pennsylvania
DEPARTMENT OF TRANSPORTATION
PennDOT Local Technical Assistance Program

moving FORWARD

WINTER 2009/2010

A quarterly review of news and information about Pennsylvania local roads.

Pennsylvania Hosts National LTAP/TTAP Conference

More than 180 people representing LTAP/TTAP centers from across the country and around the world gathered in Pittsburgh this past July to attend the National LTAP/TTAP Conference. Secretary of Transportation Allen D. Biehler, PE, kicked off the Pennsylvania's three-and-a-half day conference by highlighting the newly developed goals and objectives of the American Association of State Highway and Transportation Officials (AASHTO). Secretary Biehler is the current president of the national association, which all LTAP/TTAP centers look to as a strong partner and resource to their activities. The secretary described the following three goals specific to the partnership between ASSHTO and the LTAP/TTAP centers:

1 Develop strategies for furthering local and tribal transportation providers knowledge of topics;
2 Promote implementation and tech transfer of DOT research; and
3 Facilitate communication. ◆

Pennsylvania's Secretary of Transportation Allen D. Biehler, PE, addresses representatives of LTAP/TTAP centers from across the country.

Reflections on the 2009 National Conference

by Steve Herman, Transportation Planner, SEDA-COG

As a first-time registrant for the annual National LTAP/TTAP Conference, I arrived at this year's event, held July 27 to 30 in Pittsburgh, not knowing what to expect. By the end of the conference, I was supremely educated about our country's transportation needs and much more appreciative of the impact that LTAP is having across Pennsylvania and the nation.

Conveying all that I learned or experienced during the 2009 National LTAP Conference would occupy more space than is appropriate for this article, but I'd like to share a few highlights of my experience:

LTAP: High Return on Investment

By listening to conference presentations and networking with attendees during breaks, I soon realized that LTAP activities are having significant positive effects in municipalities, thus yielding

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ALSO IN THIS ISSUE

LTAP's Advisory Committee Has New Chair

Simonetti Wants to Spread the Word about the Value of LTAP

Ann Simonetti, new LTAP Advisory Committee Chair.

Ann Simonetti, the new chair of the LTAP Advisory Committee, recalls first hearing about LTAP while attending a Pennsylvania State Association of Boroughs conference. When she learned about the Roads Scholar program and the free technical assistance that LTAP can provide municipalities, Simonetti, a Marysville borough councilmember in Perry County, was immediately hooked.

But, she soon discovered that far too many municipal officials are still in the dark about LTAP and its valuable services. "When I discussed LTAP at the Perry County local government association meeting, I was shocked to find out that no one had even heard of LTAP," she says. "They were amazed when they learned about its training and technical assistance and how it's all free."

As Simonetti prepares to take the reins as chair of the LTAP Advisory Committee, she wants to make sure that other local government officials have their eyes opened to the value of LTAP. She believes the role of the Advisory Committee is to help spread the word about LTAP's free services to municipalities struggling with budgetary constraints and road maintenance and safety issues.

On this page, Simonetti shares her opinions about LTAP and the value of this PennDOT-sponsored program.

Why is LTAP important and how has it helped your borough?

"LTAP's free services are always a welcome investment to local governments. Marysville has used the LTAP Technical Assistance to provide advice when we had a claim from an out-of-town individual who turned too sharply on one of our roads and suffered a tire blowout. After the manager assessed the situation, he immediately called in LTAP. Its expert engineers arrived in our borough and suggested improvements for our consideration. In this case, we resolved the problem and did not need to involve the borough engineer, which saved us money. Believing in the value of the LTAP program, we have also hosted LTAP training over the years."

What are your goals as chairman of the LTAP Advisory Committee?

"I look forward to continuing the good work that the Advisory Committee has been doing. During my four years on the committee, I have had my eyes opened as to what LTAP can do and its great potential for helping local governments with their transportation issues. LTAP recently completed a strategic plan, and implementation of that plan is critical since its points should prove profitable to all municipalities.

"I also hope to get back to a rotation where the committee meets four times a year. That way, PennDOT can keep us abreast of what is new in the transportation field, and we can share that information not just with our own local governments but, through the local government associations, with all municipalities statewide. I believe that the marketing of LTAP through all the state associations must continue to make this program the best possible."

In light of the current economic climate, what are your thoughts on the future of LTAP?

"I am hopeful the funding stream will continue for LTAP's technicians to make municipal visits. Given how things are right now in our economy, to have this wonderful service offered free to all municipalities is almost miraculous. Just like everyone else, we at the local level are feeling constraints on our budgets. LTAP offers free training and will bring its technical assistance directly to municipalities to provide a depth of knowledge that we could never get on our own. That is just invaluable to local governments. My hope is that despite the economic concerns now facing the state and federal governments, which provide funding for the program, LTAP will continue and will thrive." ◆

Interested in serving on the LTAP Advisory Committee?

The LTAP Advisory Committee is looking for a new member from the PennDOT District 9 area (Bedford, Blair, Cambria, Fulton, Huntingdon, and Somerset counties). An appropriate candidate will have a working knowledge of municipal government and must have taken LTAP classes and be enrolled (on track) to receive Roads Scholar certification (if not a Roads Scholar already). For more information, please send an email to: ltap@state.pa.us.

Funding Programs for LED Signal Crusade

by Wendy Kelley, LTAP Traffic Safety Engineer

Conserve Energy. Save money. Save time. No out-of-pocket costs required. Does this sound too good to be true? It's as simple as changing a light bulb. Well, maybe there's a little more to it than that, but with the innovative programs that are available through many agencies today, converting from incandescent traffic signal lamps to light emitting diode (LED) traffic signal lamps is easy and rewarding.

LEDs vs. Incandescent Lamps

Bottom line, LED traffic signals use less energy and therefore can lower your electric bill and save you money. A typical incandescent lamp uses 100 to 150 watts because most of the energy goes into burning the filament that is dissipated as heat. An LED lamp only requires 8 to 25 watts because of a smaller amount of heat dissipation and less wasted energy. Not only does the change to LED lamps conserve energy and save money on the electric bill, but it will save time and money thanks to reduced maintenance requirements. Incandescent lamps are generally changed once a year or at least every two years, while PennDOT approved LED lamps are guaranteed for five years and have been reported to last much longer.

Another positive factor associated with the conversion to LEDs is safety. An incandescent lamp's life can end abruptly with no warning. One day the red light is working, the next day it's not. LED lamps fade slowly as individual diodes fail which allows time to replace the lamp before a complete outage.

	LED	Incandescent
Energy usage	8 to 25 watts	100 to 150 watts
Maintenance	5 years or more	1-2 years
Safety	Lamp fades providing warning	Lamp can suddenly go dark with no warning

Table 1. Comparison of LED lamps vs. incandescent lamps

LED Costs & Savings

Although initial LED signal costs have become more reasonable over the last few years, they are still expensive to purchase and install up front whether a municipality chooses to retrofit the lamps or replace an entire 3-, 4-, or 5- section signal head. But, with claims of an average savings of 85% on the electric bill, and the ease of a retrofit installation, it pays to make the change. In addition, with the many innovative funding programs that exist today, it's easier to make the change. Some programs offer up-front financing with payback terms that are established from the anticipated savings in electric bills that are realized by the change to LED signals. The Southwestern PA Commission's website (www.spcregion.org/trans_ops_traff_mun_led) offers an "LED Savings Calculator" that can be used as a valuable tool for various municipalities to make appropriate and educated decisions. The website also includes links to funding programs which are described in the Programs & Funding section.

To date, many Townships and Boroughs have made the change to LED signals with and without the aid of partnership and financial programs. John Paden of Lemoyne Borough, Cumberland County raves not only about the 80% savings on the electric bill, but also the $16,400.00 savings that his Borough realized by purchasing the LED lamps through Pennsylvania's Department of General Services COSTARS program. More information on this program is included in the Programs & Funding section. The Borough completed a project consisting of retrofitting incandescent lamps with LED lamps at 6 intersections for a total cost of $18,500.00, or approximately $3,100.00 per intersection. With an expected $1,230.00 per intersection in annual energy savings, it will take approximately 2.5 years to recoup the initial costs.

Another success story comes from Mark Murawski, Lycoming County Transportation Planner, when the West Branch COG started working with PennDOT Engineering District 3-0 as part of the Energy Resource Center (ERC) SEDA-COG Program to retrofit 102 intersections in 12 municipalities. The LED equipment was purchased through the Lycoming County Liquid Fuels Grant Assistance Program and each municipality installed the LED modules upon receipt from the vendor. It was calculated that an annual energy savings of $1,368.00 per intersection would be realized. This translates into an annual energy savings of $139,536.00 county-wide for all 102 intersections.

Other municipalities have reported similar energy savings after they made the change to LED signals including 60% from Warminster Township, Bucks County; 66% from East Buffalo Township, Union County; 71% from Loyalsock Township, Lycoming County. Table 2 provides a breakdown of approximate costs which were determined from a signal contractor in Northeast PA. The prices include purchase and installation costs and can vary based on location, quantity, and program involvement.

	Retrofit (change all lamps)	Replace full section head
3-section head	$350.00	$750.00
5-section head	$620.00	$1,250.00
Pedestrian head	$350.00	$560.00

Table 2. Costs to supply and install LED signals

LEDs and Streetlights

Allen Kreider from Manor Township, Lancaster County reports a 76% savings after making the switch to LED traffic signals. Upon realizing the substantial savings, Manor Township plans to obtain ownership of the streetlights from PPL and change the lamps to LED. Currently, Manor Township leases the street lighting at a considerable cost, but after a 30 year cost/savings analysis with a 20 year financing program was performed by "Concord Public Financial Advisors, Inc." which projected a savings that increases yearly starting at $50,000.00 in the first year and accumulating to more than a 1.5 million dollar savings after 20 years and more than $3.5 million after 30 years, the township decided to make the street lighting LED change as well.

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Workplace safety is a concern no matter what time of year it is or what operation you are performing. In the LTAP Winter Maintenance course, the instructors emphasize safety awareness dealing with equipment and personal safety. Every year we hear about over-head structures being hit because the operator has the truck bed elevated too high when he is spreading material or someone getting injured by working on a spreader while it is still on. The following article illustrates the importance of being aware of safety issues in the winter and provides another perspective when it comes to performing winter operations. We also encourage you to review the LTAP Technical Information Sheet #87 "Winter Operations Safety Checklist." The information contained in it will help increase safety awareness to help reduce the potential for accidents. Let's have a safe and accident free winter!

Let It Snow

Safely plowing parking lots and roads

by Joann Robertson, CSP, ARM, CPCU

As essential as it is after a snowfall, plowing is an inherently dangerous business, executed on slippery roads and in blinding storms. But by following some basic safety procedures, public entities can reduce the likelihood of property damage and auto collisions involving plows.

One of the most effective ways for municipalities, school districts, and other public entities to prevent potential accidents involving snowplows is to have drivers visit assigned areas to locate hazards and map out parking lots before the plowing season begins.

Agencies should instruct all plow operators to visualize routes to assigned work sites, as well as the parking lots and driveways they'll be plowing, and to record the location of potential hazards. Operators who are unfamiliar with the route should be accompanied by a coworker, who can pass along information about sharp turns, steep hills, and potential problems associated with locations chosen to pile snow.

It's also wise for truck drivers to revisit parking lots each season. The pavement may have settled, leaving raised manholes or other hazards, newer lots may have sunk, and older lots may have developed cracks. Hitting raised areas can injure a driver and damage the plow. Mark hazardous curves or other needed areas with tall, sturdy stakes.

Advance planning is critical, so drivers should decide beforehand where to pile snow. It's important not to block access to drainage, fire hydrants, building exits, mailboxes, or other key areas. Do not restrict entrances or exits to lots and don't block or obstruct the view of drivers. Usually it's best to choose spots toward the edge of the lot for piling snow.

If snow plows are shared or a truck is reassigned from one driver to another, it is imperative that drivers share specific safety information. Were there any notable problems? Does the truck need to be restocked with any emergency supplies? Does it need to be refueled or refilled?

If drivers will be working in tandem, they should discuss their plans with each other and use a radio, not hand signals, to communicate. Clear communication is the key to working safely together.

Operators also should check trucks at the start of their shifts, looking around and under the vehicle for obvious problems. In the cab, drivers should be sure to run down a checklist that includes mirrors, wipers (they should be clear of ice) and fluid, the heater, windshields, headlights, all other lights, and fuel. It's also important to see that plow attachments, lifting chains, tire chains, pins, connections, and the salt and sand spreaders, are set properly.

Some municipal entities have begun using a salt-brine system to treat or pretreat the roads. Because of the rising costs of sand disposal, salt has become more popular to use on winter roads than sand. In the salt-brine system, the two components are combined into a liquid or paste to apply to roads. This operation uses mainly the same equipment as a traditional salting or sanding operation. When the solution is applied, it is immediately activated to begin the melting process. When poor driving conditions are predicted, the solution can also be applied to create a barrier over the road, preventing a chemical bond from forming before the snow or ice arrives. This pretreatment, called "anti-icing," is very effective at easing snowplow operations. Anyone who handles the salt pellets or salt solution should wear rubber gloves because the product is drying to the skin.

Not every hazard lies outside a vehicle, so operators also should check for items in the cab that might be distracting or pose a danger. Drivers should throw out trash, such as coffee cups and soda cans, and store other items securely. If an empty can gets stuck under the pedals, the result could be disastrous, and if an accident occurs, any loose item could become a deadly projectile.

Here are some additional tips for snowplow operators:

- Always wear a seat belt when plowing because hidden objects may cause sudden stops.
- Never plow with your head out the window; hidden objects could cause head and neck injuries.
- When operating a plow, it is imperative that drivers check their mirrors about every three to five seconds to avoid the danger of hitting a motorist who has advanced into a blind spot. Double-check in the rearview mirror when turning.
- Try to scan ahead about a quarter mile. Look for suddenly appearing hazards such as pedestrians, stalled cars, animals, or disabled vehicles.
- A plow isn't a bulldozer. It's not designed to move rocks, dig dirt or spread gravel.
- When two snowplows pass in opposite directions, remember to give the plow blades additional clearance.
- Other motorists may be hidden behind the plow and may pull out in front of you.
- Be on guard around parking lots. Motorists in hospital parking lots, for example, can be emotionally distracted, while 24-hour convenience store lots will have shoppers pulling in and out all day.
- Use a three-point grip when entering and exiting the truck cab – two feet and one hand, or two hands and one foot – to avoid injury. Always face the truck when getting in or out of the cab, and don't jump. Use footholds and handholds. When your feet hit the ground, the surface will most likely be wet or icy so use caution.

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Super Job

Department supervisors are responsible for overseeing operators and setting an example, and these safety-minded tips can go a long way toward keeping drivers alert and at their safest.

Timing is a strategic part of the job, and supervisors should make sure that snow plowing doesn't begin too late in the storm cycle. Most plowing runs begin when there is an accumulation of one to four inches of snow. Snow will quickly become too difficult to remove if drivers are not plowing with the storm.

Be aware of driver fatigue and assign rest periods as needed. Remember that drivers must be constantly evaluated to ensure they are in the proper condition to handle their assigned routes. If a supervisor notes that a driver has been drinking or is sick or tired, the route should be reassigned to another employee.

Coffee, by the way, can have some eye-opening effects, but not necessarily the good kind. Drinking too much of it can cover up natural signs of fatigue, causing drivers to fall asleep with little warning. In addition, watch out for drivers who use stimulants that may cause them to overreact, exhibit a false sense of driving capability, or act aggressively or impatiently. Be on special alert for the use of over-the-counter medications such as cold medicine, which can make drivers drowsy.

Some snowstorms are worse than others, so it's imperative that plow operators adjust their approaches to road and weather conditions. Wet snow can weigh up to 12 pounds per cubic foot – a factor that can influence how quickly and effectively it can be pushed, even with the heftiest of rigs.

At the other end of the spectrum, snowplows can go too fast at times. Supervisors should point out that skidding or sliding or snow flying back into windshields are sure signs that operators need to slow down. Crews should be instructed to match their speed to the conditions of the road.

The Back Story

Uneven road surfaces, narrows streets, parked cars, low-hanging tree limbs or wires, mailboxes, and fences are obvious hazards to avoid, but oftentimes backing up can be as dangerous as moving forward. Snow, plow equipment, and the truck itself can impede visibility, and, as strange as it may seem, other motorists often don't consider that snowplow operators may actually need to move in reverse. For those reasons, snowplow operators should avoid backing up unnecessarily to reduce the chance of accidents.

Here are some techniques to teach drivers to avoid collisions when backing up a snowplow:

- Slow down in advance, and scan for obstructions.
- Make sure your four-way flashers are on and check your mirrors.
- If you don't know whether it's clear behind you, get out and check.
- Don't assume the back-up alarm will protect you; fixed objects can't hear.

As important as anything else, plow operators should remember that motorists typically don't understand plowing operations and may misjudge the length, width, or speed of a plow. As a result they may drive too fast, pass improperly, or tailgate – mistakes that can lead to collisions. Anticipate to avoid problems.

When plowing is completed and trucks are parked for later use, ensure that operators always lower the plow and keep bystanders clear as the blade comes down. Changes in temperature over time also can cause the plow to drop without warning.

Finally, drivers should be reminded to report any problems they encountered to the mechanic and share critical information with the next operator before leaving the worksite. If drivers are involved in any accidents, instruct them to write down the details immediately.

Having taken all those safety measures, public agencies may be able to settle back and . . . let it snow, let it snow, let it snow. ◆

Joann Robertson, CSP, CPCU, ARM, is the coordinator of risk management services for the New York Schools Insurance Reciprocal.

This article originally appeared in the January 2009 issue of Public Risk*, the member magazine of the Public Risk Management Association (PRIMA). For more information, visit www.primacentral.org.*

EMERGENCY SUPPLIES

Ensure snowplow operators are provided with necessary emergency equipment, including:

- Flares
- Flags
- Fire extinguisher
- Fuses
- Gloves/hat/jacket
- Blanket
- Scraper/brush
- Shovel
- First aid kit
- Booster jumper cables
- Food/water
- Flashlight
- Radio/CB/cell phone

QUICK DRAW

When snow plow operators draw diagrams of parking lots and routes, they should pay special attention to the placement of the following:

- Benches
- Picnic tables
- Garbage cans and dumpsters
- Signposts
- Fire hydrants
- Mailboxes
- Library drop-off boxes
- Clothing pick-up boxes
- Raised parking lot areas
- Bus stops
- Crosswalks
- Utility boxes
- Playgrounds
- Storm drains and manholes (make a note if they're raised)
- Potholes
- Light and utility poles
- Basketball posts
- Fences
- Areas under construction
- Damaged pavement or curbs
- Parking spots for the disabled
- Ramps
- Sheds, security booths, and outbuildings
- Abandoned vehicles
- Handrails and stairs
- Gates
- Dumpsters
- Curbs
- Building exits
- Center road dividers
- Fire lanes

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high returns on the LTAP investment. The training courses and technical assistance offered nationwide reach more than 100,000 local government participants each year. In Pennsylvania, the value to municipalities is even more pronounced by the fact that fees are not applied to LTAP classes unlike in several other states where students must pay to attend LTAP courses.

Considering that nearly half of the current transportation workforce is expected to retire by the year 2010, the importance of LTAP training is bound to increase even more as newer hires must be trained and brought up to speed on the latest transportation trends.

Pennoni, Inc. company representatives, the LTAP/TTAP Steel Sponsor, meet with a conference attendee.

Tremendous Partnerships

Before attending the conference, I was already familiar with the strong partnerships among Pennsylvania agencies, including PennDOT, PSATS, metropolitan and rural planning organizations, municipalities, and training providers, that help to administer and promote LTAP. But during the conference, my eyes were opened to other existing partnerships that contribute to LTAP and make the program more efficient. Committed and enthusiastic supporters at universities, federal agencies, public works associations, engineer associations, and contractors are working to maximize the effectiveness of LTAP across the country. And, the National LTAP Association continues to seek out further partnerships with other groups and to leverage resources so that local governments' transportation needs are better met.

Safety and Maintenance Priority

Frequently, transportation professionals, elected officials, and the general population will focus on new construction or adding capacity to transportation system facilities at the expense of basic system preservation. But, at the conference, speakers emphasized that safety and maintenance needs must take precedence and that LTAP's transfer technology and training can help to advance these priorities.

Thanks to diverse safety/maintenance classes, technical assistance, library materials, safety circuit riders and safety audits (e.g., the Safe Local Roads and Walkable Communities Programs in Pennsylvania) offered through LTAP and PennDOT, local governments in Pennsylvania have a variety of options available to help them accomplish these safety and maintenance objectives.

At the conference, I picked up a booklet that clearly and graphically extols the benefits of sound transportation asset management. Local officials interested in learning more about extending the lives of their roadways and stretching limited transportation dollars may want to visit the National Center for Pavement Preservation Web site at www.pavementpreservation.org and request a free copy of *"At the Crossroads: Preserving our Highway Investment."*

LTAP Hot Topics

During an interactive and informative plenary session on the final day of the conference, I learned how LTAP centers across the nation are dealing with the economic recession gripping our country. LTAP centers in several states are turning to Web-based training to help reduce costs and minimize travel, and it is expected that the use of online training will continue to increase in the future.

Many LTAP centers are also grappling with escalating postage costs, which are forcing them to distribute more information electronically. It was apparent from the discussion that increased funding for LTAP services is needed and justified. As transportation bills are developed in Washington and Harrisburg, individuals should be relaying the benefits of LTAP to Congress and the state legislature and working to secure additional funding support for these worthy LTAP programs. ◆

Amy Lucero, Director of Technical Services, Federal Highway Administration, addresses the conference attendees.

2009 National LTAP/TTAP Conference
July 27-30, 2009 • Pittsburgh, PA

Upcoming Workshops

To Register:
PHONE: 1-800-FOR-LTAP (367-5827)
WEB SITE: www.ltap.state.pa.us
This represents some of our scheduled courses. Look for updates on the Web site.

November 17, 2009
Lebanon County
Equipment & Worker Safety
8:00 AM - 11:30 AM
North Lebanon Township Building

November 17, 2009
Schuylkill County
Traffic Calming
8:00 AM - 3:00 PM
Schuylkill Community Education Council (Mahanoy City)

November 17, 2009
Northumberland County
Winter Maintenance
8:00 AM - 3:00 PM
Point Township Building (Northumberland)

November 18, 2009
Potter County
Winter Maintenance
8:00 AM - 3:00 PM
Coudersport Maintenance Facility

November 19, 2009
Lycoming County
Roadside Vegetation Control
8:00 AM - 3:00 PM
Woodward Township Fire Hall (Linden)

November 24, 2009
Adams County
Principles of Paving
8:00 AM - 3:00 PM
Adams County Emergency Services Facility (Gettysburg)

November 24, 2009
Lycoming County
Risk Management/Tort Liability
8:00 AM - 12:00 PM
Woodward Township Fire Hall (Linden)

December 2, 2009
Delaware County
Common Sense Solutions to Intersection Problems
8:00 AM - 3:00 PM
Upper Chichester Township Building (Boothwyn)

December 2, 2009
Montgomery County
Winter Maintenance
8:00 AM - 3:00 PM
Lower Providence Township Building (Eagleview)

December 8, 2009
Luzerne County
Engineering & Traffic Studies
8:30 AM - 3:30 PM
Northeastern Pennsylvania Alliance (Pittston)

January 6, 2010
York County
Asphalt Roads Common Maintenance Problems
8:00 AM - 11:30 AM
Spring Garden Township Municipal Building (York)

Liquid Fuels Non-Acceptable Expenditures

by Bob Garrett, PennDOT Municipal Liaison

Nearly, 8 percent of all Pennsylvania municipalities receive an audit finding each year due to non-acceptable uses of liquid fuels funds. "If municipalities follow a couple of simple do's and don'ts and always contact their municipal services representative before making a questionable expenditure nearly all of these findings could be eliminated," says Jeff Roback of PennDOT's Bureau of Municipal Services. "When in doubt, call PennDOT. We have staff assigned to every municipality whose job it is to make sure that liquid fuels funds are spent correctly."

Roback pointed out the following common "don'ts" for non-acceptable liquid fuels expenditures:

- Don't proceed with a project without PennDOT approval.
- Don't spend funds on nontransportation projects.
- Don't purchase fuel for private vehicles or nontransportation related vehicles.
- Don't use liquid fuels funds for curbing and sidewalks.

Specifically, construction and re-construction jobs require prior PennDOT approval. By involving your PennDOT municipal services representative early in the development of road and street jobs, you can avoid the threat of a post-construction audit finding.

Liquid fuels funds are derived from the state gasoline taxes. The taxes are sometimes called "user's fees" because by state law they are only used on highways, roads, streets, and bridges. To maintain the integrity of these funds, it's important not to use them on non-transportation projects, no matter how worthy these projects may be. For example, liquid fuels funds should not be used on sanitary sewers, water lines, parks, general municipal buildings, police departments, or other charitable and civic projects.

Gasoline and diesel fuels for private vehicles or the vehicles of municipal departments other than roads and streets may not be purchased with liquid fuels funds. In addition, curbs and sidewalks are not acceptable uses of the funds.

"Curb cuts that comply with the new ADA regulations are allowed," says Roback "But only the drop curb portion of the sidewalk may be paid for with liquid fuels funds. The actual main sidewalk is not an allowable expense."

Finding out after the funds have been spent that they were non-acceptable expenditures via the audit process is perplexing to say the least. The best way to avoid this type of finding is to involve your PennDOT municipal services representative early in the project development process and to ask your representative any time you have a question. ◆

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Programs & Funding

In concert with a nationwide emphasis on saving energy and the recognition that changing traffic signals to LED lamps is making a difference, partnership programs have been developed to keep costs reasonably low. These partnerships are often combined with funding programs to make conversion possible despite what may seem like out-of-reach costs. All you have to do is know where to look. Following is a list of many programs that are available to help your municipality make the change to LED:

1. **Fund (SEF)**
   www.thesef.org

   This nonprofit organization promotes clean and renewable energy projects. SEF offers up-front financing with payback terms that are established from the anticipated savings in electric bills over a five-year period. This is determined from a rate comparison between current and projected energy use. According to SEF officials, municipalities that have participated in the program to date are averaging a savings of approximately 85 percent on their electric bill.

2. **Energy Resource Center (SEDA-COG)**
   erc.sedacog.org

   The Energy Resource Center provides energy conservation and renewable energy education, training and technical assistance, and financial assistance to local governments and other entities throughout the SEDA-COG 11-county region. Financial assistance is offered through various programs, such as the Pennsylvania Energy Harvest Program and the Pennsylvania Energy Development Authority.

3. **PA Energy Harvest Grant**
   www.dep.state.pa.us/grantscenter/GrantAndLoanprograms.asp

   Energy Harvest provides funding to municipalities for renewable energy deployment, biomass energy projects, coal-mine methane, and waste coal reclamation for energy; implementation of innovative energy efficiency technologies; or clean distributed generation infrastructure improvements. Applications and guidelines can be found on the Web site.

4. **PEDA (PA Energy Development Authority) Grants**
   www.dep.state.pa.us/grantscenter/GrantAndLoanprograms.asp

   PEDA provides grants and loan guarantees to municipalities for alternative energy projects and related research involving recycled energy, energy recovery, and energy efficiency. Applications and guidelines can be found on the Web site.

5. **Pennsylvania Guaranteed Energy Savings Program**
   www.portal.state.pa.us/portal/server.pt/community/energy/1300

   This program assists and enables Commonwealth agencies to contract for energy conservation measures without the requirement of an up-front capital budget allocation. Services include developing, coordinating and structuring (provision of forms, scoring criteria, timelines, etc.) projects, as well as assisting agencies with project management. Outreach is also available to help local and county governments investigate Guaranteed Energy Savings Program (GESA) projects. The GESA Manual for Pennsylvania's Government Organizations provides a how-to guide for the implementation of Guaranteed Energy Savings Agreements.

6. **Pennsylvania League of Municipalities**
   www.plcm.org

   The league's Municipal Utility Alliance (MUA) has chosen to partner with Republic ITS, an electrical contracting and transportation engineering firm that specializes in the maintenance, testing, repair, and replacement of traffic signals and streetlights. Republic ITS's full service includes everything from project planning, installation, and communication to project reporting. This program also offers built-in financing where all costs involved in the retrofit are offset through the energy savings realized by the municipality.

7. **M&T Bank Loan Program**
   www.mandtbank.com

   M&T Bank provides a financing program offering competitive interest rates and technical assistance for local governments and municipal authorities to implement energy saving improvements. M&T's funding can be used in conjunction with other grants and low-interest loans.

8. **SMSP (Shared Municipal Services Program)**
   www.newpa.com

   The purpose of this program is to promote cooperation among municipalities and to foster increased efficiency and effectiveness in the delivery of municipal services at the local level. Grants ranging from $10,000 to $25,000 are offered to a group of two or more municipalities or councils of governments (COGs). For more information and guidelines, log onto www.newpa.com, go to Find Incentives & Apply for Funding, choose "Funding and Program Finder", select "community" on the next screen, and scroll to the Shared Municipal Services Program link.

9. **COSTARS Program**
   www.portal.state.pa.us/portal/server.pt/community/costars/1272

   COSTARS is an approach to the Cooperative Purchasing Program that encourages the formulation of an interactive partnership between Local Public Procurement Units and the Commonwealth. The goal is to provide better contracts with competitive pricing, while increasing participation of eligible agencies. The Department of General Services (DGS) requires Local Public Procurement Units and State Affiliated Entities to register as COSTARS members, and only those entities registered with DGS may purchase from the contract. Membership is free.

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Lycoming County Completes Small Bridge Inventory Pilot Project

by Mark Murawski, Lycoming County Transportation Planner

The Lycoming County Planning Commission, working in partnership with the PennDOT Small Bridge Inventory Task Force, has recently completed a comprehensive inventory of locally owned bridges in Lycoming County with span lengths between 8 and 20 feet. The inventory pilot project will now be used in developing a systematic inspection program for these smaller bridge structures.

Federal law requires all publicly owned bridges with span lengths greater than 20 feet to be inspected at least every two years or more frequently for weight limit postings or other documented critical deficiencies. Since 1995, Lycoming County has worked with PennDOT to inspect approximately 100 locally owned bridges using the county's engineer, Larson Design Group, as part of the National Bridge Inventory System (NBIS). However, since locally owned bridges between 8 and 20 feet in span length were not systematically inspected by municipal officials, the county decided to develop its own pilot program to routinely inspect these smaller bridges. Deteriorating smaller bridges can create public safety hazards and if closed for service can disrupt the local economy by requiring a long detour.

Using Lycoming County Geographic Information System mapping, county staff identified possible locations of smaller bridge structures by targeting where locally owned roads cross various stream channels. These potential locations were plotted on the GIS orthophotos and then reviewed with the local officials of each of the 52 municipalities in Lycoming County to verify bridges and to determine if any municipal data existed on the structures. Following the municipal meetings, county and municipal officials and staff from PennDOT Engineering District 3-0 Municipal Services visited each potential structure to collect basic data that could be entered into the PennDOT Bridge Management System (BMS) II. In-depth inspections were not conducted for purposes of this initial inventory and assessment

A total of 90 eligible structures were inventoried. From the cursory field assessment conducted by municipal services staff (who are certified bridge inspectors), the bridges were assigned a rating with 30 percent found to be in "good condition," 50 percent in "fair condition," and 20 percent in "poor condition." One structure was so deteriorated that it had to be immediately closed to traffic for emergency repairs by the local bridge owner.

Following the completion of the bridge inventory and data entry in BMS II, Lycoming County staff worked with the PennDOT Small Bridge Inventory Task Force, which is comprised of representatives from several PennDOT engineering districts, central office, and other interested MPO/RPO planning partners, to develop a technical scope of work tailored to the inspection of smaller bridges. It was determined that an initial in-depth inspection of all structures should be done to establish baseline conditions and that bridges should be assigned a structural rating of 2 to 9. Bridges with structural ratings of 6 to 9 would be inspected on a four-year cycle, ratings of 4 to 7 on a two-year cycle, and ratings of 2 to 4 annually. Overlap in the frequency cycles would allow for engineering judgment to be used to determine appropriate inspection frequencies on some particular structures.

Lycoming County establishes an inspection program for all bridges between 8 and 20 feet long.

Municipalities are not currently eligible for federal reimbursement for inspecting these smaller bridges. So, the goal of the bridge inspection program is to inspect structurally deficient bridges in accordance with NBIS cycles and to save money by inspecting bridges in good condition less frequently. Emergency flood inspections would also be conducted after high-water events.

The county is estimating that the cost to inspect all 90 structures in 2010 will be around $165,000, and the county will pay for the inspections from its liquid fuels fund. Municipalities that enroll in the program will get their bridges inspected for free. The inspection program should be less costly in subsequent years since staggering inspection cycles will mean that not all structures will be inspected in the same year.

The Lycoming County Planning Commission is finalizing a report that will be made available to other counties and municipalities that want to conduct small bridge inventories in their areas. During a presentation about this pilot initiative at the LTAP National Conference in Pittsburgh in July, the county received positive feedback from LTAP representatives from other states.

The initial inventory of bridges was funded by LTAP planning funds provided to the Williamsport Metropolitan Planning Organization as part of its participation in LTAP planning and outreach activities for Lycoming County. The Williamsport MPO will also use the LTAP Program to help train municipal officials on proper small bridge preventative maintenance practices and how to read bridge inspection reports to further extend the useful life of these structures given the challenging fiscal environment facing local governments.

Questions about the Lycoming County Small Bridge Inventory Pilot Program can be directed to Mark Murawski, Lycoming County transportation planner, at (570) 320-2138 or mark.murawski@lyco.org. ◆

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Summary

Whether you are a large municipality or a small one, have many traffic signals or only a few, take advantage of a funding program/ partnership or not, it certainly pays to make the change from incandescent lamps to LED signals. Especially since Pennsylvania municipalities, and their taxpayers, are expected to face higher energy costs after all remaining rate caps expire by the end of 2010. Make the change. Reap the benefits.

Sustainable Energy Fund (SEF) **www.thesef.org**	This program is a nonprofit organization that promotes clean and renewable energy projects. SEF offers up-front financing with payback terms that are established from the anticipated savings in electric bills over a 5 year period. This is determined from a rate comparison between current energy use and projected energy use. According to SEF officials, municipalities that have participated in the program to date are averaging a savings of approximately 85% on their electric bill.
Energy Resource Center (SEDA-COG) **erc.sedacog.org**	The Energy Resource Center provides energy conservation and renewable energy education, training and technical assistance, and financial assistance to local governments and other entities throughout the SEDA-COG 11 county region. Financial assistance is offered through various programs such as the Pennsylvania Energy Harvest Program and the Pennsylvania Energy Development Authority.
PA Energy Harvest Grant **www.dep.state.pa.us/ grantscenter/ GrantAndLoanprograms.asp**	Energy Harvest provides funding to municipalities for renewable energy deployment; biomass energy projects; coal-mine methane, waste coal reclamation for energy; implementation of innovative energy efficiency technologies; or clean distributed generation infrastructure improvements. Applications and guidelines can be found on the website.
PEDA (PA Energy Development Authority) Grants **www.dep.state.pa.us/ grantscenter/ GrantAndLoanprograms.asp**	PEDA provides grants and loan guarantees to municipalities for alternative energy projects and related research involving recycled energy, energy recovery, and energy efficiency. Applications and guidelines can be found on the website.
Pennsylvania Guaranteed Energy Savings Program **www.portal.state.pa.us/ portal/ server.pt/ community/ energy/ 1300**	This program assists and enables Commonwealth agencies to contract for energy conservation measures without the requirement of an up-front capital budget allocation. Services include developing, coordinating and structuring (provision of forms, scoring criteria, timelines, etc.) projects, as well as assisting agencies with project management. Outreach is also available to help local and county governments investigate Guaranteed Energy Savings Program (GESA) projects. The GESA Manual for Pennsylvania's Government Organizations provides a "how-to" guide for the implementation of Guaranteed Energy Savings Agreements.
Pennsylvania League of Municipalities **www.plcm.org**	The League's Municipal Utility Alliance (MUA) has chosen to partner with Republic ITS, an electrical contracting and transportation engineering firm that specializes in the maintenance, testing, repair, and replacement of traffic signals and streetlights. Republic ITS's "full service" includes everything from project planning, installation, and communication to project reporting. This program also offers built-in financing where all costs involved in the retrofit are offset through the energy savings realized by the municipality.
M&T Bank Loan Program **www.mandtbank.com**	M&T Bank provides a financing program offering competitive interest rates and technical assistance for local governments and municipal authorities to implement energy saving improvements. M&T's funding can be used in conjunction with other grants and low-interest loans.
SMSP (Shared Municipal Services Program) **www.newpa.com**	The purpose of this program is to promote cooperation between municipalities and to foster increased efficiency and effectiveness in the delivery of municipal services at the local level. Grants ranging from $10,000 to $25,000 are offered to a group of 2 or more municipalities or Councils of Governments (COGSs). For more information and guidelines, log onto www.newpa.com, go to Find Incentives & Apply for Funding, choose "Funding and Program Finder", select "community" on the next screen, and scroll to the Shared Municipal Services Program link.
COSTARS Program **www.portal.state.pa.us/ portal/ server.pt/ community/ costars/ 1272**	COSTARS is an approach to the Cooperative Purchasing Program that encourages the formulation of an interactive partnership between Local Public Procurement Units and the Commonwealth. The goal is to provide better contracts with competitive pricing, while increasing participation of eligible agencies. The Department of General Services (DGS) requires Local Public Procurement Units and State Affiliated Entities to register as COSTARS Members, and only those entities registered with DGS may purchase from the Contract. Membership is free.

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