

WINTER EDITION

Special points of interest:

- 2015 Every Day Counts # 3 launches in January
- VLR Listserv upgrade
- Salt prices increase

Inside this issue:

Road Salt	2
News, Listserv, Circuit Riders	3
Roads Scholar Program	4
2015 Workshops	5
Every Day Counts	6
Transportation News continued	7
VLR Transition	9

We're on the web
www.vermontlocalroads.org

NEWSLETTER

Vermont Local Roads



Vermont Towns Struggle with Road Salt Price Hike

It's been compared to spreading gold on our roads. The price of salt has taken its toll in the State of Vermont. With an early start to winter and compounding storms, budgets and salt supplies will certainly feel the pinch.



MONTPELIER, VT (AP) – Vermont cities and towns are feeling the sting of a substantial increase in the price of road salt.

The price change – reflected in the contract signed by Vermont's Agency of Administration – amounts to a 40 percent increase since last November.

Vermont League of Cities and Towns Executive Director, Steven Jeffrey tells the Times Argus the price increase will have a big impact on town budgets and winter road conditions. He said salt prices have been a concern for the past 10 years.

Brandon Town Manager, Robin Bennett said prices negotiated by the state increased from about \$54 to \$76 per ton from November 2013 to October 2014. As a result, she said, she purchased 20% less salt this year.

A message from Vermont Local Roads

In September, the Vermont Local Roads program relocated from St. Michael's College to the VTrans Training Center in Berlin, Vermont. This transition allows VTrans to continue its funding of the program (as it has done since its inception in 1982) and enables the program to utilize the many resources VTrans has to offer.



We have been working diligently to improve upon the services that Vermont municipalities receive from the program. We've had some great workshops and have met with many towns across the state. Since September, we've already visited more than 130 towns in Vermont and we plan to keep visiting. Our goal is to meet all of you!

We want to hear from each of you so that we can continue to create a program that fits YOUR needs....continued on page 9

Road Salt - best practices

Management, Policies & Personnel

- Write a *Snow Removal Plan*. Such a plan should include rules of practice that specifically address the use of chemicals including salt (e.g., timing, amount, conditions).
- Make sure application equipment is properly calibrated. Calibration should allow for different gradations of salt being applied.
- Track salt usage on a storm-by-storm basis and compare to State Agency Snow and Ice Control Plan recommended application rates.
- Look at innovative contracting with salt suppliers such as group hauling rates,
- Ensure salt stockpiles are properly stored, maintained, and secured. Impermeable pads, made of concrete or asphalt can reduce loss. Covered stockpiles are recommended. Proper loader operation can reduce material loss.



Road Salt

A study conducted by Marquette University found that, when winter storms turn roads to ice, de-icing them with salt reduces accidents by 88% and injuries by 85%. (Source: Marquette University)

Road Salt - some interesting alternatives

As snow, ice and frigid temperatures continue to pound large portions of the US this winter, salt shortages and strained local budgets have sent states and municipalities scrambling for de-icing alternatives.

The US uses millions of tons of rock salt each winter to keep roads and walkways safe, resulting in salty run-offs that pollute local groundwater, lakes, streams and rivers. Beyond sand and gravel, other de-icing alternatives keep popping up, including potato juice and swine urea (yes, pig urine).

Cheese Brine is one innovative deicer currently being used in Wisconsin. Polk County officials and a local company, F&A Dairy Products, came up with a mutually beneficial solution for cheese brine, a byproduct of making mozzarella and provolone. Local governments save on salt costs by using the brine to deice their roads, and the cheese company saves on disposal costs. Right now local counties use all of the brine that F&A produces, said Chuck Engdahl, F&A's wastewater manager. Salt soaked in cheese brine has a lower freezing point (-21F) than regular salt brine (-6F). Whether or not there's a unique odor, which a few have likened to whey, is disputable. (Source: *The Guardian*)



Cheese brine is a byproduct of the cheese making process.

Transportation News

Gas tax revenue is flatlining

By Michael Barone, *Washington Examiner*

People have been driving less since 2007, gas mileage has improved, and increasing mileage standards along with more electric and hybrid vehicles will reduce gas tax revenues even more in years to come.

Those revenues are insufficient to replenish the Highway Trust Fund. Congress could increase the gas tax, but it won't; it's highly unpopular and only a handful of members favor an increase.

The alternative is to spend money from general revenues.

Continued on page 7



Fewer drivers, reduced gas tax revenues are shifting the burden of transportation policy to the states.

Listserv



The **Vermont Local Roads Listserv** has recently been upgraded to greatly improve members' ability to share information with each other.

The Listserv is an important tool that connects all list members, which mainly consist of municipal staff as well as stakeholders throughout the state. Members of the Listserv can pose questions to get advice and best practices from fellow members who may have already dealt with similar situations. This peer-to-peer communication is the essential goal of the Listserv. We plan to add more members in the coming year.

Our ultimate goal is to have ALL municipalities subscribed to the Listserv as this is the fastest and most efficient method of communication. It allows instant connectivity to inform municipalities of upcoming workshops and training opportunities, as well as highlight municipal equipment and state surplus equipment for sale, and advertise municipal employment opportunities. Currently, there are 380 registered individuals representing 190 Vermont municipalities.

Circuit Riders - Technical Assistance

Vermont Local Roads has recently reintroduced the **Circuit Rider** position back to the program as an additional resource for municipalities. The Circuit Rider will provide services such as:

- Visit town road crews to provide direct assistance at the workplace
- Visit town managers and select board members to seek input for town transportation needs and trainings
- Provide workshops to municipal staff
- Attend public meetings such as road foreman and Transportation Advisory Council (TAC) meetings

There is no fee for this service. Simply give us a call and we'll make arrangements for our Circuit Rider to visit you. Don't be surprised if he stops by your garage or office to say hello and see how he might help.

Give us a call at **(802) 828-3537** and we'll gladly tell you more about the services we provide.

Roads Scholar Program

The *Vermont Roads Scholar Program* was established as an enhanced training program aimed at providing hands-on, quality training that allows participants the ability to learn new skills while gaining recognition and achievement across various levels of road management.

To join, simply fill out a Roads Scholar application form at your next Vermont Local Roads workshop and become one of the nearly 1,200 Vermonters enrolled in this free program.

Roads Scholar	Level 1	Level 2	Level 3	Masters
Categories	Hours Required per Category for Each Level			
Equipment	18	30	36	36
Environmental	6	6	12	12
Safety	6	12	18	18
Supervisory	0	6	12	12
Technical	30	42	48	48
Tailored to choice				49
Cumulative Hours	60	96	126	175

SCHOLAR BENEFITS

The Roads Scholar Program provides:

- Recognition of training and achievement across various levels
- Coverage of subjects essential to effective road management

Reasons to enroll:

- Receive experienced instruction from dynamic presenters
- Benefit from hands-on learning
- Meet new people
- Share your experience and expertise

Upon graduation you will have:

- An official recognition letter and certificate sent to you and your

Roads Scholar Graduate

Jeff Smail recently received Level I certification from Vermont Local Roads and was recognized by the Colchester town manager at their recent town holiday luncheon. Jeff has worked for the towns maintenance and repair department for the past 35 years.

Asked what VLR workshop he enjoyed most, Jeff replied that he enjoyed the Gravel Road Maintenance workshop because he greatly enjoys operating the road grader.

Congratulations Jeff and we look forward to seeing you at future workshops.



Jeff Smail, Town of Colchester

Vermont Local Roads Workshop Courses for 2015

Equipment

- Welding
- Air Brake Systems
- Game of Logging
- Front End Loader
- Road Grader Operations
- Tire Maintenance and Repair
- Trenching and Shoring (Excavation)

Environment

- Beaver Management
- Fish Passages
- Roads & Rivers

Safety

- Flagger Training
- Road Safety 365
- Hand & Power-tool Safety
- CSA (General Safety Awareness)
- First Aid, CPR

Supervision

- Creating Budgets for Road Projects
- Introductory Leadership Development Program
- Professional and Business Writing
- Building Strong Teams
- Communication – Getting your message across
- Diversity, Harassment, Discrimination
- Time Management

Technical

- Pavement Management
- Basics of a Good Road
- Bridge Maintenance and Preservation
- Lines Levels and Layouts
- Better Back Roads-mini workshop
- Winter Road Maintenance
- Culvert Installation



Road Grader workshop - Westmore, VT - 2014

Please visit our webpage for workshop details

www.vermontlocalroads.org

FHWA delivers the next generation of “Every Day Counts” EDC-3 (2015-2016)



"Efficiency through technology and collaboration"

Through the Every Day Counts (EDC) initiative, FHWA works with state and local transportation agencies and industry stakeholders to identify a new collection of innovations to champion every two years. Innovations are selected collaboratively by stakeholders from across the highway community, taking into consideration market readiness, impacts, benefits and ease of adoption of the innovation. Ultimately, a group of approximately a dozen technologies and processes are selected for promotion under each two-year EDC cycle. Sometimes innovations are held over from the previous round of EDC in order to assure a more thorough deployment nationally.

The announcement of the third round of innovations — EDC-3 — came on August 28, 2014. Although the clock doesn't start ticking on EDC-3 until *January 1, 2015*, the innovations have been announced and diverse technical teams have been established to develop implementation plans for each innovation and to manage the deployment effort over the two-year cycle (2015-2016). Transportation leaders from across the country gathered at regional summits this past fall to discuss the EDC-3 innovations and share best practices. These summits begin the process for states, local public agencies and Federal Lands Highway Divisions to focus on the innovations that make the most sense for their unique program needs, establish performance goals and commit to finding opportunities to get those innovations into practice over the next two years.

The EDC-3 innovations are outlined below:

Shortening Project Development and Delivery

- Regional Models of Cooperation
- Improving Collaboration and Quality Environmental Documentation (eNEPA and IQED)
- 3D Engineered Models: Schedule, Cost, and Post-Construction
- e-Construction
- Geosynthetic Reinforced Soil – Integrated Bridge System
- Locally Administered Federal-Aid Projects: Stakeholder Partnering
- Improving DOT and Railroad Coordination (SHRP2 R16)

Mobility

- Smarter Work Zones

Safety

- Data-Driven Safety Analysis
- Road Diets (Roadway Reconfiguration)

Quality

- Ultra-High Performance Concrete Connections for Prefabricated Bridge Elements

Visit the FHWA website at <http://www.fhwa.dot.gov/accelerating/edc3.cfm> for more details on each innovation.

Transportation News, Cont'd

Continued from page 3

That puts a squeeze on discretionary spending, because general revenues will increasingly be needed to pay for entitlements including Social Security and Medicare.

In effect, the feds are abdicating and the states are taking up the burden. New roads and bridges are needed, and existing roads need to be maintained, repaired and upgraded. More than 30 states have passed transportation finance measures in the past three years, according to transportation consultant Ken Orski. Six states have increased gas taxes. Others have increased highway tolls, floated toll revenue bonds or passed sales taxes dedicated to transportation.

"The move toward greater fiscal autonomy, self-sufficiency and financial innovation at the state and local level is likely to grow in strength," Orski writes.

The gas tax, justified as a user fee, is being replaced by tolls, a more efficient measure of actual use: Transponder technology allows tolls to be levied based on demand, with adjustable fees to reduce congestion during peak use in states including Colorado, Florida, North Carolina, Texas and Virginia. There is a move toward public-private partnerships such as the one Canada adopted to finance a new Detroit River bridge using private capital to be repaid from tolls. Some conservatives complain about tolls, evidently on the theory that highways are built and maintained for free. But private decision-makers are more likely to make better decisions than the feds about where the real needs are.

We are witnessing the slow-motion disappearance of the Highway Trust Fund as states begin to assume more responsibility as well as the burden.

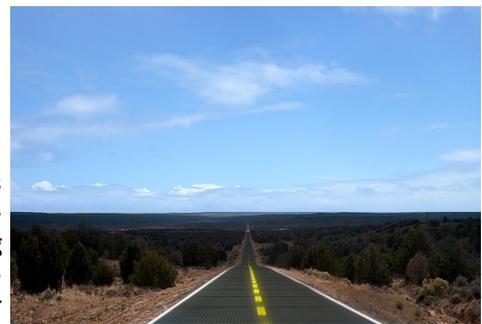


More Transportation News

Solar Roads

By Adele Peters

There are nearly 18,000 square miles of roads in the U.S., an area that's bigger than the entire states of New Hampshire and Massachusetts combined. By some estimates, there are also as many as 2 billion parking spaces. Since most of that pavement is soaking up sun all day long, a couple of entrepreneurs had an idea: Why not put it to use generating solar power?



The Solar Roadways project, now crowdfunding on Indiegogo, hopes to re-pave the country in custom, glass-covered solar panels that are strong enough to drive on while generating enough power to light the road, melt ice and snow, and send extra energy to cities. Eventually, if every paved surface was covered in the product, the panels would produce more power than the nation uses.

The project began eight years ago, when founders Scott and Julie Brusaw decided to take a chance on developing an idea that no one thought would work. "Driving on glass had never been done," says Scott Brusaw. "We had a few big hurdles in the beginning. How do you put a traction surface on glass so the first time it rains everybody doesn't slide off the road? How do you make glass tough enough to withstand the weight of 18-wheelers? What happens if someone's walking out of Home Depot and drops an eight-pound sledgehammer?" *Continued on page 8*

More Transportation News - continued

Continued from page 7

Glass, it turns out, is stronger than you might think. "You first mention glass, people think of your kitchen window," Brusaw says. "But think of bulletproof glass or bomb resistant glass. You can make it any way you want. Basically bulletproof glass is several sheets of tempered glass laminated together. That's what we have, only our glass is a half inch thick, and tempered, and laminated."

It's strong enough to easily withstand cars, fully loaded trucks, and even 250,000-pound oil drilling equipment. The textured surface means it isn't slippery, and since it can self-power small heaters inside to melt ice in winter, it's supposedly safer than an ordinary road. It also powers small LED lights inside that can light up dividing lines and spell out warning messages—if motion sensors detect a deer crossing the road, the lights can automatically tell drivers to slow down.

At parking lots or rest stops along highways, the panels could power a continuous network of charging stations for electric cars. Eventually, the designers believe it may be possible to charge the cars directly through the road as they drive. In the future, driverless cars could also use the panels to continuously report their location. Since the whole road is wired, it's also easy to maintain: If one panel stops working, all of the other panels around it call a local repair shop with the exact location. "A guy can come out and repair it in five minutes," Brusaw says. "Compare that to pothole repair."



Founders Scott and Julie Brusaw

Using the \$1 million they hope to raise on Indiegogo, the company plans to hire more engineers and continue refining the current product, testing it first on parking lots and smaller roads before moving on to highways across the entire country. Hunting down the funding to cover the U.S. (or even a significant portion) in solar roadways, however, will be an insanely big challenge.

Upcoming Workshop

“EMBRACE THE ROUNDABOUT”

Tuesday, March 31, 2015

Presented by Mark T. Johnson, PE

At the University of Vermont's Waterman Building

This one-day workshop examines the many benefits of the modern roundabout intersection ranging from reduced delay times to sharp pollution cuts and analyzes a Burlington intersection for roundabout conversion. The workshop involves training and technology transfer for the benefit of transportation planners, community development leaders, engineers and municipal street department personnel. Johnson, principal of MTJ Engineering, was among the few roundabout practitioners in the nation during the first decade of the modern roundabout era here in the U.S. during the 1990's.

For more information please contact Tony Redington (Neighborhood Planning Assembly) at:
(802) 343-6616 or email tonyrvt99@gmail.com

Online registration is available at <http://www.cvent.com/d/7rqmc9/4W>

Location: Memorial Lounge, Waterman Building, UVM, Burlington, VT

Time: sign-in 8:00am–8:45am Workshop: 8:45am–4:00pm

Vermont Local Roads Transition Update

Continued from cover page... The VTrans Training Center (VTTC) is the training arm of the Agency of Transportation and offers training and workshops on a wide variety of topics. Being housed at VTTC allows the Vermont Local Roads program to utilize a wealth of resources as well as additional curriculum for safety, employee development and equipment training.

During this transitional period there will be no disruption to the services to which you are accustomed.

- Local Roads will continue to offer workshops including the **Scholar program**
- Communications such as the **Listserve, E-Newsletter and website** will continue
- Requests for **technical assistance** will continue
- Full-time **Circuit Rider** will assist with any on-site technical requests
- Trainings and workshops will continue to be provided in locations **throughout the state**
- **New training** programs will be offered

Vermont Local Roads has recently hired Kevin Gadapee as the programs new permanent manager. Kevin joins the team with 15 years of municipal experience, recently serving as the Highway Foreman for the Town of Danville. Kevin's dynamic personality, excellent communication skills and thorough understanding of the municipal perspective will be invaluable as we continue to enhance the Vermont Local Roads Program. He began his new duties on January 12th. Please join us in welcoming Kevin to our team.

The Vermont Local Roads team and the VTrans Training Center staff look forward to working with you and are excited for the changes and opportunities this recent transition presents. Please do not hesitate to call or email us if you have any questions about the program.

Best Regards,
Vermont Local Roads team



VTrans Training Center, Berlin

WINTER EDITION

The **Vermont Local Roads** Program is part of the Local Technical Assistance Program (LTAP), a nationwide effort financed jointly by the Federal Highway Administration (FHWA) and VTrans. Its purpose is to provide road and bridge knowledge to municipalities involved with highways. There are LTAP Centers in fifty states and Puerto Rico and six Native American locations.

Sponsored by VTrans, the Vermont Local Roads Program provides information, advice and referrals to cities, towns and villages in Vermont. This is accomplished through newsletters, seminars and workshops, distribution of publications and by response to requests. For information write or call:

Vermont Local Roads
VTrans Training Center
1716 US Route 302
Berlin, VT 05602
Phone: (802) 828-3537
Web: vermontlocalroads.org

Program Staff:
Kevin Gadapee, Branch Manager
Todd Eaton, Circuit Rider

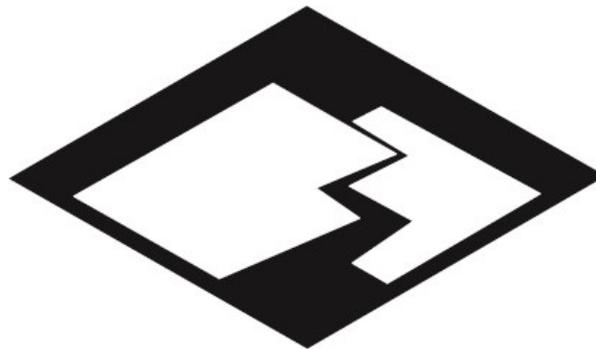
Special Thanks:

We'd like to send a very big "thank-you" to Paul Keegan who has been instrumental to the continued success of this program. Paul was the transitional and interim manager for the past 9 months and was in charge of overseeing the daily operations of the program to ensure it remained on course. We truly thank Paul for his efforts and continued support as we move forward and we will be forever grateful for his hard work and passion for the Vermont Local Roads program.

Thank you Paul.
Kevin and team

The Vermont Local Roads Program
VTrans Training Center
1716 US Route 302
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VERMONT LOCAL ROADS



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