Transition From I-D Public Water Systems (PWS) Operator to Class I PWS Operator

By: Jeffrey Smith, RS, WV Bureau for Public Health

Many questions have arisen about the process Class 1D operators must follow to transition to Class 1 PWS operators, in reference to a requirement in the latest version of our PWS operator regulations, effective July 1, 2002.

The Division of Health’s legislative rules for PWS operators, Title 64 Series 4, section 4.1.c. states, “Community and Non-transient Noncommunity public water systems classified as 1D systems on or before the effective date of this rule will remain classified as 1D systems until July 1, 2004, unless treatment modifications do not require a higher classification.”

- Community Water System—A public water system that serves at least fifteen (15) service connections used year round by residents or regularly serves at least twenty-five (25) year round residents.
- Non-Transient Noncommunity Water System—A public water system that is not a community water system and that regularly serves at least twenty-five (25) of the same persons over six (6) months per year.

This means that after July 1, 2004, any community or non-transient non-community PWS will be reclassified to a Class 1 public water system. The reclassification will be for the convenience of the public.

Municipal Sewer Connections

By: Conrad Bramlee, PSC Water and Wastewater Division

Many questions still arise about municipal water and sewer service to customers outside municipal corporate limits. The West Virginia Code §8-20-1 states that the municipal utility may provide water and sewer service up to twenty miles outside its corporate limits. Once outside its corporate limits the municipality cannot refuse to extend its water and sewer service to outside areas pursuant to the Public Service Commission rules.

If the utility has extended sewer service outside its corporate limits it has the power to compel connection after a thirty-day notice of any business or residence building located along the sewer main inside or outside the municipality’s boundaries according to West Virginia Code §8-18-22. However, a municipality cannot force connections to its sewer system by terminating water service to customers who have not connected and it has no authority to bill a customer a minimum bill if they are not connected. The Code states that when a person does not connect to the sewer system they shall be punishable by a fine “not less than five nor more than twenty-five dollars” per day they remain unconnected. Under the current statute the right to force connections is “vested in the police court or municipal court when the lot or parcel of land is within the municipality.” When the location of “said lot or parcel is located outside of the municipality, then jurisdiction shall be vested in

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It has been a year of changes for many people, some good and some bad. But remember, if it were not for change, the world would be stagnant and boring.

For the Division of Water Resources, this year marks 30 years of creating, processing, negotiating, enforcing, and complying with the Clean Water Act. Part of the Act, initiated October 18, 1972, created a grants program (Title II, 1972 and its amendments) that gave communities funds to build, improve, or extend their wastewater facilities. This program lasted until the late 1980s when Congress felt it was time to “cut the cord” and turn the grants program into a revolving loan program (Title VI, 1988). That was a long, hard difficult change for many communities.

The State Revolving Fund (SRF) program has now been in effect for 10 fiscal years (1992 to June 30, 2002) and the results are as the following:

- Funds Received from the EPA: $284,755,895
- Funds Received from local sources: $56,951,177
- Loaned out or committed: $394,590,905
- # of communities affected: $162
- Repayment of loans made: $39,301,039

The State can now claim only one primary treatment facility that is being upgraded. The rest of the facilities provided secondary or better treatment allowing for cleaner discharges to our streams.

Annually, any changes projected for the SRF program are announced in the Intended Use Plan (available now). This year’s plan updates the target data for the household median income used to calculate the effective interest rate on the loan. October 1st marks the date of change. If a project has not been filed at the Public Service Commission, then all calculations must use the new income information found on the Census website.

The SRF has been able to accommodate 98% of the past requests for funding. Now we find ourselves in an unusual situation where our funds are tightening up and we don’t enjoy the excess dollars the program use to have. Tough funding decisions will have to be made, based on the merit of the project and the water quality improvements anticipated.

Yes, change comes in many forms but it is ultimately up to people to decide how smoothly it will be included in their lives.

2003 Seminars

The Water and Wastewater Division requests your assistance in deciding the locations of the seminars for 2003. In the past, the seminars have been conducted at various locations around the State of West Virginia such as Beckley, Davis, Princeton, Snowshoe, Parkersburg, Martinsburg, Morgantown, Wheeling, etc. However, in 2002 the majority of seminars were held at The Days Inn & Convention Center, in Flatwoods, West Virginia because of its central location.

Please email Drema Witt at drema.witt@wv.gov or fax (304) 340-3759 with the location of a facility where you would more likely attend PSC seminars. Some locations you might consider are: Stonewall Resort, Roanoke, WV; Snowshoe Resort, Snowshoe, WV; Canaan Valley Resort, Davis, WV; Pipestem Resort, Pipestem, WV; Country Inn & Suites, Beckley, WV; The Blennerhassett Hotel, Parkersburg, WV; The Radisson Hotel, Huntington, WV; Days Inn & Convention Center, Flatwoods, WV; The Ramada Inns in Morgantown & Wheeling; Hotel Morgan in Morgantown; Wilson Lodge in Oglebay Park, Wheeling, WV or a location not listed. Keep in mind our requirements are: conference facilities with classroom style seating of 50 - 100 people, full service restaurant and sleeping rooms for approximately 50 - 100 people.
Transition From 1-D Public Water Systems (PWS) Operator to Class 1 PWS Operator

By: Jeffrey Smith, RS, WV Bureau for Public Health
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Classification of those systems will require the 1D operators employed there to likewise need reclassification to Class 1 PWS operators. Owners of community and non-transient noncommunity PWS systems currently classified as 1D systems, must ensure their operators meet all requirements to become reclassified or obtain Class 1 PWS operators to maintain and operate their system. Regulators (local Sanitarians and BPH Engineers) of facilities that have Class 1D systems transitioning to Class 1 systems must help ensure the 1D operators are aware of this new requirement and how to reclassify as Class 1 PWS operators.

Section 5.3.d. of the rules (Distribution System Sampling) states, “Personnel employed by a community or non-transient noncommunity PWS to collect samples from the distribution system shall hold a Class 1D or higher operator certification.” Individuals currently holding Class 1D certification who only collect samples will not be required to upgrade to Class 1 PWS operator certification. A 1D operator can still collect the samples.

Current requirements for Class 1 and Class 1D are in the following table:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Education Required</th>
<th>Experience Required</th>
<th>Examination Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1D</td>
<td>Eighth (8th) grade</td>
<td>None (1Day Class)</td>
<td>1D exam (score of 70% or higher)</td>
</tr>
<tr>
<td>1</td>
<td>Twelfth (12th) grade or GED</td>
<td>2000 hours as OIT</td>
<td>Class 1 (score of 70% or higher)</td>
</tr>
</tbody>
</table>

Section 7.3 of the same rules allow the current 1D operators of community or non-transient noncommunity systems, who need to reclassify as Class 1 operators, to substitute their 1D experience to meet minimum education requirements. They will also need to pass the Class 1 examination prior to July 1, 2004 to become Class 1 certified.

**Example 1:** A class 1D operator with 8th grade education has been operating a 1D system four (4) years. This operator can substitute his/her four (4) years experience for years of education and add it to his/her 8th grade education requirement. This will provide him/her a total of twelve (12) years of education. By passing the Class 1 examination prior to July 1, 2004 they are eligible for the Class 1 certification.

**Example 2:** A class 1D operator with 8th grade education has been operating a 1D system for one (1) year. This operator cannot become classified as Class 1 even by passing the Class 1 examination. His/her education level does not total at least twelve years based on adding the operating time to the eight years of education, it totals only ninth grade (8 + 1 = 9).

**Simply put:** These 1D operators must meet a cumulative educational and experience requirement of twelve (12) or more years and pass the Class 1 exam on or before July 1, 2004.

Any operator currently certified in another state, province, or other jurisdiction must also meet the requirements of our rules to be certified in West Virginia.

Our office will be offering additional Class 1 PWS operator classes in 2003 and 2004. If you or someone you know will be reclassifying from 1D to Class 1, please make application to our office on the standard EW 102C form and register for a class as soon as possible. We anticipate a significant increase in people needing the classes. To receive a 2003 schedule of classes, please contact Rich Weigand at the West Virginia Environmental Training Center (WVETC), the number is 304-372-7878. You may visit the WVETC web site at www.angelfire.com/wv/wvetc/ripley.htm.

For additional information, contact Jeffrey Smith at 304-558-6722 or visit the web site at www.wvdhhr.org/oehs/eed/training.html.
Rate case reviews are primarily financial exercises which determine if sufficient revenue is available to cover operating costs. However, it’s the “operating costs” portion which interests the engineering reviewer. As the old saw once said “it’s what’s under the hood that counts”. The same is true for water and sewer utilities since one utilities operating cost may be totally different than another’s depending on how each system is operated and maintained. There are many requirements which systems must meet from regulatory agencies such as the Public Service Commission (PSC), the West Virginia Bureau for Public Health (WVBuPH), and the West Virginia Department of Environmental Protection (WVDEP). Many system operators are familiar with all of the current requirements of all agencies and insure that those requirements are met. However, many part time operators/managers insure that only the most basic requirements are considered. The engineering reviewer tags along to see how the system is complying with those requirements and to make recommendations necessary for additional maintenance to keep systems in top operating condition. Often, operators fail to perform proper maintenance in an effort to keep operating costs low and prevent the need for a rate increase. However, as the FRAM filter salesman always said “You can pay me now or pay me later”. Paying later is always more costly.

There are many systems which were installed during the 1970’s and 1980’s which have had little maintenance and/or were poorly installed and today face major replacement and/or maintenance expenses. A planned and executed maintenance and inspection program could have prevented many of these expenditures.

But let’s get back to the engineer. He (or she) will look at many of the following issues at each Utility as he (or she) evaluates the necessary operating cost additions;

**WATER SYSTEMS**

- What were the conclusions of the last Sanitary Surveyor Capacity Development Assessment Report? Were the recommendations implemented? Are water quality standards being met? Have the recommendations outlined in the last rate review been implemented?
- What is the condition of the water plant? Is it clean and painted with all valves, pumps, metering equipment, testing equipment and safety equipment operating properly? Is it nearing capacity?
- What is the condition of the inventory? Is it sufficient to address everyday maintenance activities? Are critical spares available? Has the number of taps installed per year increased or has the cost of the materials increased since the last review?
- Are system drawings available and are they kept up to date? Is there a secure location for the drawings and other records?
- Is the plant interior and exterior lighting sufficient and is the plant, the water intakes, wells, and outside equipment protected from vandals?
- What is the level of unaccounted for water? Is there a leak detection program? Is leak detection equipment available to quickly locate small leaks?
- Is there a meter test and calibration program established? Is a meter test bench available? Is anyone at the utility certified to test meters?
- Are the proper tools and safety equipment available for the field personnel?
- Are the chemicals kept in proper storage?
- Are the tanks and lines inspected routinely?
- What is the condition of the tanks and tank sites? Do they need painted, cleaned, protected from vandals, weeds removed? Is telemetry available to determine tank level and is it operating?
- Are the system valves exercised regularly? Is the system flushed regularly? Are records kept of flush amounts, fire flow usage, major leaks and low pressure events?
- Does the system have an active cross connection program? Well head protection program?
- Is there a customer complaint log kept at the plant? Customer repair log?
- Is there an hour meter run time log kept for all pumps? Are all hydro-pneumatic pump stations operating properly? Is the bladder tank properly charged? Does the pump cycle to frequently? Are the station telemetry and alarm systems operational? Is the station properly maintained and protected?
- Are the utility vehicles safe? Do the vehicles need to be replaced? Are there sufficient assets to provide quality customer service?

**SEWER SYSTEMS**

- Is the system meeting it’s discharge requirements? Are there any outstanding WVDEP fines to be paid? Are there any outstanding notices of violation? Enforcement actions? Have the recommendations outlined in the last rate review been implemented?
What is the maximum level of Inflow and Infiltration (I&I) during storm events as a percentage of design capacity? Are there any activities to correct I&I problems underway or planned?

Are back-up generators available at the plant and all critical lift stations? Are they functional? Are they exercised regularly? Are records of testing of these units available?

Does the alarm system at all lift stations operate? Does the alarm system function when there is a loss of utility power? How does the alarm system alert the plant operator?

How many sewage back-up events into customer’s residences occur during a typical year? How are these complaints handled?

Are there any odor complaints at lift stations? What actions are you taking to correct the problem?

What type of equipment maintenance program is in place for treatment plant and offsite equipment? Are critical spares in inventory at the plant or immediately available from a vendor?

What type of sludge disposal is utilized? Is the cost reasonable?

Are system drawings available for all treatment plant equipment, collection lines and lift stations. Are these drawings updated as changes are made to the system? How many copies are available to the field staff? Where are the originals and updated originals kept?

Is there an in house repair shop or are all repairs sent to outside shops? Are outside contractors utilized for small extensions and new taps or are utility personnel capable of doing the work? What type of equipment does the utility own to allow the personnel to accomplish the work?

Who maintains this mobile equipment? Are maintenance records available? Are there any outstanding repair bills which are overdue for payment?

Do the lift stations have grease problems? Are the grease trap requirements for commercial users enforced? Are grease traps inspected? By whom and how often?

GENERAL INTEREST ISSUES

Is there an employee training program when new equipment or procedures are implemented? Are employees treated fairly? Is safety equipment and training available to all field employees?

Has the total average annual cost of all plant additions(taps/lines/treatment equipment) and the cost of the treatment process(chemicals/power) increased since the last rate review?

Is the Complaint log in the office kept up to date? Are the complaint logs for the past five years available for review?

This is a partial list of the engineers interest in your utility. These issues allow the engineer to make a judgement on the utilities compliance with all agency requirements. Based on the answers to the above questions, a recommendation will be made to provide an additional annual cash surplus to accomplish any activities the engineer determines to be necessary to allow the utility to meet it operating obligations and to protect the customers quality of service.

It is very helpful if someone is available to travel the system with the engineer as he reviews your system. The engineer is genuinely interested in helping you operate your utility in the best fashion possible. So when you contemplate your next rate adjustment prepare your staff and your records for the review procedure the engineer will conduct during an onsite visit. It does make a difference!!

Municipal Sewer Connections

the circuit court of the county wherein the lot or parcel is situated.”

The Public Service Commission Water Rule 4.8.5 and Sewer Rule 4.5.3 provides that when a municipality owns, operates or provides sewer service to its customers it may require the provider of the water service to enter into an inter-utility agreement for termination of water services for nonpayment of sewer bills. However, if a public service district owns, operates or provides sewer service to its customers and a municipality provides water service it shall be required to enter into an inter-utility agreement for termination of water services for nonpayment of sewer bills.
One of the requirements when a non profit water or sewer utility (Public Service Districts, Municipalities and Associations, etc.) files an application for a certificate of convenience and necessity is that a Rule 42 Exhibit be prepared and submitted with the application. This is a financial or accounting document that is typically prepared by the utility’s accountant. Rule 19.1(Rule 42) and Rules 19.2 through 19.9 of the Rules And Regulations For The Government Of The Filing Of Tariffs Of Public Utilities And Common Carriers By Motor Vehicle set forth the requirements and financial statements which comprise the Rule 42 Exhibit. These statements are referenced by the letters “A” through “H” with supporting schedules and represent a utility’s financial condition.

There are certain statements and or schedules set forth in Rule 19.1(Rule 42) that are not necessary for review and or applicable to non profit utilities when filing a certificate application. These include Schedules 3 and 4 of Statement A, all of Statement B and all of Statement E. These statements and schedules should be omitted from the Rule 42 Exhibit since they are not relevant to the review process or the establishment of rates within a certificate filing. Most Rule 42 Exhibits submitted in conjunction with certificate filings are prepared correctly, however, there are some that are incomplete and contain insufficient information. A common mistake is showing only the proforma or proposed level of operations incorporating the certificated project. The Rule 42 Exhibit must include per books level of operations which is representative of the utility’s recent audited test year and reflected in its most recently filed Annual Report. Only in cases where a utility is initiating its authority to provide either water or sewer service and constructing new water or sewer facilities to achieve this is it acceptable. Other mistakes involve projecting revenues without the inclusion of a detailed bill analysis, or making adjustments without sufficient explanations. With regard to both of these statements it is recommended utilities provide as much information as possible rather than too little.

Another aspect of the Rule 42 Exhibit to be addressed is the issue of going level adjustments. The Rules of Practice and Procedure adopted August 28, 2001, revised the requirements associated with Rule 42 Exhibits within certificate filings. Typically the adjustments reflected in the Rule 42 Exhibit are related to the project only, however, the new rules now allow utilities to include going level or non-project related adjustments. This results in the possibility of a two step rate increase, one increase to cover the non-projected related or going level adjustments and the other to cover the project related or proforma adjustments. The going level increase would go into effect upon the issuance of the Final Order while the proforma increase would go into effect upon completion of the certificated project. It should be noted the inclusion of going level adjustments requires the Commission to conduct an audit within the certificate filing to verify these adjustment which in turn could increase the time needed to process the case.

In some instances there may be adjustments to going level included in the Rule 42 Exhibit to reflect current operations due to a rate increase that occurred during the test year or prior to the certificate filing. These adjustments are necessary to annualize the utility’s revenues and establish its going level operation. Then the proper level of rates needed to cover the utility’s proforma operations can be determined. In these instances it is beneficial if the Rule 42 Exhibit includes a detailed bill analysis as well as detailed explanations of these going level adjustments.

To summarize, non profit utilities and or their accountants need to remember when preparing and submitting a Rule 42 Exhibit within a certificate filing that it should be comprised of the applicable statements and supporting schedules. These statements and schedules must include per books and or going level numbers, as well as provide detailed bill analysis and adequate detail of all adjustment. This should enable Commission Staff to timely review the utility’s Rule 42 Exhibit without likely having to request revisions.
Public Relations Information: Why do I have to pay for water usage on my sewer bill that is not delivered to the sewer system?

By: Ingrid Ferrell, PSC Engineering Division

Have you been asked by customers why they have to pay for water used to wash their cars and water their lawns and gardens on their sewer bill? They reason that it obviously doesn’t have to be transported by the system and treated at the sewer plant so they shouldn’t have to pay for it! I have been asked that question over the years by customers, utility and employees alike. Even once by a PSC Commissioner in a hearing concerning a rate increase. It can be a confusing issue for everyone and a concern for customers.

It may be a question that some utilities have struggled to answer with as dry a summer as we have had. What do you tell your customers? Do they still go away frustrated and mad even after you give them an answer? I have an explanation that just may help. They are not paying unnecessary sewer costs or paying more than their fair share just because all the water they use doesn’t make it back to the treatment plant.

The designing of sewer rates is generally based on water usage. It is the easiest and most practical method for determining how much sewage is being sent to the treatment plant and how much to bill a customer. There are exceptions to that rule when it makes sense to use a sewage flow meter, such as when another utility sends its sewage to your system for treatment. In that case, the other utility also has inflow and infiltration that needs to be accounted for so your customers are not subsidizing that utility. However, for the typical residential customer it would be too costly and not necessary to install sewage flow meters or even second water meters for all outside usage.

The rate design takes into account that all water usage is not returned to the sewer system. For residential customers it is approximately 80 to 85 percent of their water usage and for commercial customers it is approximately 85 to 90 percent of their water usage. If they were charged for the exact amount of sewage based on a sewage flow meter and that was less that what Staff has typically predicated flows back to the sewer, the rate per 1,000 gallons would be higher. This is because there is a certain revenue requirement that each utility needs to cover its expenses including debt service. If customers are charged a rate based on less gallons for the same expenses, it follows that the cost on those gallons treated will be greater. However, between the different classes, the amount of sewage based on water usage that they are billed for is properly distributed and taken into account is the fact that not all of the water usage makes its way to the treatment plant. That’s a long winded explanation for saying that the customers usage and subsequent rate acknowledges that not all their water usage goes into the sewer system.

Sometimes there are instances when it makes sense to allow your customer a special flow measuring device. An example of this would be a nursery that has such a high volume of water usage not being delivered to the sewer system. Or an industrial customer that uses a great quantity of water in its processing that does not end up in the sewer system. Those customers would be out of the typical range and therefore, giving them a separate meter would be justified. Sewer Rules 3.1 states in part:

In general, sewer service charges shall be based upon the volume of water delivered to the customer’s property. This volume is measured by the water meter serving the premises. In cases where a significant volume of the water delivered to the premises is not returned to the sanitary sewer system or water from another source is discharged to the sanitary sewer system the customer may request, or the utility may require, special flow measuring devices to properly measure the volume of water entering the sanitary sewer system. Such special flow measuring devices shall be furnished, installed and maintained by and at the expense of the customer with the approval of the utility.

It would be impractical and costly to allow typical customers to have second meters. All customers rates would increase and nobody likes higher rates.
## Water & Wastewater Division

**Amy L. Swann - Director** 340-0481  
Patricia Abbott - Executive Secretary 340-0482  
Judy Thayer - Secretary 340-3749

**CASE CONTROL SECTION**

Bill Nelson - Utilities Analyst Supervisor 340-0445  
James W. Boggess, Jr. - Utility Analyst II 340-0352  
Karen Buckley - Utility Analyst II 340-0470  
Sean P. Ireland - Utility Analyst II 340-0772  
Charles Knurek - Sr. Utility Analyst 340-0460  
Randy Lengyel - Sr. Utility Analyst 340-0447  
Scott McNeely - Utility Analyst I 340-0397  
Jack L. Miller - Sr. Utility Analyst 340-0488

**ASSISTANCE SECTION**

Geert F. Bakker - Chief Utilities Manager 340-0467  
David Acord II - Utilities Analyst Supervisor 340-0475  
James F. Aucremanne - Utility Analyst I 340-0379  
Conrad Bramlee - Utility Analyst II 340-0471  
Susan L. Brown - Utility Analyst I 340-0422  
Drema Witt - Administrative Services Assistant 340-0440

*Informal Complaints*

Nick Ciccarello - Consumer Affairs Tech. 340-0314  
Kristen Harrison - Consumer Affairs Tech. 340-0321  
Sophia Lusk - Consumer Affairs Tech. 340-0457

## Engineering Division

**Earl Melton - Director** 340-0392  
Vicky Gibson - Secretary 340-0370  
Sandra Green 340-0363

**CASE CONTROL SECTION**

David W. Dove - Chief Utilities Manager 340-0436  
Audra Blackwell - Engineer-In-Training II 340-0448  
Jeff Brady - Engineer I 340-0499  
Jonathan Fowler - Engineer I 340-0491  
David Holley - Technical Analyst-In-Training II 340-0328  
Joe Marakovits - Technical Analyst III 340-0443  
John Mottesheard - Engineering Technician 340-0466  
Jim Spurlock - Technical Analyst II 340-0357  
James C. Weimer - Engineer I 340-0476

**ASSISTANCE SECTION**

Jim Ellars - Chief Utilities Manager 340-0331  
Jeff Bennett - Utility Inspector II 340-0313  
Ralph Clark - Engineer II 340-0455  
Ingrid Ferrell - Technical Analyst III 340-0335  
Dave Foster - Utility Inspector III 340-0398  
Gary Jarrell - Technical Analyst III 340-0428  
Craig Miller - Utility Inspector 340-0354

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**DIVISION FAX:** (304) 340-3759  **PSC WEB PAGE:** http://www.psc.state.wv.us  **TOLL FREE:** 1-800-344-5113

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Water & Wastewater Division  
Public Service Commission  
201 Brooks Street, P.O. Box 812  
Charleston, WV 25323