

Vermont Rural Water Association....Supporting Water and Wastewater Systems since 1982

VT Schools Participating in DWSRF Program

by Elizabeth Walker and Bryan Redmond, Water Supply Division DWSRF Program Specialist

Approximately 35 schools in Vermont are in line to receive construction funds on the 2007 Drinking Water State Revolving Fund (DWSRF) project priority list. Due to the modified point weighting for school projects this year, many of these schools are receiving funding for the first time. These small projects are necessary to meet the new NTNC requirement for providing disinfection.

Getting on the priority list is the easy part. This article will describe the process schools need to follow in order to obtain funding through the DWSRF program for a water system improvement project.

For municipally-owned schools, the first step is to obtain a planning loan to finance the preliminary engineering and final design phases of the project. Many of the schools on this year's list have already applied for the planning loan, entered into an agreement with an engineer to provide design services, obtained a permit-to-construct from the Water Supply Division (WSD), and are ready to go to bid.

Many of the schools already had an engineer on board and, for those that did not, a Request for Proposal (RFP) to hire an engineer was sent out. Assistance is available through VRWA for hiring an engineer or developing an RFP.

Municipal schools with populations of less than 500 will benefit from planning loan forgiveness for most if not all of the planning and design engineering

fees up to a \$25,000 maximum. It is important to know that planning loan forgiveness occurs after the project is complete and only after all loan forgiveness conditions are satisfied.

Private schools are not eligible for planning loans and must utilize the construction loan program to pay for all project costs.

Once an engineer is selected, the school is provided with an engineering agreement that outlines the scope of services and associated cost. After the agreement is received, the school should complete the planning loan application and send the application with the unsigned engineering agreement to the WSD. The WSD will review these documents and deliver any comments to the loan applicant and project engineer.

Once the agreement and application are deemed acceptable, the WSD will send a letter approving the engineering agreement and notify the applicant that the loan documents will be sent to Sheila Lilley with the Financial Management

Continued on page 3.



Basement sump pumps can add unnecessary inflow to your WWTF.

Reducing Inflow and Infiltration: Sump Pumps

by Wayne Graham, VRWA

In this series of articles, I will discuss cost effective ways of reducing inflow and infiltration to our wastewater facilities.

Let's start by defining inflow and infiltration:

Inflow is the water discharged into a sewer system and service connections from such sources as roof drains, sump pumps, foundation drains, cooling water discharges, manhole covers, combined sewer systems, catch basins, storm water, and surface runoff. This term covers everything other than the flows that the wastewater system was designed to treat (toilet drains, sink drains, etc.)

Infiltration is the water entering sewer pipes and service connections from the ground. Defective pipes, joints, connections, and manhole walls are common locations where infiltration occurs.

Sump pumps are used by some homeowners to remove unwanted water from basements. Unfortunately, a lot of these sump pumps are hooked into the homeowner's sewer lines. This is a direct connection to the sewer collection system and results in extra influent flow that the collection system has to handle and the wastewater facility has to treat.

This extra flow wastes valuable facility capacity and restricts the

Continued on page 4.

Who We Are

Since 1982, Vermont Rural Water Association has supported water and wastewater systems across the state. We provide many services, including training, source water protection planning, and onsite assistance.

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News Leaks is the official publication of VRWA. It is published quarterly for distribution to operators, owners, managers and board members of water and wastewater systems in Vermont, as well as to association members, water and wastewater service providers, regulators, and other friends. Opinions expressed in the newsletter do not necessarily reflect the views and policies of VRWA.

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Letters

Just a note to let you know how much I appreciate the services of Vermont Rural Water. I operate a small system, only serving 27 mobile homes, but I have to operate under the same Vermont water supply rules as larger systems. Vermont Rural Water has been a great help to me in meeting the State requirements.

Just thought you'd like to know.

Yours truly,

Cliff Eaton
Eaton's Mobile Home Park

I am submitting this letter of support for Vermont Rural Water Association. The operators at this wastewater facility have had a long standing relationship with VRWA. We began by being a host facility and training site for your classes. This partnership has brought many training opportunities to the Northeast Kingdom of Vermont.

On the technical assistance side, Wayne Graham is very helpful in providing onsite training to new operators, assisting with written programs and lending a hand at difficult maintenance tasks.

VRWA and its dedicated employees provide a much needed service in Vermont.

Sincerely,

James Brimblecombe
Chief Operator, St. Johnsbury Wastewater Facility



VRWA Board

Left to right: Ed Savage, Joe Voci, Dick Desautels, Jeff Vance.
Missing: Rod Lamothe.

News on Tap

Opportunities

by Shaun Fielder, VRWA

Our industry is all about change. With change come opportunities. During this past year, VRWA has adjusted to a number of changes to ensure that we keep to our mission of providing the support water and wastewater systems need to promote public health and a clean environment.

As you know, our association accomplishes this through the hard work of all our directors and staff. We have had some changes in personnel this year and have one other change to report.

Elizabeth Walker finished employment with us on August 31. Many people in the water industry across Vermont have been lucky enough to work with her. Elizabeth has been a key figure in the

Vermont state revolving loan fund process as a VRWA Water System Specialist since 1998. For all the parties involved in the program, including the WSD staff, she was the senior technician.

I recently received a copy of a "best of luck" note directed to her: "You know how impressed I've been, not just the technical skill and knowledge, but the professionalism and down-to-earth honesty and compassion you bring to your working relationships." Elizabeth has been a great co-worker and she is lucky enough to be going back to her former employer, Sugarbush Mountain Resort. Elizabeth, best of luck from all of us at VRWA.

Ian Schrauf will be taking on the position vacated by Elizabeth. Ian started with us on September 3. He lives in southern Vermont and has extensive experience in water and wastewater

operations. Most recently, Ian worked with the Mass Rural Water Association. His duties and responsibilities were very similar to those of the position he has taken here. His name may sound familiar; he formerly worked for the old Northeast Rural Water Association.

Ian spent some time with Elizabeth prior to her completion of employment with VRWA to ensure a smooth transition. Welcome aboard Ian!

Our future opportunities are many and we are gearing up for early winter outreach efforts to ensure continued funding of our programs. We are working hard to promote the value of and need for our services. Please be part of that process by keeping those memberships coming in, as well as letters of support and thanks. We look forward to continuing to work with all you of on future endeavors.



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number of future hook-ups and the growth of a community. Inflow and infiltration sources often result in the need for costly facility upgrades, which is a huge waste of money and time when the existing plant could have met the community's needs without these additional flows.

Sump pump discharges can also cause wastewater treatment facilities to use extra electricity and chemicals, and can also affect the efficiency of the treatment process. A typical homeowner sump pump (40 gallons/minute) running 10 minutes per hour can pump 9,600 gallons per day. If there are 20 similar sump pumps in your community, 192,000 gallons of unwanted water is being sent to your wastewater facility in one day!

There are several ways to ensure that sump pumps are not tied into sewer collection systems:

- **Education.** Many homeowners do not realize the problems caused by hooking sump pumps into their sewer lines. Educational mailings, billing inserts, door hangers, newspaper notices and town report messages are all ways of communicating sump pump issues to homeowners. Most homeowners will voluntarily fix the problem when they discover that they pay for these wasteful flows in sewer rates and taxes.

- **Ordinances.** Most communities have sewer ordinances that regulate illegal connections such as sump pumps, roof drains and perimeter drains. Enforcing the sewer ordinance is sometimes necessary.

- **Plumbers.** A visit to your local plumbers to remind them about proper sump pump installation may also help.

Getting the word out in your community about sump pumps and doing periodic inspections of basements may yield surprising results for your wastewater collection system and treatment plant.

For assistance with inflow and infiltration issues in your community, contact VRWA Wastewater Specialist Wayne Graham at 800-556-3792 ext. 319



Sump pump attached to the sewer line.

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Training Input Leads to Change

by Phil Acebo, VRWA

Our training calendar for both water and wastewater is filling up for autumn 2007 and for the winter of 2008. Both Wayne Graham, on the wastewater side, and I have been busy putting together classes that have shown past popularity and also some fresh classes that we believe will be beneficial to operators across Vermont.

We plan courses by identifying ongoing needs and areas where there are new technologies or improvements to existing methodologies. We will also continue to address new EPA regulations such as the Long Term 2 Enhanced Surface Water Treatment Rule (LT2) and any other regulations that impact systems.

Your input is crucial to our planning process. Evaluations from various trainings held throughout the state have indicated that some systems would like further training in coagulation chemistry. To emphasize this, an operator called and asked if we could organize this training. Because of the keen interest, we've arranged a trainer to offer this topic in 2008. So the moral of the story is that your ideas and input do matter.

As you read this quarter's *News Leaks*, our Class 3 and 4 operator's class at Vermont Technical College, instructed by Sheldon Towne of New Hampshire Community Technical College (NHCTC), will have commenced. Hopefully, we will be able to offer this same class next year as

a fall course. Since successful participants receive their recertification credits and also three college credits from NHCTC, this class is a nice way to build your resume. Another Advanced Water System Operation class for Class 3 and 4 operators will be held beginning in January 2008, similar to the class we held from January-April of 2007.

Since the Distribution certification deals with specific skills and knowledge, we have created a separate class for those just seeking a Class "D" Distribution certification. Participants in last year's Advanced Water System Operation course prompted this change with their feedback. Looking at the specific skills, knowledge, and expectations required, I met with Paul Tice of Champlain Water District to map out a curriculum that better addresses the needs of the Distribution certification. This class will begin in March 2008 and finish just prior to the exam in May.

Another issue for all of us is finding good training sites. Sites are always an issue as well as distributing training geographically. Our goal is to create training sites that address the travel needs of our operators. That being said, it is challenging to make training convenient for all, but by diversifying sites we will be able to make some training less intrusive. If you have a site that we could use for training; please let us know.

Those operators who hold a Class 2 or

Class 4 certification will have their renewal coming up in June 2008. So **now** is the time to collect all your certificates (TCHs) from the past three years. If you start this process now, you will have a lot less anxiety in ten months. Remember, the responsibility for your recertification falls upon you.

Communicating your needs to VRWA is the key to giving us the information we need to weigh the needs of water and wastewater professionals. With your help, we can adjust the curriculum to better meet your needs. This profession, as you know, is forever evolving; change and technological advances are part of the challenge. As the people responsible for providing safe drinking water to thousands of Vermonters and visitors to our state, you have a critical role, and VRWA wants to be there to assist you.

Thanks so much for supporting VRWA. We look forward to seeing you soon.

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VT Schools Participating in DWSRF Program

Continued from Page 1.

Section of the Facilities Engineering Division (FED) for final processing.

Once the loan authorization is received, Sheila develops the official legal documents for the loan and circulates for final DEC approval prior to sending these documents back to the loan applicant for signature by the school board.

Once the final loan documents are executed (signed) by the school board, the engineer begins the design work. The school is allowed to requisition for reimbursement on a monthly basis.

By this time, the school will have had a site visit with a DWSRF technical assistance provider (either VRWA or WSD staff) and completed a Capacity Evaluation/Improvement Plan and a project timeline. Both of these documents are submitted to the WSD for approval and are required.

Also during the engineering phase, the school will need to have an environmental review and categorical exclusion request form submitted to the state. This process determines whether or not an Act 250 permit is needed to address endangered species/wetlands/archeological and other environmental conditions that may be affected by the project. This is usually done by the VRWA Water System Specialist. After the categorical exclusion is granted by the state, a 30-day public notice period must take place before the decision is finalized.

If your school has been identified as a fundable project on the priority list, then it is time to submit a construction loan application to WSD for review and approval.

Once the final plans are completed and a permit-to-construct is obtained from WSD, the construction phase begins. The engineer will provide you with a construction phase engineering services agreement that includes bidding, inspection, certification, and operation and maintenance manual completion if needed. This agreement will be reviewed and approved by the Construction Section in the FED to help reduce construction costs.

Before closing on a construction loan, the school will need to have had a vote of the voters (voice, hand or paper ballot vote at a public meeting) if the total project cost (including initial planning) is less than the \$75,000. If it is more, then there must be a formal bond vote.

Remember that with the construction loan, municipal schools are eligible for \$25,000 in construction loan forgiveness; this is an important selling point when you have your vote. Most schools have an article for town meeting day or call a special meeting if it is more appropriate.

VRWA's Water System Specialists and the loan program staff have sample language, warning procedures, and vote documentation requirements. Once the voting and all other required information is

DWSRF Loan Checklist

- Submit priority list application
- Select engineer and have engineering agreement drafted.
- Fill out municipal planning loan application. If a private system, fill out private construction loan application.
- Complete a Capacity Evaluation and Improvement Plan and project timeline and submit to DWSRF program staff.
- After approval of engineering agreement, sign and return to the DWSRF Project Development Specialist.
- Execute loan documents in order to request reimbursement.
- Gain voter approval.
- Sign and Submit the Environmental Review/Categorical Exclusion Request.
- Obtain construction permit for engineered plans.
- Submit municipal school construction loan application to DWSRF program staff.
- Submit draft construction phase engineering services agreement to the Construction Section of the Facilities Engineering Division. They will also need to approve the bidding and procurement methods used.
- Execute loan documents for construction to receive reimbursement.
- Final completion of project inspected and approved.
- Satisfy the requirements in the capacity improvement plan, construction and operating permit.
- Fill out planning loan and construction loan forgiveness request forms if municipal.

completed, the FED will then send out the official loan documents to be executed by the school board.

For DWSRF Assistance Call

- VRWA, Ian Schrauf, 800-556-3792 x321, ischrauf@vtruralwater.org.
- DWSRF program staff and the WSD Capacity Development Specialist, 800-823-6500.
- Visit www.vermontdrinkingwater.org for a more detailed fact sheet.

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VRWA Secures New Mapping Project

by Eric Hanson, VRWA

VRWA was recently awarded a contract with the Water Supply Division to complete the mapping of source protection areas for 40 public water systems throughout the state.

This mapping will be completed by hydrogeologist Eric Hanson. The project involves replacing the default (circular) source protection areas for these systems with scientifically delineated source protection areas.

Completion of this project will provide these public water systems with a clearer picture of where the groundwater that recharges their sources is coming from. This allows the system to proceed confidently when preparing the required source protection plan.

Once this project is completed, all public community water systems in Vermont will have scientifically delineated



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ed source protection areas.

The first redelineations completed for the project were the source protection areas for two bedrock wells that serve as ancillary sources for the Town of Brighton surface water withdrawal system. Although these bedrock wells are used only infrequently to augment the surface water system during times of very low flows, or during high flow/high turbidity events, scientifically delineated source protection areas are important to the Brighton Water System for two primary reasons:

1. To enable qualification to apply for monitoring waivers with the Water Supply Division, and
2. To allow for meaningful town planning and zoning regarding water quality protection for the town's water supply sources

Typically, scientifically delineated source protection areas cover considerably less land area than the default circular source protection areas. This is illustrated in the map above, which shows both the default and scientifically delineated source protection areas for one of the Brighton wells.

VRWA is looking forward to working with the Water Supply Division on the successful completion of this project, as this will be a significant milestone for groundwater quality protection for public water systems. VRWA is very pleased to expand our services in this regard to assist public water systems throughout Vermont.

For additional information, please contact Eric Hanson at 802-660-4988 ext. 327

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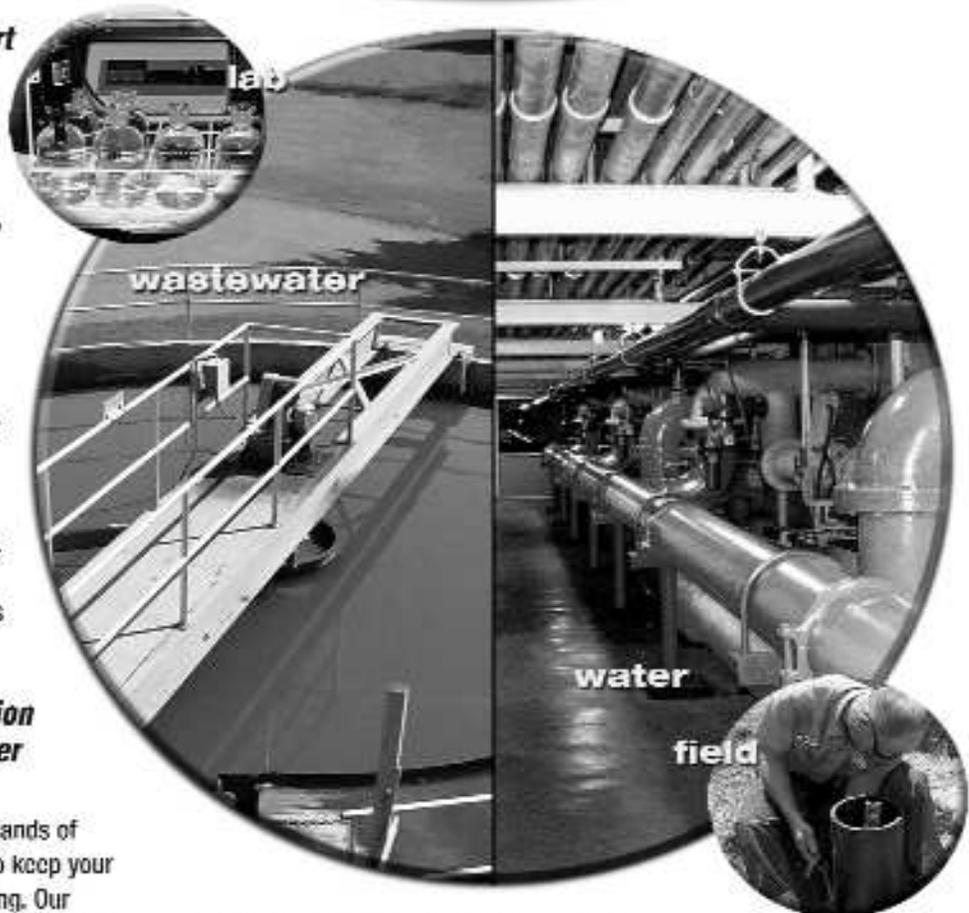
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