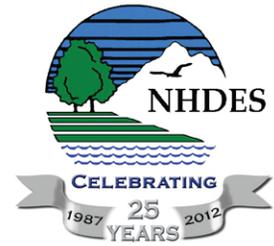


ENVIRONMENTAL NEWS



Newsletter of the N.H. Department of Environmental Services

November-December 2012

GRAND OPENING



Local, state and federal officials pose in front of the Moose Hill School air monitoring station at a recent ribbon-cutting ceremony.

Moose Hill School air monitoring station officially opened

DES recently hosted a ribbon-cutting and site tour of its flagship air monitoring station located at the Moose Hill School in Londonderry. This state-of-the-art facility was built using energy efficient siting, design and lighting. It is the first DES station to incorporate solar energy to power monitoring equipment.

Speaking at the opening ceremonies, DES Commissioner Tom Burack said, "Maintaining good air quality protects New Hampshire's environment and the public's health, which are inextricably linked to our state's economic well being."

The station is part of a National Core multi-pollutant air monitoring network designed to provide data at lower detection limits, as well as enhanced forecasting and reporting of air quality conditions to the public. DES worked closely with EPA to carefully select this site for its central proximity to the highly populated, southeastern suburbs of New Hampshire. This site lies in the air pollution transport corridor that crosses the southern portion of the state.

For more information about air quality in New Hampshire, call the Air Quality Information Line at (800) 935-SMOG or visit www.airquality.nh.gov. ■

COMMISSIONER'S COLUMN

Let's talk trash: Solid waste management has come a long way in 25 years

For many of us, taking out the trash is not significantly different today than it was 25 years ago, other than we are a little better about recycling. But, the way that our cities and towns manage our garbage is nothing like it once was. For decades prior to the creation of the Department of Environmental Services in 1987, New Hampshire's municipal solid waste was largely managed using crude methods that put our land, air, water and health at risk. In most towns, residents brought their trash to the "town dump," where it was burned in the open or in low-tech incinerators, or dumped on the land directly. "Burning day" at the dump filled the air

Commissioners Column, continued on page 7

"This is an exercise!" Oil tank ruptures at terminal

It was a dark and stormy night on the Piscataqua River when purportedly a diesel fuel tank at the Irving Oil Terminal facility received extensive damage. High winds, possibly from a tornado, tore a gaping hole, 20 feet by 20 feet, in the side of the tank, letting loose more than 564,000 gallons of ultra low sulfur diesel fuel oil into the river. More calamities, including a tanker ship running aground in the river, were reported throughout the day.



Google Images

Such was the scenario presented to the more than 175 people participating in this fall's oil spill drill held at Pease Tradeport and on Great Bay. Once participants were given the word to start, emergency responders took quick and well coordinated actions to minimize the potential impacts of the imaginary disaster. The response was truly impressive, as local, state and federal agencies worked smoothly together in the various teams—from operations to logistics, and from

Oil Spill Drill, continued on page 2

Rain gardens help to beautify/restore

Hodgson Brook in Portsmouth is polluted by several contaminants and suffers from a high presence of pavement, buildings and other hard, impervious surfaces in its watershed. A ten-year-old restoration project, started by volunteers and funded in part by a DES Watershed Assistance Grant, aims to clean up Hodgson Brook by reducing the impact of impervious surfaces on water quality.



Volunteers install a rain garden in the Hodgson Brook watershed.

Earlier this fall, 50 volunteers installed rain gardens at three houses in Pannaway Manor, a Portsmouth neighborhood. A neighbor strolling by at one of the construction sites liked the idea so much that Candace Dolan, watershed coordinator for the project, and her friends, designed and built a fourth one there and then.

The aim of the project is to reduce the impervious cover of the watershed from 32 percent to 10 percent, a threshold below which the brook is likely to be healthy. Disconnecting roofs and pavement from the storm drain system will help lower the effective impervious cover of the watershed.

The rain garden is a simple, beau-

Oil Spill Drill

continued from page 1

commanders to technical assistants, communication was clear and actions swift.

“Both at the Incident Command Post and out on the water, we achieved our critical exercise objectives,” noted Mike Wimsatt, waste division director. “We discovered our collective strengths, identified some weaknesses, and most importantly, gained information that will help us succeed in a response to a real incident.”

Nearly 30 agencies were invited to participate with the US Coast Guard, DES, Maine Department of Environmental Protection and Irving Oil Company taking key roles. DES’s Rick Berry and Carroll Brown did an extraordinary job in organizing the exercise and providing guidance to the other participants. While the Waste Management Division had the most DES players and some of the most critical jobs to execute, all divisions, including the Commissioner’s Office, had essential, participatory roles in the success of the operations.

The on-water exercise proved particularly noteworthy. The DES “staff and contractors successfully deployed the complete Great Bay Protection Strategy (over 4,500 feet of oil spill containment boom) in Furber Strait in just one hour,” remarked Wimsatt. “This represents the first time that this strategy has ever been deployed so quickly and so successfully. A nationally-experienced Coast Guard containment boom specialist, who served as an evaluator during the on-water exercise and who witnessed the entire operation, told me that it was the best boom deployment of its kind that he had ever seen. This is very high praise for an operation that represents a true milestone in the department’s efforts to achieve an enduring protection strategy for Great Bay.”

While there is always room for improvement and not every eventuality could be anticipated, DES can be justly proud of its response at this year’s oil spill exercise, and its advanced preparedness for the real event. ■

tiful and practical way to deal with stormwater. Runoff from impervious surfaces, in this case the roof of each house, has a chance to soak into the ground and provide water for flowers and shrubs. Pollutants in the runoff are filtered by the soil instead of carried directly to the street and ultimately the brook. The watershed has a chance to do what it would otherwise do naturally – soak up the rain.

DES has an easy-to-follow manual for homeowners to install stormwater practices, including rain gardens, dry wells and more, available at <http://des.nh.gov/organization/divisions/water/stormwater/stormwater-mgmt-homeowners.htm>. DES is also developing an assistance program to help local groups around the state work with homeowners to implement these practices. ■

ENVIRONMENTAL NEWS

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HHW Collection Grants Available

DES is accepting Household Hazardous Waste (HHW) Collection Grant applications for fiscal year 2014 (July 1, 2013 - June 30, 2014). Cities, towns, solid waste management districts and planning commissions are all eligible to apply. The application deadline is February 1, 2013. For more information, contact Dean Robinson, HHW coordinator at (603) 271-2047 or hhw@des.nh.gov. Download an application from www.des.nh.gov. ■

What Kind of Greeting Are You Sending?

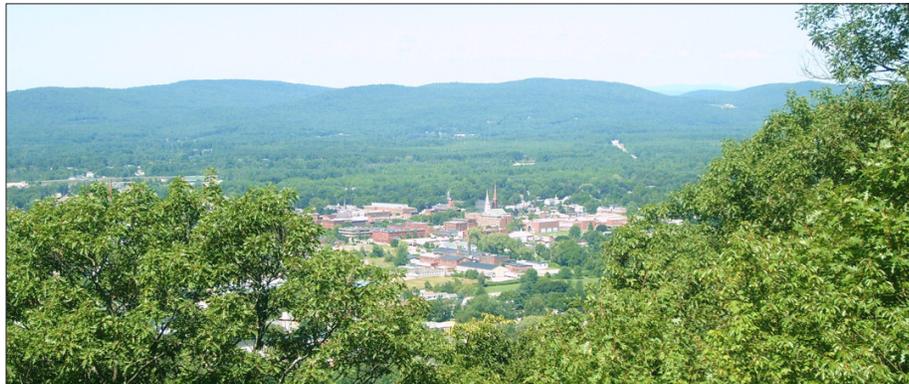
Remember the days when you went searching for the perfect greeting card to give to a special person for a special occasion? Your choices were simple: a paper card that was serious or funny with words and/or pictures. The card was kept for sentimental reasons or hopefully recycled rather than thrown in the trash. Now, thanks to technology, we have the choice of talking, singing, even dancing musical greeting cards! But at what price?

October's *GreenWorks* explores the materials that go into these new-fangled greeting cards and the possible harmful effects they have on the environment. Mercury batteries are the most serious threat, but there are other components that are also hazardous when disposed of improperly.

Read the full article at <http://des.nh.gov/organization/commissioner/pip/newsletters/greenworks/documents/201210-greenworks.pdf>. ■



PUBLIC OUTREACH



Keene, N.H.

Greater Keene area initiative promotes better wood burning to reduce pollution

Keene is situated in southwestern New Hampshire in a valley surrounded by high hills and Mount Monadnock. Because of this valley topography, Keene is subject to temperature inversions when warm air above traps cold air below, particularly on calm, winter nights. During a temperature inversion, small particle pollution, most notably from wood smoke in the winter-time, is released into the air and becomes trapped and concentrated near the ground. Because the wood smoke is unable to rise and disperse, air pollution and potential health problems increase.

To address this air pollution issue, an outreach campaign has been launched in the Keene area that focuses on reducing wood smoke emissions by providing tips and strategies on burning wood wisely. DES has partnered with Cheshire Medical Center, Greater Monadnock Public Health Network, Keene State College, and Southwest Region Planning Commission on the initiative.

The partnership encourages people who heat with wood to be a part of the solution, not the problem, by:

- Burning the right wood.
- Using the right stove.
- Burning the right way.

What's "right"? Burning seasoned hardwood in an EPA-certified stove, while maintaining a bright, hot fire that minimizes smoldering. Burning wood more efficiently not only reduces the amount of smoke produced, it also can save money.

Small particle pollution is a complex mixture of extremely small particles and liquid droplets. These tiny particles are nearly 30 times smaller than the diameter of a human hair. They are so small that they can be inhaled deep into the lungs and even cross into the blood stream. Once inhaled, particle pollution can cause negative health effects, especially for sensitive people. People with heart or lung disease, the elderly and children are most affected by high levels of small particles.

Small particle pollution is not only caused by wood burning, but also by vehicle exhaust, and burning fuels for home heating and industries. It can also form from reactions of gases in the atmosphere.

For more information about the campaign, contact Jessica Morton at jessica.morton@des.nh.gov or (603) 271-1390. For more tips and information about efficient wood burning, see EPA's Burn Wise website at <http://www.epa.gov/burnwise/>. ■

Interactive model dramatically illustrates effects of flooded rivers

Tropical storm Irene, which caused considerable damage in the North Country in 2011, clearly demonstrated that rivers do indeed move river banks and beds during floods. In April 2012, DES had a unique opportunity to show three northern communities why their rivers behaved the way they did, using a new tool borrowed from the Vermont Rivers Management Program. The interactive tool, or “flume,” is a model of a river system, complete with moveable riprap stone and undersized culverts, that allows one to watch how a river reacts to flooding. Recently, DES acquired its own flume that will be used in presentations across the state.

Many of the impacts witnessed in the aftermath of Irene were the results of the ways our rivers have been historically managed. Moving away from these potentially harmful practices should be encouraged when possible, and the flume model is an excellent way to illustrate why.

The new DES flume will be on display at the Local Government Center Conference, November 14 and 15, in Manchester. For more information about the flume or to arrange for a demonstration, contact Shane Csiki, DES Geological Survey, (603) 271-2876 or shane.csiki@des.nh.gov.



This sand box is not for preschoolers, but it is a teaching tool. The interactive tool, or “flume,” is a model of a river system, complete with moveable riprap stone and undersized culverts. It helps demonstrate how rivers really do move river banks and beds during floods.

November 14-15

NH Local Government Center Annual Conference
Radisson Hotel, Manchester, NH. See <http://www.nhlgc.org/trainingevents/annualconference.asp> for agenda and to register on-line. For information: (603) 224-7447.

NEWS FROM THE SEACOAST

Cross-border stormwater collaboration

Steve Couture, DES Coastal Program, recently coordinated a tour for a Gulf of Maine Council on the Marine Environment work group, which helped forge international collaboration on stormwater issues. In this photo, James Houle of the UNH Stormwater Center tells a group of Canadians about an innovative drainage area that helps remove stormwater pollution from the center’s parking lot. Pictured below are: Kevin Garroway and Sophia Foley, Nova Scotia Dept. of Environment; Rob Capozzi, New Brunswick Dept. of Environment and Local Government; Kathy Alesse, East Coast Excavating; and James Houle. Learn more about the UNH Storm Center at <http://www.unh.edu/unhsc/>, and the Gulf of Maine Council at www.gulfofmaine.org.



SAVE THE DATE

2013 State of Our Estuaries Conference

Coming together for
clean water solutions

Friday, Dec. 7th, 2012
Portsmouth Harbor Events Center
in Downtown Portsmouth, NH



Piscataqua Region Estuaries Partnership www.prep.unh.edu [Twitter.com/PREPCommunity](https://twitter.com/PREPCommunity) [Facebook.com/PREPCommunity](https://facebook.com/PREPCommunity)

A DAY IN THE LIFE OF

Solid waste inspectors' top tool: people skills

By Anna Carrigan, 2012 DES intern

When one hears the term “solid waste inspector,” a few things might come to mind: dumpsters, regulations, a science degree. One thing that probably does not factor in to these thoughts is “people skills.” However, much of DES solid waste inspector Doug Kemp’s job has to do with effectively relating to, and communicating with, the public.

Solid waste is defined as solid or semisolid, non-soluble material, including gases and liquids in containers. The term also includes agricultural waste, demolition waste, industrial waste, municipal garbage, and household items such as batteries, electronics, and light bulbs.

Just two inspectors are responsible for inspecting all facilities in the state, of which there are several hundred. Facilities subject to inspection include process and treatment facilities, incinerators, landfills, recycling centers and transfer stations.

Doug and his colleague, Melanie Doiron, are each routinely out on the road completing inspections one day a week. Inspections are generally conducted unannounced in order to see the facility as it would normally operate. Prior to inspecting a site, Bill researches the facility to find out information such as who the permit owner is, who the operator is, and what past violations, if any, there have been. Bill is also responsible for entering reports from previous inspections into the OneStop database and the Solid Waste Bureau’s database.

When first arriving at a site, Doug and Bill make sure that the facility’s sign is properly labeled with the required permit information. After locating the facility operator, Doug requests that he be given a tour as if he were a new resident of the town. As he walks

through the facility, Doug takes notes. While it’s clear that he is on the look out for environmental hazards, it is even more apparent that his priorities are on safety and collaboration. At one site, Doug notices that some containers lack the required labeling. Rather than citing the operator for this violation, Doug produces labels from his briefcase, and amicably instructs him on why the labels are important, and how to fill them out.

At another site, before informing the operator of what needs to be adjusted, Doug lauds him for his hard work in keeping his facility as clean as it is. Doug then explains to the operator what changes need to be made—and not just what, but why. When Doug proposes that pet waste be disposed of in the dumpster instead of in the compost pile, the operator balks because of the potential public backlash. Doug reassures him and tells the operator, as he hands him a business card, that anyone with an issue can call him directly. Doug even suggests a way to get funding for an informational sign, to make the transition easier for the public.

Site by site, Doug is quick in praising, thorough in educating, deliberate in assessing, gentle but firm in enforcing, and comes and goes with a handshake. The guideline he operates by is to “tell them what’s good, and tell them what’s not good before you leave. It’s not fair to surprise people when they get the report, and it doesn’t do anyone any good to be surprised.” By carrying out his job with this in mind, Doug is able to see how his work helps fulfill the larger DES mission.

While his job description may state that he is to inspect facilities and cite those in violation of state law, he realizes that the goal of his job, and DES, goes beyond that. The best interests of New Hampshire’s environment and people are not found in citations, but rather in facilities operating in compliance of the law, observing environmentally sound practices, and working towards a sustainable future in as fiscally responsible of a way as possible. These objectives are usually better met through education and a cordial attitude than a hard line approach. By working in collaboration with local communities, the DES Solid Waste program, and inspectors like Doug Kemp, are transforming these goals into reality, and ensuring a better quality of life for all of us. ■

TRAINING OPS



Bringing its training to the North Country, the DES Solid Waste Management Bureau recently certified 33 solid waste operators at a workshop held in Lincoln. Solid waste facilities are required by their permit and the Solid Waste Rules to employ only operators who are DES certified.

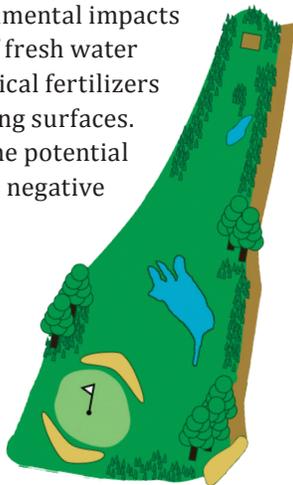
P2 program to green golf courses

Fore! Incoming! ... Not the words you want to hear as you are teeing up for a shot on the course. However, rogue hooks and slices are not the only things to look out for on the greens. Growing awareness of the potential negative environmental impacts from maintaining our favorite courses have left golfers, surrounding communities and environmental watch groups all unwilling to grant any Mulligans.

There are nearly 120 golf courses throughout the state of New Hampshire, each showcasing their own game-play challenges and natural beauty. It is this natural beauty that draws people into New Hampshire from far and wide and keeps them coming back to enjoy all that our state has to offer. Golf courses should be considered valuable assets for the recreation, economic vigor, and green spaces that they can provide. However, these tremendous benefits may be tempered by the environmental impacts of consuming large quantities of fresh water for irrigation and utilizing chemical fertilizers and pesticides to maintain playing surfaces. Pesticides and fertilizers have the potential to leach into the watershed with negative consequences.

Several golf courses have stepped up to take the lead in using chemicals and resources more responsibly. Recently, the New Hampshire Pollution Prevention Program (NHPPP) has been working with some of these industry – leading golf courses, as well as golf trade associations and other state programs to create a best management practice manual and workbook specifically for golf courses. This publication will focus on sustainable business practices, and features pollution prevention methods tailored to New Hampshire golf courses. It is intended to promote environmental responsibility and offer assistance in meeting golf courses' environmental and sustainability goals. The guide highlights course irrigation management, fertilizer management, pest control and energy conservation at the course facilities in addition to more general "green" business strategies such as waste reduction and recycling.

This golf course guide is slated for release in time for the 2013 golf season. The next time you head to the links for a day of golf, take a moment to consider the significant amount of resources used to maintain that certain shade of green, and be compelled to ask your course what they are doing to minimize their impacts. "Fore" more information please contact Chris Moore at (603) 271-2956 or christopher.moore@des.nh.gov.



Assistant Commissioner Vicki Quiram (right) accepts the first place award on behalf of DES from Rebecca Harris, executive director of the Contoocook Valley Transportation Company. DES's Commute Green Team logged the most trips and miles from May 14-October 5. Team DES commuted green for 26,908 miles and reduced 874 trips.

Oakhurst Dairy expands hybrid delivery fleet to New Hampshire

Oakhurst Dairy, northern New England's largest independent family-owned dairy company, recently unveiled three new hybrid electric delivery trucks at an event for employees and local and state officials. The new vehicles are used on routes primarily in Hillsborough, Merrimack, Rockingham and Strafford counties, where industry and transportation contribute to regional air pollution. Air pollution reductions are gained by burning less fuel. These trucks represent an expansion of the dairy's exciting alternative technology vehicle fleet.

Earlier this year, Oakhurst was awarded a DES Alternative Fuel Vehicles Grant through the Granite State Clean Cities Coalition to fund the incremental cost of the new trucks.

For more information about the Granite State Clean Cities Coalition, see granitestatecleancities.nh.gov. For more on Oakhurst Dairy's green projects, see www.oakhurstdairy.com.



DES and Oakhurst Dairy officials pose with one of the company's new hybrid delivery trucks.

Commissioner's Column

continued from page 1

with noxious odors and smoke containing hazardous chemicals and particulates that traveled far and wide, and were a significant contributor to air pollution in our state. Partially burned and unburned waste was often left uncovered, inviting vermin and posing a risk of disease transmission.

By the mid-1980s, the practice of open burning had ceased, and waste at town dumps was generally covered with soil at the end of each day. This represented a significant improvement over previous practices. Also, commercial waste-to-energy incinerators and double-lined secure solid waste landfills were being sited and constructed in the state. However, the town dumps located in many New Hampshire towns remained in wide use. These so-called "sanitary landfills" were not lined, so there was no way to prevent rain water that came in contact with the waste, which sometimes included hazardous waste, from leaching into the ground and contaminating groundwater. Out of over 120 unlined municipal landfills, there were 108 still operating in 1987, each with varying degrees of groundwater contamination. In some cases, this contamination threatened or impacted public and private drinking water supplies, and it became clear that prompt action was needed.

State and federal regulations imposed stringent landfill operating requirements, and state groundwater protection laws encouraged many New Hampshire towns to cease operating their unlined landfills by 1991. However, the requirement to properly close these facilities posed a significant financial burden on our municipalities. Proper closure usually required design and construction of an engineered soil or synthetic cap, proper drainage, and long-term groundwater monitoring. To address this problem, the NH Legislature enacted the Unlined Municipal Landfill Closure Grant Program in 1994. Under this program administered by DES, towns that agreed to properly close their unlined landfills became eligible for a 20 percent state matching grant. The program was tremendously popular and successful. Since its inception, the program has provided over \$30 million to help 116 towns to properly close 107 landfills. The program, in concert with responsible decisions and actions by our local governments, resulted in the investment of \$165 million statewide to address this critical environmental challenge.

DES is pleased to announce that the Farmington landfill, the last unlined, municipal solid waste landfill in New Hampshire, has ceased operations this year and completed closure. The closure included proper grading, drainage improvements, and a low-permeability engineered soil cap that is already growing green grass! So as we celebrate our 25th anniversary year, we also celebrate the news that all unlined municipal solid waste landfills have been successfully closed

and capped. Where necessary, groundwater quality is being monitored over the long term at these facilities to ensure that, as expected, proper closure results in steady improvements in groundwater quality.

Even as we celebrate this important milestone, we know that we face many more challenges ahead in the arena of solid waste management. With each of us generating more than four pounds of solid waste every day, we will need to find new and better waste management solutions. In 1991, the NH Legislature expressed its support for integrated solid waste solutions and established a hierarchy of waste management methods, in order of preference: 1) source reduction; 2) recycling and reuse; 3) composting; 4) waste-to-energy technologies; 5) incineration without resource recovery; and 6) landfilling. In total, New Hampshire generates about 1.3 million tons of solid waste each year. Management of this waste is currently divided roughly equally among waste-to-energy incineration, secure landfilling and recycling. The first two of these are effective but costly management options, with tipping fees ranging from \$60 to \$100 per ton. Source reduction, recycling and composting, where feasible, are generally much more cost-effective. As we embark on the next 25 years, DES and its partners look forward to crafting more economical and environmentally sustainable solutions and shifting that balance increasingly towards source reduction, reuse, recycling and composting. ■

Tons of trash removed from Connecticut River watershed

Source-to-Sea volunteers scour more than 400 river-miles

On the last Saturday of September, over 2,000 registered volunteers grabbed trash bags and work gloves to pitch in on the Source-to-Sea Cleanup, organized by the Connecticut River Watershed Council. The 410 mile-long Connecticut River and nearby tributaries are cleaner today thanks to the volunteer efforts of residents and cleanup volunteers. Over 75 cleanup groups registered from Vermont, New Hampshire, Massachusetts and Connecticut. The exact amount of trash hauled out of the river was not finalized at press time, but some of the larger items found included junk cars, a parking meter, and a large tractor tire. For more information about the cleanup and the Connecticut River Watershed Council, please contact Angela Mrozinski at amrozinski@ctriver.org or (413) 772-2020 ext 204; or go online to www.ctriver.org. ■



RECOGNIZING TEAMWORK



Team DES (L-R): Grace Levergood (31 mi.), Rich Levergood (31 mi.), Pat Gruttemeyer (16 mi.), Carolyn Guerdet (31 mi.), Sharon Rivard (event chairman), Paul Heirtzler (31 mi.), Amy Clark (31 mi.), Ken Kessler (31 mi.) and John Regan (16 mi.). Not pictured: Sheila Heath (16 mi.), Jeff Andrews (77 mi.) and Ray Walters (77 mi.).



DES cyclists take the bronze in fund raiser

The DES staff's immense generosity shines once again! Thanks to the efforts of team leader, Carolyn Guerdet, and the riders of Team DES, the team raised more than \$3,000 for the 2012 Pedaling for Payson fund raiser. Proceeds from the cycling event support the Gene Gillis Fund at Concord Hospital Payson Center for Cancer Care that provides cancer patients with financial assistance for out-of-pocket expenses. Team DES was comprised of 17 riders – 10 DES employees and seven family members and friends. By raising at least \$3,000, we were named a Bronze Spoke Team! In addition to the DES staff listed in the photo caption, Gloria Andrews was in charge of rest stops along the routes, and Linda Magoon and the Bow Junction Band donated music for the post-ride activities. More than **\$139,000** (donations continue to come in) was raised overall. Team Leader Guerdet wants to raise the bar for next year's event: "more riders from DES AND push for the Silver Spoke Award of \$4,000!" Thank you to everyone who made Team DES a success. ■

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