Local Traffic Problems

Greenwich Public Works Department Commemorates National Public Works Week
By: Melissa Evans, Traffic Operations Coordinator, Town of Greenwich

Greenwich Public Works held its second National Public Works Week event by holding a Public Works Day at one of our facilities. The event was sponsored by many of the companies we work with on a regular basis. We had a cookout, complete with an ice cream truck, displays highlighting each Division’s accomplishments, several trucks for folks to check out and a very impressive attendance. Not only did we have over 100 employees attend, we also had more than 10 companies sponsor the day and they sent over 20 representatives to celebrate with us. Also in attendance were several of our local government officials and committee members. We even had a Public Works quiz for people to take, and submit for a prize—we awarded 5 prizes—including some great gift cards!

Proper Lifting Techniques

**PREPARE FOR LIFTING**

- Wear shoes appropriate for the task being performed.
- Wear gloves if needed for gripping the object or to prevent scrapes and cuts.
- Adequately warm up or stretch prior to attempting to lift heavy objects.

**SIZE UP THE LOAD AND WORK AREA**

- Assess the land before you lift.
- If the load is heavy or clumsy, get a mechanical aid or help from a coworker.
- If the weight of the object is unknown, tap it gently to determine if it can be safely lifted.
- Divide large loads into smaller ones.
- Check for rough edges or abnormalities that could affect your grip.
- Make sure that you have a safe path to carry the load.
- Aisles should be kept clear.

**LIFT SAFELY**

- Avoid wet or slippery areas.
- Make sure you have a clear place to set down the object.

- Keep your feet apart, staggered if possible.
- Keep your back straight during the lift.
- Get a good grip on the load and keep your elbows tucked in.
- Keep the object as close to you as possible.
- Place your feet close to the object and center yourself over the load.
- Lift by straightening your legs; raise up with your head first.
- Do not bend at the waist or twist. If you must turn, turn with your feet, not your body.
- Set the load down properly using the same principles.
Technology Transfer Center Request Form

_____ Please change my address/contact information as indicated below.
_____ Please add this person to the mailing list. _____ Please remove this person

Name: ______________________________________________________________
Title: ________________________________________________________________
Agency/Organization: ___________________________________________________
Address: __________________________________________________________________
City/State/Zip: ________________________________________________________
Phone: _________________ Fax: _________________ E-Mail: _________________

I would like to see a future newsletter article on the topic of: ______________________
I would like to suggest the following future training topics be offered by the T2 Center:
____________________________________________________________________
I would like to request the following informational resource materials:
____________________________________________________________________

Please fax a copy of this form to (860) 486-5718 or mail to:

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