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◆ Honorable Peter Shumlin, Governor ◆
Deb Markowitz, ANR Secretary ◆ David Mears, DEC Commissioner

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Waterline



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The Flow of Money

Walking the downtown streets of Montpelier with Lori Barg from Community Hydro I am unaware she is leading me on a historic tour of inline (or conduit) hydroelectric power. I thought we were simply walking to a restaurant to talk about the potential of capturing the energy of moving water within existing waterlines in Vermont. But when she stops at the corner of State and Main Streets and explains to me that in 1886, under what is now the Coffee Corner Diner, there was enough pressure and flow in a 10-inch water main to power over 330 lights in the downtown area, I am stunned.

It seems inline hydroelectric power already has a long history in Vermont. We continue our way towards city hall wondering about the economic impact of 330 lights over 125 years ago and what this once forgotten renewable energy could mean for water utilities in 2011.

Hydropower can be traced back to ancient times but hydroelectricity—electricity generated by falling or

flowing water—dates back only to the late 19th century. Figuring out how to convert mechanical energy to electrical energy stumped many scientists but once this was solved it didn't take long for the world to capitalize and by 1920 almost 40% of the power produced in the United States was hydroelectric. An overwhelming majority of this power was created by damming a river or stream and diverting water to drive a turbine and a generator. This is considered conventional hydro. With its dams and water diversions, even small projects can have significant environmental impacts.

While no reliable data on

the potential capacity of inline hydro exists, there are undoubtedly possibilities in Vermont. Water utilities with a constant flow of water, excess pressure, and onsite energy demands might want to look into this lesser known form of hydroelectricity. The first step is to commission a prefeasibility assessment to see if your water utility is indeed a good candidate for inline hydro. If you decide to pursue the project, you can





The Importance of Joining VTWARN

The recent flooding in Vermont has brought attention to emergency preparedness and *response*. Currently, the Vermont Water/Wastewater Response Network (VTWARN) has 40 utility members, representing a large portion of the state to deal with just this topic; however; there are literally hundreds more systems yet to take advantage of this

program. Past response and lessons learned tell us that utility operations are specialized, must be self-sufficient, and must fill in the gap between disaster onset and arrival of governmental aid. In addition, the restoration of water systems brings hope to a community stricken with either minor or catastrophic events. 💧

More benefits of joining VTWARN include:

- The network is developed, managed, and run by utilities for utilities;
- Helps establish eligibility for Federal Emergency Management Agency (FEMA) disaster reimbursement;
- Provides another pathway to assistance;
- Provides timely access to resources;
- Provides access to database of utilities and resources (www.vtwarn.org);
- There is no cost and no commitment; and
- Both privately and publicly owned utilities can participate

For more information about VTWARN, go to www.vtwarn.org or contact Richard Pratt, Chief Engineer at Champlain Water District at 802 864 7454 or dickp@cwd-h2o.org; Heather Campbell, Water System Security Coordinator at 802 241 3417 or heather.campbell@state.vt.us



Flood ravaged Barre City, mid-June 2011
Granite St., Barre City
Photo credit: John Sell



Flood ravaged Barre City, mid-June 2011
Harrington Ave, Barre City
Photo credit: John Sell



Rule Revisions (continued from previous page)

What will trigger a Level 2 Assessment? A Level 2 Assessment will be required when a water system is issued an E.coli MCL violation or an E.coli monitoring violation. A Level 2 Assessment will also be required when a second Level 1 trigger occurs within a rolling 12 month period (unless the system has corrected the initial problem).

Violations

The proposed revised Total Coliform Rule includes changes to some of the types of violations and subsequent required actions. The revised rule is proposed to include 4 types of violations: E.coli MCL Violation, Treatment Technique Violation, Routine Monitoring Violation and Reporting Violation.

What will constitute an E.coli MCL Violation? An E.coli MCL violation is triggered when routine, repeat or temporary routine samples include at least one E.coli positive sample and one Total Coliform positive sample or when a system fails to take the required samples following a routine E.coli positive.

What actions will be required when an E.coli MCL violation is triggered? The water system will be required to provide public notification within 24 hours (Tier 1), consult with the Vermont Water Supply Division no less than 24 hours after learning of the violation, and complete a Level 2 assessment /corrective action.

What will constitute a Treatment Technique Violation? A Treatment Technique Violation is triggered when a system fails to perform a triggered Level 1 or Level 2 assessment, fails to correct all sanitary defects identified in an assessment, or fails to correct sanitary defects according to an agreed upon schedule.

What actions will be required when

a Treatment Technique Violation is triggered? The water system will be required to provide public notification within 30 days (Tier 2) and repeat public notice every 3 months as long as the violation or the uncorrected deficiency persists.

What will constitute a Routine Monitoring Violation? A water system will receive a routine monitoring violation for failing to take the required routine or additional routine samples

What actions will be required when receiving a Routine Monitoring Violation? The water system will be required to provide public notification within 1 year (Tier 3). Community Water Systems can use the annual consumer confidence report to report the violation.

What will constitute a Reporting Violation? A water system will receive a reporting violation for failing to submit a monitoring report or assessment form, or failing to submit a report by the required date (regular monitoring samples are due no later than 10 days after the end of the monitoring period.)

What will be required when receiving a Reporting Violation? The water system will be required to provide public notification within 1 year (Tier 3). Community Water Systems can use the annual consumer confidence report to report the violation.

When will the revised Total Coliform Rule become effective? The revised rule is expected to be finalized October 2012 and become effective three years later in October 2015. More information is available under "What's New" on the Water Supply Division Home Page. 💧

For more information about changes to the Total Coliform Rule, contact Julie Hackbarth at 802 241 3410 or julie.hackbarth@state.vt.us; Matt Guerino at 802 241 3415 or matt.guerino@state.vt.us

Do you have pictures, success stories, case studies or quips you'd like to share with your fellow drinking water community members?
Email them to Ashley at ashley.lucht@state.vt.us or Eric at eric.law@state.vt.us



Revisions to the Total Coliform Rule

A "Find & Fix" Approach

In 2010, EPA proposed revisions to the Total Coliform Rule. The revisions are intended to improve public health protection, improve rule effectiveness, and reduce rule implementation burden. There will be an overall shift in focus from monitoring results informing public notification to monitoring results informing investigation and corrective action. Systems will be required to investigate and correct any sanitary defects found whenever monitoring results show a system may be vulnerable to contamination. Benefits will include a more proactive approach to public health protection and a reduction in confusion associated with Public Notice actions for Total Coliform violations. The revised rule is expected to be finalized October 2012 and become effective three years later in October 2015.

Major changes to the Total Coliform Rule include:

- ◆ Total Coliform as part of an overall treatment technique.
- ◆ There will no longer be an MCLG/MCL for Total Coliform.
- ◆ The MCLG/MCL for E.coli is retained, set at zero. Fecal Coliforms will no longer be used.
- ◆ A Total Coliform threshold exceedence triggers assessment and corrective action (of any defect found).
- ◆ A treatment technique violation occurs if assessment or corrective action is not completed.
- ◆ Public Notification is required for TT violations or acute MCL violations. Public notification will no longer be required for multiple total coliform positive routine or repeat samples.

Monitoring

While routine and repeat monitoring are still a cornerstone of the proposed revised Total Coliform Rule, there are some proposed changes to the monitoring requirements.

Will there be any proposed changes to routine monitoring? There are no changes in the routine monitoring requirements for systems serving greater than 1,000 in population. For systems serving a population of less than 1,000, there will be new criteria for increased and reduced monitoring and more flexibility in sample siting plans.

Will there be any changes to repeat monitoring? There are no changes in the repeat monitoring requirements for systems serving a population greater than 1,000. For systems serving a population of less than 1,000, repeat monitoring will be reduced from 4 samples to 3 samples. Ground water systems must still take an additional source sample to comply with the GWR. The revisions include flexibility in the location of sites for repeat samples beyond 5 sample taps up and down-stream of the total coliform positive location.

Are there other changes to monitoring requirements? The use of dedicated sampling sites instead of premises would be allowed. Start-up procedures and sampling during high vulnerability periods for seasonal systems are required.

Assessment

When monitoring results show a system may be vulnerable to contamination, the system will be required to conduct a simple self assessment (Level 1) or a more detailed assessment by a qualified party (Level 2) depending on the severity and frequency of contamination.

What will trigger a Level 1 Assessment? For systems taking 40 or more samples per month, a Level 1 assessment will be required if 5.0% or more of the samples are Total Coliform positive. For systems taking less than 40 samples, a Level 1 assessment will be required if 2 or more samples are Total Coliform positive. A Level 1 Assessment will also be required if a system fails to take all required repeat samples.

(continued on next page)



Note from the Editors

In last year's fall edition of Waterline we used our editorial space to talk about the downbeat economy and how water utilities might pull themselves up by their bootstraps. A majority of the experts say the recession officially ended nearly two years ago but it doesn't take an expert to know many Americans still feel a great deal of trepidation about their finances.

Water utilities are in the same boat as American households but it could be argued that utilities have one less option in how they counter their financial woes. Households, for example, can save in the short-term by putting off necessary repairs for another day and not receive a Temporary Operating Permit, or the accompanying EPA compliance score (see page 7), or worse yet an environmental ticket (see page 12). Public health and environmental policy-makers have rightfully placed the utmost importance on drinking water and as a result the debate is not centered on the why but rather on *how we pay for improvements?*

As we travel the State helping water systems with their

Inline Power (continued from page 1) contact the Agency of Natural Resources (ANR) for an initial project review to identify any significant environmental issues. Typically, the effect on streamflow and screening of the intake to exclude fish are the major concerns for this class of projects.

Ultimately, your utility will have to obtain an exemption from the Federal Energy Regulatory Commission. For this type of project, the exemption process can take six months or less to complete, provided the application is fully complete. Because a federal permit is required, ANR will have to issue a state certification, but that process runs concurrent with the federal review, so it doesn't add time to the process. Finally, you will need a Water Supply Permit-to-Construct because downstream flows directly affect water supply operations. Carefully timing the permit applications can shorten the

technical and managerial capacities we often hear, "we already know what we need to do but we don't have the money to do it." In this economic climate the problem is compounded with water boards inheriting old and poorly-conditioned infrastructure neglected by previous boards, the political difficulties of raising user rates in a tough economy, and the State of Vermont and EPA's increased emphasis on environmental and public health compliance which, if delayed or ignored, may result in monetary penalties. All of these factors are putting water utilities between a rock and a hard place, forcing water professionals to become competent in the third and final capacity--financial.

Economic stress and anxiety water board members feel—like households—can stem from being unsure what the next steps are and having the sense of little or no control over their future. In response to this we included in the last edition of Waterline an article on asset management and in this issue on page 12 we include a short discussion on the importance of sustainable user rates or full-cost (continued on page 5)

amount of time needed to complete the regulatory process.

There always has to be a first and luckily for other water systems around the State the Town of Bennington has already plunged in (pun intended). Two years ago, the town installed a 15-kw hydroelectric energy recovery system on the raw water intake piping of their water treatment facility. Because it is an interconnected net-metered system the town had to apply for a Certificate of Public Good from the State of Vermont Public Service Board. The town is still working on maximizing the energy production of the system on a year-round basis (especially during times of high turbidity) but even running at 76% efficiency the new inline hydro has the potential to save \$15,000 per year in energy costs for a 6.25 year return on investment (ROI).

(continued on page 8)



Water—the Drop of Life a Celebration of National Drinking Water Week

The annual drinking water week fair returned to the Vermont Institute of Natural Sciences (VINS) in Quechee for a second year and what a celebration it was. After weeks of rain, the skies parted and we were given a delightful, sunny, spring Vermont day for over 250 students, teachers, aids, parents and volunteers to participate in activities related to drinking water and the natural environment. Attendees were also treated to a 'Raptors up Close' demonstration conducted by VINS staff.



Perennial favorite activities were present such as Hartford water operator, Rick Kenny assisted by Evan Eccher, and his Water Cycle, Morse Farm Maple Corn, the Sponge Game and new this

year, a water drop costume. We don't have a name for her yet, but if you've got some suggestions, drop us an email!

This celebration would, of course, not be possible without the tireless efforts by the drinking water week committee—THANK YOU! If you'd like to get in on the action, we meet every second Wednesday of the month in Water Supply Division's conference room at 10:30AM; you can also call in. Please send us an email if you are interested.

Lastly, we must not forget our sponsors that without your contributions, we would not be able to make the event what it has become.

Oh yea, did you know it takes 1857 gallons of water to produce a pound of beef? Or, that it takes 37 gallons of water to produce one cup of coffee (*source: National Geographic Magazine*)? I'm betting you can't live without your cup of coffee! 💧

For more information about Drinking Water Week, contact Ashley Lucht at 802 241 3424 or vermontdrinkingwaterweek@gmail.com

Drinking Water Week Sponsors— THANK YOU

Allen Engineering ♦ American Society of Civil Engineers - VT Section ♦ Barre City ♦ Burlington Water Department ♦ Champlain Water District ♦ Champlin Associates ♦ Colchester Fire District #2 ♦ Downs, Rachlin & Martin ♦ Dufresne Group ♦ EDM Consulting ♦ Stantec ♦ Environmental Compliance Services ♦ Efficiency Vermont ♦ EJ Prescott ♦ Endyne ♦ Fairfax Water Dept. ♦ Ferguson Waterworks ♦ Aldrich + Elliott ♦ Friends of the Mad River ♦ GMWEA ♦ Green Mountain Engineering ♦ HA Manosh ♦ Hartford Town ♦ Hartigan ♦ Heindel & Noyes ♦ Town of Hinesburg ♦ Holland Co. ♦ Hoyle, Tanner and Associates ♦ Jim Dodds ♦ Montpelier City Public Works ♦ M & K Commercial Diving ♦ Natgun Corporation ♦ Otter Creek Engineering ♦ Phelps Engineering ♦ VHB Pioneer Environmental ♦ Red Dirt Girl Photography ♦ Town of Randolph ♦ RCAP Solutions ♦ Shepard's Pie ♦ Simon Operation Services ♦ Statewide Aquastore Inc. ♦ Technical Planning & Management ♦ Ti-Sales ♦ USA Blue Book ♦ United Water ♦ VT Agency of Natural Resources ♦ VT Rural Water Association ♦ Waterbury Village ♦ West Rutland ♦ Weston & Sampson ♦ Vermont Institute of Natural Sciences (VINS)



Simple Ways to Maintain System Compliance (in no particular order)

- ✓ Understand owner & operator responsibilities & duties—WSR-Subchapter 21-12
- ✓ Maintain your operator certification
- ✓ Know your Permit to Operate status
- ✓ Correct permit & sanitary survey deficiencies
- ✓ Notify WSD that you've corrected deficiencies
- ✓ Develop and update, as needed, your O&M manual
- ✓ Perform daily/weekly/monthly/annual tasks
- ✓ Follow your monitoring schedule requirements
- ✓ Keep/submit complete & accurate records
- ✓ Issue public notice when required; certify to WSD that you've done it
- ✓ Maintain your Source Protection Plan; re/apply for Phase II/V Monitoring Waiver
- ✓ Develop a capital improvement plan that addresses system needs for at least 5 years; charge appropriate rates to achieve that plan
- ✓ Communicate with your certified operator/governing board



Doug Kievit-Kylar, Carey Hengstenberg, Kira Jacobs (as water drop), Heather Campbell and Helen Banevicius at the Drinking Water Fair. Photo credit: Red Dirt Girl Photography



Fairness, Equitability and Preparedness


The hallmarks of an appropriate user rate structure

When was the last time you took a hard look at your user rates? Do you find that the water system can't make necessary improvements without a significant rate hike? Do you feel like you can't cover your expenses at the end of the quarter? Do you fear your rates are too high, but there is a lot of infrastructure work ahead and you don't know how to manage it?

If you answered yes, or are nodding your head, you likely need to reassess your rate structure. Contrary to popular opinion it doesn't have to be painful; it doesn't have to be arduous; it doesn't even have to be complicated. There are often simple solutions, like billing more frequently that can help your cash flow. However, you may need to do some heavy lifting (of the pen and paper kind) to keep from kicking the can down the road to your successor.

Water Supply can help. We have the ability to work with most systems, regardless of size or complexity, to find solutions that will ensure your infrastructure needs are met, your system is financially sustainable and can accommodate growth, and the rate structure is fair and

easy to understand. You may also find this improves communication between those who ensure the water is clean and those who are charged with making decisions. It is often the case that an operator is the first to recognize the need for a revenue increase, but it's only the board that can make it happen.

Water Supply will visit with you and on your terms to make recommendations that will fit the needs of the system. We want to work with you to understand your system's current and future needs and show you how a proper rate structure can ensure a steady revenue stream, provide equitability and encourage conservation, and convey to the users that you are making decisions that will benefit the community now and into the future. 




For more information about Financial Capacity, budgeting, or developing user rates contact Ashley Lucht at 802 241 3424 or ashley.lucht@state.vt.us

VT DEC Environmental Ticketing

Proposed Rule Update

In the last issue of Waterline (Fall/Winter 2010) information was provided about the proposed Environmental Ticketing Rule which would expand current DEC authority for issuing tickets by Water Supply Division, as well as other regulatory programs within the Department. Now that the 2011 Legislative Session is ended, the DEC Enforcement Division is proceeding with the next step of the rule making process by preparing a final draft rule, taking into account pub-

lic comment received earlier this winter. Rule implementation procedures will be developed for the regulatory programs throughout the Department, including the Water Supply Division. Adoption of the rule by the end of the year is anticipated. 

For more information about DEC's Ticketing Program, contact Gary Kessler at 802 241 3820 or gary.kessler@state.vt.us



Your Drinking Water Data Is Now Available Online

The **Drinking Water Watch** website has officially been launched! What is the Drinking Water Watch website, you ask. This site allows public water suppliers (TNC, NTNC and PCWS) and the general public to view information maintained in our Vermont State Drinking Water Information System (SDWIS). SDWIS is the database that the Water Supply Division (WSD) uses to regulate public water systems in Vermont; it contains system information such as water quality data, facility information, contacts, population, deficiencies, etc.

Water systems can use Drinking Water Watch to ensure test results were submitted and received by WSD, view contacts associated to the system, or see other information associated with the system. We encourage water suppliers to review this data, not only for your own records, but to help us regulate you efficiently and accurately. You must have your WSID and in the proper format (ex VTXXXXXX) to access the website.

The site also allows the public to review the quality of their water or locations they may be visiting. The public will also need the correct WSID and in the proper format to access the website. You may want to include this information in your CCR.


Some of the information available on the Drinking Water Watch Site include:

- ◆ Points of contact (owners, administrative contacts, operators)


Editor's Note (continued from page 3) pricing.

Some water utilities dismiss asset management and full-cost pricing as mere academic exercises which take away from more important duties, but in reality they are the foundation of financial security. *A water utility can't be financially sound, thus keeping up with regulations and necessary improvements if they don't first have a good handle on the assets they already have.* Many communities, in turn, won't vote in favor of a rate increase without a solid documented

- ◆ Population
- ◆ Connections
- ◆ Sources
- ◆ Listing of facilities (wells, treatment plants, storage, etc.)
 - ◆ Sample points codes
- ◆ Water quality test results
 - ◆ Coliform samples
 - ◆ Lead and copper 90th percentiles
 - ◆ Chemical results
 - ◆ Inorganic compounds
 - ◆ Radionuclides
 - ◆ Volatile organic compounds
 - ◆ Synthetic organic compounds
 - ◆ Disinfection byproducts
- ◆ Violations

Drinking Water Watch can be found on our Website <http://www.vermontdrinkingwater.org/> or directly at <https://anrnode.anr.state.vt.us/DWW/>. 

For more information about Drinking Water Watch, contact Tim Pricer at 802 241 1413 or tim.pricer@state.vt.us

basis. Not asset management for asset management's sake, but rather asset management as the first step to financial competence and a "yes" vote on Town Meeting Day. 

For more information about Waterline, contact its editors Ashley Lucht at 802 241 3424 or ashley.lucht@state.vt.us or Eric Law at 802 241 4656 or eric.law@state.vt.us



Consumer Confidence Reports (CCRs)— Making the Most of this Necessity: Tips for next Year

Like many organizations these days, we speak our own language.

"Hey Fred, did that MHP submit their TOP PN?"

"No, and their TTHMs are still above the MCL and there's no O&M. I actually think they also got an NOAV. I guess all this will be included in their CCR."

You, of course, know exactly what all this means, but the public has no clue and some if it might be appropriate for them to know. For public community water systems, the Consumer Confidence Report (CCR) is exactly that—an explanation to the public about some of the technical requirements of the system. The EPA (oops, there it is again) requires an annual who, what, where, how and why of the water that comes out of the tap. But the CCR can be so much more; it is your opportunity to put in plain words what you do and even brag a little about it.

Public water systems are regulated entities thus entitling the public's right-to-know critical elements regarding the water and water system. The CCR gives the details of what's in the water; where the water comes from; how it got from source to tap; what treatment

processes occur; what was taken out; and, who the people are that make it happen 24/7/365. In addition, the CCR details what problems, if any, the water system encounters and what might be necessary to keep clean, potable, plentiful water available for the community's use.

There are specific items that are required to be included in the CCR. Except for the name and telephone number of the person who should be contacted if the customer has questions about the report and system, all other required information is provided in the system's individualized CCR template supplied by the Water Supply Division. The template, however, is really just the bare bones—a scaffold upon which additional information may be added. Those responsible for issuing the CCR are encouraged to add information, even pictures, to improve readability, provide further explanations, or add new and exciting information. You can also add charts, diagrams, photographs; many add clip art.

The CCR is also a good place to inform customers about what's coming down the pipe (continued on next page)



Phew, my Sanitary Survey is over – or is it?

You just marked "Complete Sanitary Survey" off of your list of things to do this year and figure you have another three years (actually about 2 ½ years) to sit back and relax, right? Well, that is almost right. We all know you put in a significant amount of time just keeping things running as smoothly as you do, but there is something else you can do that will greatly reduce your potential for headaches down the road; that being a simple reply to your sanitary survey letter.

If you read closely, you will note the following words in

the second to last paragraph of your sanitary survey findings letter: *"In accordance with the Federal Groundwater Rule, the Water System is to provide a written response to the items listed above in no less than 30 days, or by date, 2011. The written response is to indicate that the compliance dates above are acceptable or provide a detailed alternative schedule for review and approval. All identified system deficiencies shall be corrected within 120 days of the date of this notification letter or in accordance with an alternate schedule that has been approved by the Division."*

"Whoa, am I in trouble?", "What is (continued on page 9)



EPA Compliance Scoring (continued from previous page) "Although Region I fully supports this goal, and we plan to work with the Region I states to fully attempt to meet this goal, we also recognize that the current commitment... is not something that the Region I states or EPA Region I staff can currently (or for that matter may ever) achieve."

Region I added that ongoing work between the region and states 'has resulted in resolving some of the simpler and the more straight forward issues at these public water systems ([such as] data cleanup). However, many of the systems left on the priority list, especially the highest scoring ones, have more challenging issues ([such as] ownership, funding, simultaneous rule compliance) which it may take years to resolve."

In its response, EPA said that while it expects timely enforcement actions to commence against all priority systems, it was not necessarily requiring all systems on the priority list to achieve compliance within six months. Instead, regions should consider the number of systems on its annual commitment systems (ACS) roster—which is updated biennially—to be the baseline for its enforcement goal in FY12.

"While primacy agencies are expected to address all priority systems with a formal enforcement action or return them to compliance within six months of their reaching a score of eleven, the ACS establishes that number of priority systems on each primacy agency's July 2011 ETT report will be that agency's numerical target for FY 2012," OECA's response reads. The agency changed its final SDWA commitment statement to read, "During FY12, the primacy

For more information about the new Compliance Scoring System, contact Jean Nicolai at 802 241 3405 or jean.nicolai@state.vt.us

agency must address with a formal enforcement action or return to compliance the number of priority systems equal to the number of its PWSs that have a score of 11 or higher on the July 2011 ETT report."

Region VIII and Region II wrote similar comments, suggesting that the agency adopt a numerical compliance benchmark rather than requiring all priority drinking water systems to achieve compliance. Region II further suggested that the six-month requirement be removed from the commitment language altogether, to which EPA replied, 'While this language has been moved to clarify that meeting the six month deadline is a goal and not part of each region's numerical target, the requirement to act within six months of a PWS reaching a score of 11 is part of established EPA policy.'

In its comments on the NPM guidance, EPA Region V said that there needed to be additional support from OECA and additional adjustments made to the ETT for guidance to be effective and the 2009 revised ERP to have its intended effect. Specifically, Region IV said that the six month compliance deadline should not be held as a requirement until 'planned changes to the ETT to track this six month period... [are] fully vetted and implemented...'

In their response to Region IV's comment, OECA said the office 'is working to resolve this issue, and expects to have adequate staff to manage and maintain the ETT.' *—John Heltman* 💧

Congratulations to Irasburg Fire District #1

As the 2010 Drinking Water State Revolving Fund (DWSRF) award recipient, Irasburg Fire District #1 was recognized for completing a drinking water infrastructure project that is innovative and promotes sustainable health protection. The state of Vermont, through its DWSRF program, nominated the Irasburg Fire District #1 project in recognition of the sustainable system-wide improvements that were made which resulted in high quality drinking water being delivered to the District's customers. 💧



pliance.

A more detailed article will be out in the next *Waterline* issue aimed at helping you understand your system's score. The WSD also expects to have the most accurate scoring list at that time. More information will also be available on the WSD website in the coming weeks/months. In the meantime, please read below the May 16, 2011 press release from EPA announcing improvements to the availability of drinking water data in their Enforcement and Compliance History Online (ECHO) tool.

The following is an excerpt from *Water Policy Report on www.insideEPA.com*

EPA has left largely intact a provision in its final 2012 National Program Manager's (NPM) guidance requiring states and regional offices to bring priority drinking water systems into compliance within six months of violation or issue an enforcement action against them, sidestepping objections from regions that the guide limits their discretion and total compliance is impossible to achieve.

In the agency's final 2012 NPM guidance for Enforcement and Compliance Assurance, which was released April 30, EPA stipulated as part of its Enforcement Response Policy (ERP) that regions must consider those public water systems (PWS) that receive a score of 11 or higher in their Enforcement Targeting Tool (ETT) assessment to be considered a 'priority system'. Priority systems, in turn, 'must either return to compliance or receive formal enforcement action within six months of having reached a score of 11,' the final NPM guide says. *Relevant documents are available on InsideEPA.com.*

"A quick response to SDWA violations decreases the risks to public health and allows primacy agencies more flexibility as they work with PWSs to achieve sustained compliance," the final guidance says. "By focusing resources on PWSs in this way, the ERP helps ensure those PWSs return to compliance in a timely manner."

But the provision was included over the objections of several EPA regional offices, many of which complained that the insistence on bringing all drinking water systems to within a ETT score of 10, or alternatively beginning legal proceedings against those systems that exceed the ETT threshold, would limit the regions' and states' discretion on which systems to target and would compel regions to initiate enforcement against systems with ownership, financial or attainability issues.

The compliance requirement stems from a December 2009 memorandum from EPA enforcement chief Cynthia Giles outlining revisions to the agency's ERP, which were aimed at refocusing regional drinking water and enforcement programs away from addressing individual violations and towards a more holistic 'return to compliance' goal. As part of that policy, regions were instructed to identify priority systems using the ETT, which was issued simultaneously as part of that memorandum.

The ETT, in turn, takes various types of violations and ranks them—for example, an acute health-based violation would receive a violation severity factor of 10, whereas monitoring or reporting violations would receive a violations severity factor of one. The 2009 ERP memo also instructed regions to consider a utility's response to severe violations to be 'timely' if they were brought into compliance 'within two calendar quarters' of their notification of violation.

EPA Region I wrote in its reported comments to EPA's office of Enforcement & Compliance Assurance (OECA) that the insistence on total compliance while a laudable goal, is impossible to achieve. Many of the systems whose SDWA violations could have been resolved within the six-month time frame have already been addressed, the region said, and those that remain will take more time and resource to address than are available.

The region does not agree with the proposed FY2012 commitment as written above, as it implies that every public water system that reaches a score of 11 must be addressed within 6 months of appearing on the list,' Region I said in its comments. (continued on next page)



New EPA Compliance Scoring System

In 2010, EPA and state programs began implementing a new national approach for characterizing compliance with drinking water regulations by individual public water suppliers. EPA, in concert with the states, developed a scoring system that assigns points to individual violations of federal drinking water standards and monitoring and reporting requirements based on potential impact to human health. The scoring system, which looks at the most recent five-year history, will be updated on a quarterly basis.

Each violation and associated points are included in a water system's score until it is either "Returned to Compliance" (RTC) or is under a formal enforcement order to address the problem. EPA and the Vermont Water Supply Division will use the point system to focus compliance and enforcement efforts on those wa-

CCRs (continued from previous page) (figuratively)—like anticipated replacement of an old water main. Some speculate on the degree of water loss in their system which has a financial implication for all who share in the costs related to operating the system. Some include conservation tips users may follow to hold costs down. Others remind consumers not to waste water during dry months (though it's hard to imagine a dry month right now). Some may discuss projected system needs and how that may affect their water rates. This would be a good place to begin your outreach efforts to gain support for the unavoidable future bond vote, ensuring a positive outcome and hopefully avoiding public backlash.


Both last year and this year, 80% of the CCR templates were distributed to systems by email. This electronic transfer of the template enables easy custom layout and for adding inserts such as drawings, charts, photographs or perhaps your mission statement or the town logo. How about a brief history of a source or an amusing story recounting an item the backhoe operator unearthed when laying new pipe? Human interest stories are everywhere; for example, the recent fourth

ter suppliers with the highest number of points and therefore health risk. We believe that this approach will be understandable, transparent, and more focused on public health than the previous approach, which was based on definitions of "significant noncompliance" established rule by rule.

The current focus is on systems out of compliance with the Stage 1 Disinfectant/Disinfection By-Product Rule. DEC's Enforcement Division will be negotiating Assurances of Discontinuance with five water systems to attain compliance with the Stage 1 Disinfectant/Disinfection By-Product Rule with the goal of remaining in compliance under the Stage 2 D/DPB Rule. The WSD has worked closely with these systems and provided technical assistance to evaluate different options to help these systems achieve com-

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grade field trip to the treatment plant. Didn't have a school visit? Invite them. Anything to improve the CCR's readability or increase the knowledge base of your users will benefit your efforts in the long run.

You are a PCWS and you are subject to the GWR or the SWTR and you still have to comply with the LCR. Now, is that ppb or ppm? This is mere gibberish to the public until your CCR goes out in the mail. A well-written CCR will not only properly inform but also potentially increase consumer confidence and help users better appreciate their public water system. Those in the WSD believe your influence in protecting public health is profound. Go ahead and jazz up that CCR. It's worth the investment. 



For more information about CCRs, contact Coleman Baker at 802 241 3414 or coleman.baker@state.vt.us



Inline Power (continued from page 3) Hydropower consultants strive for a ROI closer to 3 to 5 years, but taking into account specific water utility needs, regional energy cost differences, and the ever-changing construction bidding climate consultants like Mike Maloney from SOAR Technologies advise utility owners to be conservative in their projections. According to Mike, “there are many variables to contend with and 7 to 10 years seems to be a more practical goal. Anything over 10 years is a psychological barrier many decision makers can’t seem to get over.” But to get a payback of 10 years or less in Vermont it may also be necessary to secure funding assistance.

Thanks to Bennington there is less of a learning curve and hopefully the lessons learned will result in reduced costs for other water systems. The other part of the equation to bring down the ROI is government subsidy in the form of credits, grants, or favorable loans. The Clean Energy Development Fund’s grants are currently closed but there is growing optimism that it could return in some fashion to complement its still active loan program. The Drinking Water State Revolving Loan Fund offers planning loans at 0% for five years which may be eligible for up to \$50,000 in forgiveness or rolled into a -3 to 3% construction loan with a loan term ranging from 20 to 30 years. Funding incentives are by no means limited to these two government funding programs and water systems are encouraged to look for other options, including credits from the power companies.

Challenging the ROI assumptions even further, turbine manufacturers state that a water system should get at least 20 to 30 years from inline hydro with minimal maintenance. Plant operators may have to lubricate the parts once a month or replace the occasional pro-

PELLER, seal, or strainer, but this amounts to thousands of dollars, not tens of thousands. Outside of replacing the controls, a turbine can be broken down to its parts and rebuilt which keeps adding to the ROI many years after the minimal maintenance period.

If inline hydro is such a perfect fit for water utilities then why aren’t there more examples throughout the State? Is it because inline hydro manufacturers are doing a poor job marketing their products? Is it because government energy subsidies have not gone to inline hydro and without much consistency and predictability? Or perhaps, our decision makers don’t want to take on a project when they won’t be there to see it come to fruition or, better yet, pay itself off during their tenure.

These are all plausible reasons for why inline hydro has not taken hold in the United States but I lean toward yet another theory. In a world with a lot of information and unprecedented choices, it could be that inline hydro gets lost in the mix. Unfortunately, manufacturers, engineers, geologists, and even regulators have failed to convince the rest of society that inline hydro is compellingly different from traditional hydroelectricity with significantly fewer pitfalls.

Not up for debate is the fact that it takes energetic individuals at the community level to move projects like the one in Bennington. Maybe the conversation starts at the water utility or the local conservation board/energy committee. These civil servants are probably already busy reducing their town’s energy demands to a bare minimum and alternative energy production might serve as a complementary effort.

I think of kilowatts as the rate of energy use, and kilowatt-hours as the quantity of energy. 💧

If you have questions about this article, please contact Eric Law at 802 241 4656 or eric.law@state.vt.us. For more information about inline hydro please check out FERC’s Handbook for Conduit Exemptions at <http://www.ferc.gov/industries/hydropower/gen-info/handbooks.asp> or contact Shayne Jaquith from the Vermont Water Quality Division at 802 241 4456 or shayne.jacquith@state.vt.us



Sanitary Survey (continued from page 6) this 120 days thing?”, “Ah, -I’ll just skip it- they’ll call me if something is wrong...” Sound familiar? Well, as much as that seems like just more language to confuse the masses, it is an important instruction for all water systems. The Water Supply Division (WSD) wants to help you, the water system, stay in compliance with the Federal Groundwater Rule (GWR) (and the Surface Water Treatment Rule (SWTR), too, but I digress); but we need your help! The sanitary survey approach by the Division is nearly identical whether you are running a groundwater (governed by the GWR) or surface water system (governed by the SWTR) and we need the response of both types of systems to be equally comprehensive.

We all know how difficult it is to be assigned a compliance schedule; after all, how can we, the WSD, fully understand all the intricacies of your water system, especially the budgeting and planning sides of operating something we see once every three or so years? While we do our best to get a complete picture during our inspection, we still need you to help us further understand the limiting factors in bringing your system into full compliance with the WSR and this is your chance!

Open a written dialogue with us, either via hard-copy correspondence or email (the surveyor who conducted your sanitary survey has included his email address in the sanitary survey letter) and tell us exactly what you believe to be a reasonable compliance schedule for your particular water system to adequately address the deficiencies identified during your sanitary survey. If we agree with your proposed schedule (and we are usually quite agreeable) then you have just set up your own ‘alternate schedule’ identified up there in paragraph 2 and gotten rid of the 120 days requirement! Remember though, according to the Federal GWR, no schedule can extend beyond three (3) years from the date the deficiency was identified (and many of the “fixes” required can be done in an afternoon).

You are almost done – **when you actually com-**

plete the work that you promised us you would do, tell us!! Be proud of all that time and effort you put into building a stellar water system that you are proud to call your own. The same correspondence you began within 30 days of your original survey now needs to be re-opened with “Dear Water Supply Division, I/we have corrected the following deficiencies...” It is usually helpful if you can address each deficiency in the order that they were identified in the sanitary survey findings letter, but not imperative. If you originally replied by email, you can simply reply via the email chain you previously created and have a handy record of all correspondence that occurred relative to this specific aspect of your water system.

So what does this do for you? Remember a couple months ago when many of you received your Consumer Confidence Report template in the mail? And the same many, many of you also probably spent countless hours on the telephone with various WSD personnel attempting to correct incorrect information relative to the outstanding deficiencies for your water system. This simple correspondence is designed to stop that from ever occurring; to bridge the gap between sanitary survey and CCR (or operating permit). Keep the Division apprised of your activities relative to your water system in writing (via the most recent sanitary surveyor), reduce the odds of receiving an incorrect CCR template or operating permit.

Again, the WSD is here to provide you assistance in whatever ways we can, we truly do want to help, but sometimes we need your help back. If we keep in mind that this is a collaborative effort, everyone’s headaches can be reduced and all water systems can run that much more smoothly. Our goal is the same as yours: provide an adequate supply of safe, clean drinking water from the source to the tap of every user on your system. 💧

For more information about Sanitary Surveys, contact Tom Brown at 802 241 3428 or tom.brown@state.vt.us; Don Haddox at 802 241 4226 or don.haddox@state.vt.us; Rob Farley at 802 241 3412 or rob.farley@state.vt.us; Tim Raymond at 802 241 3419 or tim.raymond@state.vt.us