

NOVEMBER 2012

# INSIDE



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## Highway Division updates GIS portal

**M**uch of the data collected by the Iowa DOT has a spatial component, a piece of geographic information to which the data can be tied. For the past few years, several employees in the Highway and Information Technology divisions have been working to link these various databases together so the information can be viewed on one map background. The data includes items as varied as sign locations, bridge sufficiency ratings, current project schedules, or as-built plans from the original construction of a piece of infrastructure. Anything with a geographic location can be included in the Highway Division's geographic information system (GIS) portal.

Scott Marler, environmental resources manager in the Office of Location and Environment (OLE), has led this project for the past few years. He said, "The Highway Division's GIS portal grew out of a consultant-built project several years ago that looked specifically at spatial data along the Interstate 80 corridor. Two years ago, other elements were added from our office that included archeological data and environmental asset management. Once those pieces were incorporated, we started looking at other elements that could be useful to have in the Highway GIS portal."

Marler and a small group of DOT GIS coordinators and IT specialists began researching the available database structures and gained approval from the Information Plan Steering Committee for funding to build on the core technology to make the portal applicable statewide. The result is the Highway Division GIS portal, available internally to all DOT employees logged on to a DOT computer.

The graphic interface uses the Iowa DOT base map, and a Google® map layer can also be engaged and used to view street views of any location along the Primary Highway System. "I think the Google map feature will be very helpful to a user who needs to see the area from the ground, but doesn't have the time or opportunity to travel."

The roadway data located on the highway links back to Iowa DOT's linear referencing system (LRS). Other data that is not located on the highway uses either Geomedia or ArcView computer software to store the data's geometry. Marler said, "A user can draw a shape around any point on the system and the portal will show data related to those points, no matter which of the many databases the data is stored."

Eric Abrams, DOT GIS coordinator, said "One of the most powerful features of this GIS portal is the ability to query different data layers. Users can get answers to questions without needing to know how to connect to multiple databases."

The portal was developed with users in mind, with tabs and tools at the top and a legend on the left. "We hope to make this tool very intuitive," said Derek Peck, GIS coordinator in the OLE who has been working on developing the portal for several years. "There are features that allow a user to zoom to a district, area of supervisor's responsibility, township section range, milepost or bridge. Or they can just type in a project number to zoom right to that project."

Because the Highway Division now stores coordinates for every project, the GIS portal includes a new tool to accurately locate the beginning and ending points of projects. "This tool will allow users to quickly and easily find and store project coordinates," said Kim Powell from the IT Division.

Once the data is found on the portal, there are options to print or share maps, making it much easier to share specific issues between work units. Marler said, "There is also a library of predeveloped maps that people can easily access. These include the vertical clearance map and five-year program, among others. We expect this library to grow over time as employees create maps that have a long-term useful life to others."

"Because there is proprietary information in the portal, we currently limit access to DOT employees only," explained Marler. "In the future, we hope to have areas of the portal secured by a user name and password for sensitive information, but we would like to make the general information available to anyone who is interested."

The Highway Division GIS portal team members are Scott Marler, Derek Peck and Jim Rost from the OLE; Kim Powell, Andy Janus and Andres Amador from the Information Technology Division; and Eric Abrams from the Performance and Technology Division.

*The Highway Division GIS portal is expected to be launched within a few weeks. An email will be distributed when the portal is available.*



## GPS/AVL data more meaningful with use of GIS technology

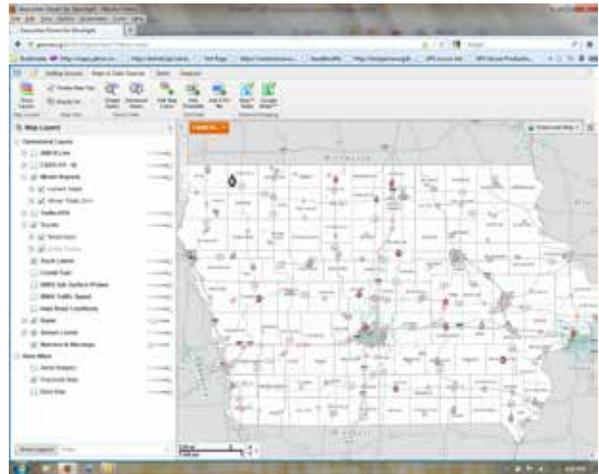
After very successful testing in the past few years, the Iowa DOT is now fully incorporating global positioning system (GPS) and automatic vehicle location (AVL) technologies into winter maintenance by equipping most snowplow trucks with sensors and cellular communication devices that allow supervisors or other DOT employees to monitor a variety of elements on each truck. Annette Dunn, winter operations administrator in the Office of Maintenance, says nearly all the trucks will be outfitted with the GPS/AVL technology by the end of February.

The AVL technology is linked to a GPS receiver to allow the unit to collect data about the truck's spreader controller, plow position, engine status, pavement temperature, and vehicle location and speed. The AVL part of the technology has shown significant promise for meeting the challenge of simultaneously increasing productivity, quality and environmental stewardship.

Dunn says the Iowa DOT testing has shown for every dollar spent on GPS/AVL technology, \$6.40 in benefits is seen in reduced use of resources, especially materials like salt. She said, "The field staff have been extremely helpful in installing, testing and providing feedback on this equipment. Because of their efforts, we are able to use the technology statewide, where we expect to at least maintain, if not increase, the cost-to-benefit ratio in the future as we more fully utilize the information provided by the GPS/AVL system. Not only will using this data allow us to refine our highway treatment practices for specific topographies and weather conditions, we expect it to assist in the evaluation of equipment such as plow durability because we'll be able to closely monitor the use and condition (plowing/not plowing) of each plow blade. We could not do this analysis without the assistance of the field staff."

The mountain of data being collected is only useful if it can be put in a framework where employees can analyze it in a meaningful way. In July, Eric Abrams, the agency's geographic information systems (GIS) coordinator, began coordinating the various databases fed by the GPS/AVL equipment on the snowplows into a Web-based application using a map background and dashboard. He said, "What this does is expose the data through a Web-based service so users can easily turn layers off and on to view different elements individually or layered together on a map."

In addition to all the data coming off the trucks, the application also offers supervisors the option to monitor twitter feeds for tweets on specific roadways. Dunn said, "Supervisors can follow what the public is saying about a



specific location on the dashboard. They can also turn on the layer to plot the tweets on the map to see if there is a common issue in one area that needs to be addressed."

Currently, the application is available to maintenance supervisors and others who need access to the information. While the data feeds are currently limited to Iowa DOT facilities, including garages, district offices and the operations support center, Dunn explained that during emergencies, the data can be piped to the State Emergency Operations Center at Camp Dodge in Johnston. "For major emergencies, having this information, especially the location information of our vehicles, available to statewide emergency managers will be a major step in increasing safety and efficiency during a crippling winter storm."

This GPS/AVL Web-based application, much like the Highway Division GIS portal highlighted on the previous page, has been made possible by the behind-the-scenes work of many GIS coordinators and Information Technology Division support staff over the last five years.

As the team leader of this group, Abrams says these types of applications have been in the works since 2007, but the technology that makes viewing the data on a dashboard and Web-based map has really come together in the last 18 months. "While designing the architecture of the system and developing the data into the correct format has been an ongoing process, we are at a point now where making the data available in this format is fairly simple. System development took some time, but now that work is done and adding data layers or developing new applications takes very little time. I see use of these applications for a variety of functions increasing in the future."

# Winter dashboard upgraded to Web platform

Last winter season, the Iowa DOT debuted a “winter dashboard.” This interactive reporting system was available to Iowa DOT maintenance managers to allow them to more closely monitor salt use. This year’s version of the dashboard is even more robust and accessible because it has been moved to an Internet-based platform.

Tina Greenfield of the Office of Maintenance developed the original dashboard, and with input from many of dashboard’s users, worked with the Information Technology Division to identify a vendor for the update. “The data that drives the new dashboard has not changed,” said Greenfield. “We still rely on the instructional memoranda (IMs) to provide the baseline data. The major difference is that this one is more intuitive to use and fairly simple to set up, but still robust. It has lots of options and tools that we couldn’t get using the old format.”

Greenfield said the Office of Maintenance used the feedback received last year to update some of the IMs and load them into the new dashboard. A few of the changes include a new category for “freezing rain” and increasing the “start” temperature for highway treatment from 32 to 33 degrees Fahrenheit to allow for cold spots. Greenfield said, “These changes are to allow for more salt on wet roads during the first couple of hours of early- or late-season storms where road temps are not freezing, but will get that way after dark, or for conditions where rain is changing to snow. If left untreated, wet roads become a problem when temperatures drop and the snow starts to fall because snow bonds heavily to the wet roads if they are not treated.” She

continued, “These may be minor adjustments, but they are just the kind of information we rely on the field to provide so this tool is as accurate and useful as possible.”

The expectation for garage employees is to follow IMs more closely, and Greenfield says using the dashboard should make that easier. “Using the elements of the dashboard, a maintenance manager can see at a glance the salt use either statewide, by district, a supervisor’s area of responsibility, or garage; and how it compares with the expected use based on the IM. The goal of the dashboard is to provide consistency throughout the state,” she said. “No computer program can replace the experience of the field employees,” said Greenfield. “But we want to try and translate that experience into data that can be shared with other supervisors around the state.”

Other changes to this year’s dashboard include options to drill down into interfaces to refine the data shown; chart views that scale automatically based on the data set; elements that can be turned on or off easily in the charts; and an increase in levels of information to include the supervisor’s area of responsibility. Greenfield said, “Another new feature that will interest garages with Interstate miles is the option to see A service-level roads compared to B and C service levels,” said Greenfield.

Maintenance managers can share the dashboard information with field staff using new export and print options. “I think the functionality of this product not only meets our current needs,” said Greenfield, “But it can be expanded to multiple applications, such as asset management.”



## Salt retention study

**S**alt only works to melt snow and ice on the roadway if it stays on the roadway. Seems like a simple idea, but, in an effort to get the best result, the Iowa DOT continues to experiment with different spreader equipment, truck speeds and brine rates to increase the safety of the traveling public during harsh winter weather.

In early October, the Highway Division's winter deicing committee, working with the Institute for Transportation (InTrans) at Iowa State University, conducted a salt retention study at the Dallas County weigh scales. Tina Greenfield from the Office of Maintenance said, "We had been looking for a location for this study, but we needed a section of road where there was no traffic and enough length for the snowplow trucks to get up to speed. The scale was closed for equipment replacement, so one of the lanes at the facility was the perfect spot for the salt retention study."

The methodology of the test was fairly simple. Greenfield said, "We recorded 33 runs. We tested three different spreaders, speeds and prewet rates. We also ran two dry tests for each truck, one at 25 mph and one at 40 mph."

Salt landed on grids drawn on a rubber mat as each truck made a pass. After each pass, members of the deicing committee used squeegees to collect salt and brine on the mat. InTrans staff will analyze data to see if there are clear elements during the testing process that allowed for more salt to remain on the roadway.

Another element of data collection for the study was a slow-motion camera recording each test run to allow researchers to look frame by frame to see exactly how the salt falls, bounces and scatters on the roadway for each scenario. "Having the cameras in place was something we had not tried before," said Greenfield. "We are very interested to be able to see in high resolution exactly how the salt falls onto the roadway from each type of spreader. That will allow us to make better decisions for our winter operations going forward and give us ideas on possible improvements that can be made to spreaders."

This winter research project is just one of several being conducted to help the Iowa DOT be more effective in the use of materials and make the roads safer for travelers.



*The salt retention study examined the amount of salt retained on the roadway using various spreaders, brine rates and truck speeds.*



*Once the salt had settled on the test area, it was collected and will be analyzed by InTrans staff.*



## Process improvement and freight mapping event

"The whole thing is about understanding who we are and what we do. It isn't that a process is bad, but everything can always be improved."

— Mark Lowe, Motor Vehicle Division director

No process is ever going to be perfect, but there is value in continuously improving whatever can be made better. For the past few years, the Motor Vehicle Division has been looking at its processes using tools related to Lean Six Sigma to eliminate waste and improve quality.

Nearly two years ago, the Office of Driver Services used one of the Lean Six Sigma tools, the Kaizen process, to refine the way applicants receive temporary restricted licenses. In this Kaizen exercise, employees mapped out the current process and found ways to eliminate redundancy and reduce the customer wait times.

With the success of this project, Mark Lowe, director of the Motor Vehicle Division, wanted to dig deeper into the Lean Six Sigma toolbox and explore other ways to improve processes. The department sent out a request for proposals, and the Iowa Quality Center was chosen to train Iowa DOT employees on the concepts of Lean Six Sigma and attain green belt (intermediate) certification in Lean Six Sigma.

Lowe said, "We wanted to move to a more complete set of tools with the Iowa Quality Center that included training a group of our own employees to become team leaders, called green belts, so they can lead midlevel projects to gain experience. Our hope is that some may become trained at the higher black belt level to help our own employees understand their processes and how they work together."

In partnership with the Iowa Quality Center, the DOT's first green belt training was held last spring. David Putz, Kate Murphy and Matt Haubrich, Performance and Technology Division; Jesse Tibodeau, District 1; Katie Johnson, Right of Way; Phil Meraz, Rail Transportation; and Brandie McCuen-Burgos, Motor Vehicle Division, attended. A second class was held this summer and included Hale Strasser and Gina Perez, Information Technology Division; Wade Bartz, Traffic and Safety; and Mark Lowe. The trainees are now working on projects to complete their green belt certification training.

In developing the training projects, the group has been challenged to utilize the correct tools for the process being studied and customize the tools to meet the needs of each office. By using the correct tools and listening to the voice of your customers, both goals of improving the speed and process flow while eliminating defects can be achieved.

Murphy, Putz and Johnson combined recently for an event to map out the way freight moves in our state and the process in place at the Iowa DOT to assist in that freight movement. This "freight event" brought together employees from all Iowa DOT divisions for a process-mapping session where representatives could sit down face to face and discuss overlaps, gaps and duplications in efforts.

***Freight mapping, continued on page 7***



## Freight mapping, continued from page 6

“Each person came to the session with data from the freight process in which their offices are engaged,” said Murphy. “There is an increased comfort level when people sit down face to face. While email can be effective, meeting the person you are communicating with and developing a rapport can make the flow of information that much better. The goal was to get everyone in the same room to look at the freight system at a higher level, not just at one component.”

The four-day process-mapping exercise dealt specifically with data and will result in data-based outcomes. Murphy said, “Using the Lean Six Sigma tools, participants are not just talking about what to improve, they are actually working at implementing the changes to make the processes better.”

Following the sessions, a process map that illustrates each participant’s contribution to the successful movement of freight in Iowa was developed. Participants have an action plan to complete and will be reviewing the process map. The team’s progress will be used to improve the overall picture of how freight moves in our state. Tammy Nicholson, director of the Office of Rail Transportation, has been named as the point person to lead an external freight council and an internal working group to identify and resolve freight issues. Look for updates of this effort in future editions of INSIDE.

## Commodity flow

The top five commodities shipped to, from and within Iowa (calculated in tons and listed in order) in 2006 were cereal grains, coal, gravel, other foodstuffs, and animal feed.

When calculated according to the value of the products shipped, the top commodities shipped were machinery, coal, motorized vehicles, other foodstuffs, and mixed freight.

U.S. Department of Transportation, U.S. Department of Commerce, 2007 Commodity Flow Survey. The survey was conducted in 1993, 1997, 2002, and most recently in 2007. To view the complete survey report, visit: [www.bts.gov/publications/commodity\\_flow\\_survey/1997/states/iowa/pdf/entire.pdf](http://www.bts.gov/publications/commodity_flow_survey/1997/states/iowa/pdf/entire.pdf)

## Shipment characteristics

Trucks transport 82.9 percent of the shipments originating in Iowa, according to the total value of the commodities. This is followed by rail at 6.6 percent, water at 0.9 percent, air at 0.4 percent, and other modes 2.5 percent.

When measured according to tons shipped, trucks transport 81.4 percent of goods, rail 13.9 percent, water 2.8 percent, and other modes 0.8 percent.

Commodities originating in Iowa travel an average of 10 miles by truck, 836 miles by rail, 1,203 miles by water, and 1,116 miles by air. (2007 Commodity Flow Survey)



## Changes at Vehicle and Motor Carrier Services

**A**n organization does not function well in survival mode. But two years ago, that is the mode in which staff in the offices of Vehicle Services and Motor Carrier Services found themselves. Early retirements and the decision not to refill the vacancies had impacted four positions from Motor Carrier Services and three from Vehicle Services. Tina Hargis, director of the now combined Office of Vehicle and Motor Carrier Services, said, "We needed to rethink the way we approach work flows and customer service delivery."

Combining the offices was the first step. In May 2010, the former director of the Office of Motor Carrier Services retired and Hargis, the director of the Office of Vehicle Services, stepped up to assume oversight of combining the two into a cohesive unit. She said, "There were several similar business processes in the two offices, such as titling and accounting, and combining resources was the best way to address the decrease in staffing. We also combined the over-the-counter customer service area in our office."

Because of the staff reductions, cross training became a top priority. "When we started looking closely at the work being done, especially with motor carriers, we found the process to be very 'silo' oriented. Each person had their tasks to perform and there were limited staff who did multiple processes," said Hargis. "Once we understood what the total work flow looked like, we could move forward to combine functions and cross train employees where it made sense. It was evident that we needed bench strength to assist with the multiple peaks of the business flow, and we needed to identify how we could better manage our resources for optimum customer service delivery."

While the immediate need of employee training was being addressed, Hargis and her team began working diligently to move more of their business processes to electronic formats. "I think sometimes our employees thought some of the ideas were a little crazy, but the team is receptive to trying new things," said Hargis. "When we first combined, we reduced our hours of service and eliminated customers calling in for oversize permits and required their requests to be submitted via the Web, fax or in person, which allowed us to accomplish serving the customer with the remaining staffing resources. We are always trying to improve our processes to gain efficiency with the current staff to accommodate the increased workload that has occurred in the past two years. The team has been resilient and adaptable to change."

Another idea was having motor carriers complete their own unified carrier registration (UCR) filing online using the national registration web-based system. "Carriers were faxing or mailing in paper registrations and then our staff was

going online to complete the registration for the carriers," said Karen Smith, a supervisor in the office. "We are now working with the carriers to get them to register themselves online rather than having our employees complete that task. It was a simple, common-sense change, but it will make a significant shift in workload."

Another change the office has instituted to more evenly distribute workload is annual commercial motor carrier registrations. "In the past, all motor carrier registrations were renewed in December," said Smith. "This will be the last year for annual registrations that create a large workload for employees."

With legislative changes made in the last session, the office will implement staggered registration for the 2013 registration year. Hargis commented, "We worked with the carriers and Iowa Motor Truck Association to get their feedback on the proposed changes. The carriers were given the opportunity to pick their renewal month. We've been pleased to see the carriers' choices for 2013 registration months have been pretty evenly spread throughout the year."

Smith also points out that with staggered registration some of the stickers that used to be needed during the registration process will be eliminated and replaced with a registration plate designating a "permanent" status. Smith said, "Carriers will have two options, apply for annual or permanent registration plates. Annual plates will still require a sticker, but permanent plates will have the word 'permanent' designated on the plate itself. For the annual stickers, the colors will coordinate with the annual registration stickers used by the counties to make it easier for law enforcement to identify out of date registrations."

Changes to the way annual registration stickers are issued will also reduce the need for manual work by employees. Smith explained, "Right now the stickers are manually matched up with the registration and plate and sent to carriers. With the new system, a sticker will be embedded on the cab card registration the carrier receives, just like you would see coming from the county treasurer for your personal vehicle."

While to an outsider the changes may seem minor, Hargis and Smith say they are predicting significant changes in the workload of their employees. "We won't be just surviving and getting the job done," said Hargis. "And, even as we implement these changes, we will continue to refine and improve our processes. It is always a work in progress."



## License plate production large part of IPI legacy

**A**lthough the massive limestone walls of the 15-acre Anamosa State Penitentiary have not changed since the facility's charter in 1872, much inside the prison walls has kept pace with life on the "outside."

One process that has changed with the times is the production of license plates by Iowa Prison Industries. IPI has been producing license plates for Iowans since 1926. Once a labor-intensive and tedious process, the digital age has transformed the way offenders produce license plates. In 1996, Iowa was the first state to move to an all-digital plate system. The process now takes a computer file of the county name and number/letter combinations and electronically feeds it to a printer that imprints the information on every set of plates.

There are several varieties of plate designs on which the letters and numbers are printed, from the Iowa's basic blue cityscape background to colored backgrounds for all the specialized college and university plates. Because IPI had one of the first digital license plate printing processes in the country, other states and countries have toured the prison work program.

For all plates, once the rolled material is printed with the letter and number combinations, that vinyl material gets a protective coating and is then adhered to a roll of metal sheeting. The metal is fed into a machine that die cuts the license plate outline and punches holes in the plates. After the plates are cut to size, the pairs of plates are quality checked, matched up and prepared to be shipped to the counties that ordered them. (See photos on page 15.)

A major upgrade and cost savings with digital printing is the ability to print plates on demand. A county treasurer's office now places an order with IPI and the order is filled. There is no longer a need to estimate long-term usage and store plates until they are needed.

Al Reiter, associate warden at the prison, oversees the offenders working for IPI. "We try to mirror the outside," he said. "We have several shops within the prison where offenders work an eight-hour shift, five days a week to learn skills and earn money that goes into an account to pay items like child support, restitution or fees they owe from their offenses."

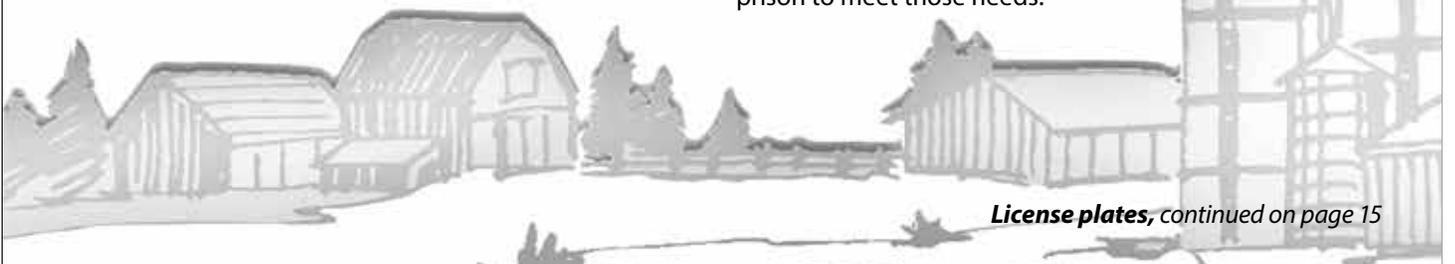


*Al Reiter, associate warden at the Anamosa State Penitentiary, (right) explains the initial steps of the license plate making process to Iowa DOT Director Paul Trombino, Motor Vehicle Division Director Mark Lowe and Darcy Austin from IPI.*

In the license plate shop offenders make from 55 cents per hour up to \$1.41 per hour, depending on the job performed and length of time the offender has been working in the shop. "They move up the work ladder here, just as they would at a job anywhere else." Reiter continued, "Because there are relatively few full-time jobs available compared to the population, work inside the prison is considered a privilege. Offenders must apply for jobs, prepare resumes and participate in interviews, just like they will do when they are released. Once they have a job, they learn a work ethic and have performance standards they must meet in order to keep the job and advance through the shop."

Reiter said 90 percent of offenders will return to society. By working a steady job while in prison, offenders develop positive attitudes, learn good work habits and marketable skills. Those who work while in prison have been shown to have a much lower rate of returning to the prison system once released.

IPI is self-funding and operates at no cost to taxpayers. Iowa Department of Corrections Director John Baldwin said, "Because IPI is self-funded, it is important to partner with other state agencies to assess their needs and then develop programs inside the prison to meet those needs."



*License plates, continued on page 15*

## All for One activities

Toys for Tots campaign set for Nov. 26 to Dec. 7



Old favorites and a few new ideas highlight this year's Iowa DOT Toys for Tots campaign. New this year, a giving tree will be placed near the mailroom with "idea" tags with needed items. These are simply suggestions to help get you started shopping for Toys for Tots items.

Also new to the schedule is "Wrap up the Holidays," a gift-wrapping service (similar to gift-wrapping services at a mall). The first of three wrapping events will be Wednesday, Dec. 5, from 1 to 3 p.m. If the service proves useful, it will be repeated on Wednesday afternoons until Christmas. Donations of tape, wrapping paper, bows, gift tags, ribbon, decorations (candy canes, bells, ornaments, floral picks, gift bags and boxes, tissue paper, etc.) can be given to Lori Pflughaupt in Building 5 or Deanne Popp in Local Systems.

Ornaments for a "Giving Tree" will also be new this year. The "tree" will be constructed on the windows of the west walkway by the mailroom. Paper ornaments will be available for a \$1 donation to raise money for the campaign.

### Toys for Tots week schedule of events

Tuesday, Dec. 4, 8 a.m. until gone  
Bake sale with hot apple cider  
North Lobby

Wednesday, Dec. 5, 1-3 p.m.  
Wrap up the Holidays (gift wrapping)  
North Lobby

Thursday, Dec. 6, 11 a.m. until gone  
Soup lunch  
Hallway outside Café 800

### All for One summer activities wrap up

Five summer farmer's markets were held at the central complex in Ames. In addition to fresh produce and baked goods, DOTers donated crafts and popped popcorn to sell. The May, June, July and August events netted a total of \$1,241 to be divided between the Toys for Tots and Food Drive campaigns. A special farmer's market in September gathered \$263.50 to support postage costs for the "Support Our Troops" campaign.



## "Support Our Troops" campaign a huge success

During the month of September, items were donated by Iowa DOT employees to be sent to troops serving in Afghanistan. Office of Support Services employees Steve and Teri Ehrich's son, Michael (Mick), is serving in the U.S. Air Force in the region. On Oct. 11, 65 boxes were shipped to Mick's unit using more than \$900 in cash donations for the postage. Included in the care packages were a wide range of items from hand sanitizer to playing cards to candy.

We are overwhelmed by the generosity of DOT employees from all over Iowa. As parents, it is never easy to have a child serving in a war zone. It is heartwarming to know that you continue to care so much for our troops serving in Afghanistan.

– Steve and Teri Ehrich, Office of Support Services

Thank you so much to all the amazing DOT employees for your wonderful participation in the "Support Our Troops" campaign. We were totally overwhelmed with the outpouring of support. I knew I worked in an amazing place; and once again our employees proved it. Thank you on behalf of our troops in Afghanistan.

– Vicki Stamper, Support Our Troops coordinator from the Office of Policy and Legislative Services

Thanks to our troops for all that they do to keep us safe from harm. I pray we bring them home safely to their loved ones.

– Lynette Leopold, Information Technology Division





HyVee.

# Nutrition Notes

with Amy Clark



**P**ortion control is probably the most important aspect of weight management, especially during these special times when families gather and, yes, when food is delicious and plentiful. Many Americans suffer from portion distortion, a consequence of our eyes being fooled into thinking that super-sized amounts of food are the standard. As a result, we routinely underestimate how much food is on our plates and are consuming more calories, which results in weight gain. It's safe to say we have forgotten normal serving sizes.

Keep in mind this holiday season, as you head toward the break room filled with goodies, to a company holiday party or even your family gatherings, that the larger the portion, the more calories consumed. Here are ways to downsize your portions during this holiday season, whether it is lunch at work, eating out, family gatherings or company holiday parties.

## Ways to downsize portions

1. Use MyPlate as a guide. To start, measure your plate and try using a 9-inch plate as a way to reduce portion size and calories. Then, visually divide your plate in half. Fill half with vegetables and/or fruit. Fill one-quarter with lean meat or protein (lean meat, poultry, seafood, beans and peas, eggs, processed soy products, nuts, seeds). Fill one-quarter of the plate with grains, including whole grains as much as possible. Add one serving of low-fat milk, nonfat yogurt or cheese.



2. Purchase single-serve or individually wrapped items such as fruit cups, pudding cups, string cheese, granola bars or frozen fudge bars.
3. Buy frozen entrees with fewer than 10 grams of fat and 350 to 400 calories.
4. Eat just one serving of food, no seconds.
5. Leave a bite or two on your plate.
6. When eating out, eat half of the entrée at the restaurant and take the other half home for another meal.
7. Order regular or child-size sandwiches, drinks, fries at fast food restaurants; not the biggie, value or super-size meals.
8. Practice the three-bites rule – eat only three bites of a dessert.
9. Become a label reader – look for three things on the label to help determine the serving size. These include serving size, number of calories per package/container and calories.

## Estimate your portions

If you don't have a measuring cup available, here's an easy way to eyeball the correct portion size.

- ½ cup cooked cereal, pasta, rice, vegetable or canned fruit = cupcake wrapper
- 1 cup mashed potatoes or casserole = size of fist
- 1 medium fresh fruit = tennis ball
- 1 medium potato = computer mouse
- 1 ounce cheese = four stacked dice
- 3 ounces cooked meat or poultry = deck of cards
- 3 ounces grilled or baked fish = checkbook
- 1 teaspoon margarine = tip of thumb (top joint)
- 1 ounce nuts or small candies = one small handful

For more information contact your local Hy-Vee dietitian or visit [www.hy-vee.com](http://www.hy-vee.com).

*This information is not intended as medical advice. Please consult a medical professional for individual advice.*

## Family happenings

### District 1

Lori Wilkens



Carlisle garage employees **Cory Glover** (left) and **Claude Frazier** (right) participated in the “Over The Edge” fundraiser for Special Olympics Iowa on Sept. 19. This event was Frazier’s initial experience with rappelling and the first time either man had rappelled 345 feet down the Financial Center in downtown Des Moines. Glover has rappelled before with the Carlisle Fire Department, where he is the fire chief, but this was the highest he had ever rappelled. Frazier said, “It was an experience that we won’t soon forget!”

### Information Technology Division

Colette Simpson



Logan Krier, the son of **Heather Thompson**, communications technician 3 in the Information Technology Division, became a member of the Iowa Army National Guard in July. Krier is a senior at Nevada High School and, after graduation in May, he will leave for Fort Benning, Ga., to attend 16 weeks of infantry basic training and advanced individual training. Following the training, Krier plans to attend Iowa State University (while still maintaining his fierce loyalty to the Nebraska Cornhuskers) and become a member of the nationally ranked ISU Army ROTC program. Krier is the nephew of **Scott Gustafson** in Support Services and grandson of **Debra Thompson** in the Information Technology Division.

## Location and Environment

Susie McCullough



**Angela Poole**, environmental specialist senior in the Office of Location and Environment, and her husband, **Chris Poole**, transportation engineer specialist in Design, welcomed their second child Sept. 10. Manford Iver tipped the scales at 9 pounds, 10 ounces and measured 23 inches long. He joins big sister, Marigold, 2, at home. Congratulations to the Poole family!

## In memory

**L. Stanley Schoelerman** died on July 8, at St. Luke Nursing Home in Spencer. Schoelerman was born on July 22, 1924, to John F. and Alice B. Schoelerman at their farm home south of Everly. Schoelerman attended school in Everly and graduated from high school in 1942. He married Muriel Wynette White Sept. 30, 1945. The couple lived and worked on the Everly family farm until 1964. Schoelerman was active in American National Cattlemen's Association, and Farm Bureau, and was Clay County Soil Commissioner chair for two years. Schoelerman was named Outstanding Young Farmer in the state of Iowa in 1959.

In 1964, Schoelerman left the farm, moved to Spencer and joined Petersen Sheep and Cattle Co. Two years later he bought the company with business partners Russ Heine and John Miller. In 1974, Governor Robert Ray appointed Schoelerman to the Iowa Transportation Commission, followed by another appointment to the National Motor Carriers Committee in 1980.

Schoelerman is survived by three children; four grandchildren and three great-grandchildren.



## Kudos!

*These are letters that have been submitted to the editor. They may have been edited for length and continuity.*

To: Shawn Lode, Iowa Economic Development Authority  
From: Denise Sharbaugh

My husband and I visited Iowa in July and August of this year and I just wanted to write and say thank you for all that you and the Iowa tourism office do for travelers.

Every employee at every rest stop and welcome center we visited was unfailingly helpful and polite. Everyone went out of their way to offer help, answer questions, give directions, and recommend places to see and stay. We traveled through 12 states this summer and the employees at the Iowa welcome centers and rest stops were by far the nicest, best informed and most helpful. If, through the sheer volume of information offered and enthusiasm of the employees about their state, the object of the rest areas and welcome centers is to get people to return to Iowa, then your mission is accomplished. We ended up staying two extra nights in Iowa because of the information and conversation found at the rest areas (particularly Underwood). My husband and I are planning to return to Iowa to find out what we missed, instead of unfairly treating it as a pass through state as we did this summer.

Moreover, each rest area was clean and well maintained. I particularly loved the Adair (westbound) rest area because of the wind turbine and green design. It may sound goofy, but as a fifth grade science teacher, I have used pictures and information gathered at that rest area in my environmental science lessons. Because of that rest area, my students know that green buildings exist - they just have to visit Iowa to see them!

Thank you for making a rest area a teaching tool for a teacher 1,000 miles away. Thanks for having clean, safe and well maintained rest areas. Thanks for hiring enthusiastic, nice and informative people to answer questions from weary tourists. Thank you (and the whole of the tourism office) for showing us that Iowa is more than just a pass through state and that there are wonderful things to discover when you're there!

To: Mark Voss, Ames Driver's License Station  
From: Wayne P. Davis

I wanted you to know how much I appreciated the patience and helpfulness of Chris McDowell when I was in your office to renew my driver's license Friday, Sept. 7. She guided me through the process efficiently and with minimum delay. I had a similar experience with another of your clerks two years ago. We are fortunate to have such a well-trained and well-mannered staff to perform this important function.

(Editor's note: Chris McDowell is a driver's license examiner in the Ames DL station.)

## Personnel updates

Information supplied by the Office of Employee Services for Aug. 31 to Sept. 27, 2012

### New hires

**Steven Cotter**, highway technician associate, Des Moines garage;  
**Samuel Hiscocks**, program planner 1, Systems Planning

### Promotions

**Lorrain Bremer**, from clerk-specialist to administrative assistant 1, Driver Services; **Marina Heintz**, from accounting clerk 2 to clerk-specialist, Vehicle and Motor Carrier Services; **Dennis Howe**, from bridge inspector 2, District 1 bridge crew to public service executive 2, Des Moines maintenance; **Robert Knudtson**, from highway technician senior to construction technician senior, Britt construction; **Wes Mayberry**, from transportation engineer intern to executive officer 2, Design; **Trent Sorgenfrey**, from mechanic to garage operations assistant, Tipton garage; **Rob Thies**, from highway technician associate to garage operations assistant, Grimes garage; **Cory Thumma**, from highway technician associate, Coralville garage to equipment operator senior, Independence garage

### Transfers

**Kurt Schneckloth**, highway technician associate, from Tipton garage to Cedar Rapids garage; **Brian Smith**, transportation engineer specialist to transportation engineer manager, Design

### Retirements

**Judith Albin**, driver's license supervisor 2, Driver Services; **Dynise Collum**, highway technician associate, Cedar Rapids garage; **Steven Holland**, roadside development specialist 3, Design; **Judy Lensing**, clerk-specialist, Design; **Nyle Sheetz**, construction technician senior, Mount Pleasant construction

## Join the Wellness Committee

The Iowa DOT's Wellness Committee invites you to join the team. Employees with an interest in encouraging others to live a healthy lifestyle are welcome on the Iowa DOT's Wellness Committee. With your supervisor's approval, you can participate in monthly meetings (via video conference if necessary), plan events for your work area and support the Iowa DOT's effort to promote health and wellbeing.

For more information about the group, go to DOTNET (<http://dotnet/wellness/aboutus.asp>), or email the Wellness Committee at [dot-wellness@dot.iowa.gov](mailto:dot-wellness@dot.iowa.gov).



## Service awards

Information supplied by the Office of Employee Services for November 2012

### 35 years

**Dennis Ackerman**, Jefferson construction; **Elaine Olson**, Support Services; **David Thompson**, Sigourney garage

### 30 years

**Darla Best**, Employee Services; **Mary Call**, Muscatine DL station

### 25 years

**Jerry Adair**, Des Moines garage; **Marcia Daily**, Marshalltown DL station; **John Shimek**, New Hampton construction; **Randy Taylor**, District 2 maintenance

### 20 years

**Chris Brakke**, Design; **Gerald Busch**, DeWitt garage; **Malcom Dawson**, Materials; **David Mathis**, Waukon garage

### 15 years

**Thomas Dengle**, Grimes garage; **Patricia Hoffa**, Waterloo DL station; **Steven Lueck**, District 6 field staff; **Jeff Marienau**, Sioux City construction; **Jon Mason**, District 5 materials; **Debra Miller**, Waterloo DL station; **Brian Sykes**, Materials; **Nick Wilkerson**, Wapello garage

### 10 years

**Colleen Chapa**, Traffic and Safety; **Harlan Evans**, Oskaloosa garage; **William Golden**, District 1 paint crew; **Nathan Manderscheid**, DeWitt garage; **Stacy Ryan**, Design; **Nicholas Sailsbury**, Information Technology Division; **Michael Schoonhoven**, Ashton garage

### 5 years

**Douglas Carlson**, Urbana garage; **Tyler Chiri**, Ames DL station; **Gregory Duda**, Information Technology Division; **Steven Henry**, Support Services; **Kory Lindell**, Mount Pleasant garage; **Annette Misel**, Vehicle and Motor Carrier Services; **Jeff Oppedahl**, Design; **Carol Payne**, Ames DL station; **James Peters**, Employee Services; **Sarah Skelton**, Des Moines DL station; **Jeffrey Stratton**, Coralville garage; **Jeffrey Uhlenhopp**, Clarion garage; **Libby Wielenga**, Location and Environment; **Tammy Wright**, Sioux City DL station

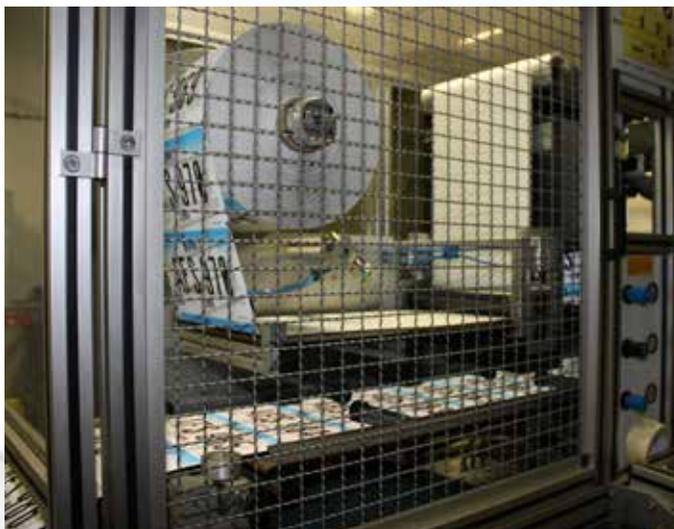


## License plates, continued from page 9

In addition to the license plate shop, the Anamosa State Penitentiary houses the Iowa's largest sign shop, producing signs for all 99 counties, many communities and several surrounding states. Another shop creates laminate and metal furniture for schools. The IPI custom wood shop produces beautiful custom wood pieces. Still other shops make furnace filters and other items. Many IPI products are available for purchase by State of Iowa employees. To see a listing of available items, visit the IPI website at [www.iaprisoinind.com/store/default.aspx](http://www.iaprisoinind.com/store/default.aspx).



After the vinyl is adhered to the metal sheeting, it is die cut and punched into new license plates.



This machine adheres the printed vinyl to metal sheeting during the license plate making process.



Once the plates are cut, matched in sets and quality checked, they are stacked and ready to be packed and shipped to the county treasurer's office.

# INSIDE

INSIDE is developed to help keep all Iowa DOT employees informed about critical issues affecting them, recognize DOT employees for their excellent service and share interesting aspects in the lives of our co-workers. For more information, contact Tracey Bramble, Office of Strategic Communication, at 515-239-1314 or email [tracey.bramble@dot.iowa.gov](mailto:tracey.bramble@dot.iowa.gov).

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District 4	vacant, Atlantic	712-243-3355
District 5	Brenda Hadley, Fairfield	641-472-6142
District 6	Sandi Byers, Cedar Rapids	319-364-0235
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Design	Vacant, Ames	
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Federal and state laws prohibit employment and/or public accommodation discrimination on the basis of age, color, creed, disability, gender identity, national origin, pregnancy, race, religion, sex, sexual orientation or veteran's status. If you believe you have been discriminated against, please contact the Iowa Civil Rights Commission at 800-457-4416 or Iowa Department of Transportation's affirmative action officer. If you need accommodations because of a disability to access the Iowa Department of Transportation's services, contact the agency's affirmative action officer at 800-262-0003.

**On the cover:** Weather delays are rare for rail freight during an Iowa winter.

**November I-Spy clue:** A large summertime treat with a cherry on top.

**October I-Spy solution:** The Great Pyramid is in the background.

# Iowa reaches driver's license reciprocity agreement with Republic of Korea

Iowa DOT Director Paul Trombino III and the Honorable Chul Huh, consul general of The Consulate General of the Republic of Korea in Chicago, signed a special driver's license reciprocity agreement between the State of Iowa and Republic of Korea on Tuesday, Oct. 30, in the Senate Chambers of the Old Capitol Building in Iowa City. The agreement is expected to assist students, travelers and business people in both the Republic of Korea and Iowa.

The formal signing ceremony was also attended by Deputy Consul General Joonho Cheon and Deputy Consul Jong Wook Han. John Lee, president of the Korean-American Society of Iowa, as well as Korean pastors, students and others living in Iowa were also in attendance.

"This agreement serves the flow of commerce and economic prosperity between the Republic of Korea and State of Iowa, while building continued collaboration," said Trombino. "We value the contributions made by Korean businesses here in Iowa and are very pleased to partner with them to assist our Iowa business leaders now living and working in that country."

Under the agreement, which was effective upon signing, Korean citizens older than 18 years old, who are lawfully present in the United States and have established residency in Iowa, will be able to exchange their valid noncommercial Korean driver's license for an Iowa noncommercial driver's license.

The applicant will have to submit valid immigration documents to establish identity and lawful presence and must pay the requisite fees and pass a vision test, but will not be required to submit to a knowledge or drive test. Similarly, Iowa drivers, age 18 or older, who are residing in the Republic



*Director Trombino and Consul General Huh sign the reciprocity agreement.*

of Korea and who possess a valid Iowa driver's license, will be able to exchange their Iowa driver's license for a Korean driver's license without being required to pass a knowledge or road test.

The Iowa DOT carefully examined driving skills and qualifications required in Korea and established they were comparable to those required in Iowa. The State of Iowa also has driver's license reciprocity agreements with France and Germany.

The Republic of Korea is the United States' seventh largest trading partner and has a strong economic presence in Iowa. The General Council Huh said, "The Republic of Korea recognizes the importance of these agreements and has signed agreements with 27 other countries and with 12 U.S. states. Iowa is a key partner because of growing Korean business commitments in the state and the fact that there are more than 9,000 Korean students currently in Iowa."



*Director Trombino and Consul General Huh with the signed agreements.*



*The group in attendance posed for a photo outside the Old Capitol in Iowa City.*