

Partners in PA

Partnership for Safe Water Update

Volume 1



Issue 2



79 Phase I & II Plants
37 Awarded Phase III

The following article contains information for systems that have successfully completed Phase III and received DEP's "Certificate of Recognition" provided by Ed Chescattie, PA DEP

Suggested Format for Partnership for Safe Water Yearly Narrative Report

In order to maintain active status, water systems that have completed Phase III of the Partnership will need to write a yearly short narrative report along with their annual data.

The following detailed instructional outline explains the suggested format for this very important report.

Suggested Format:

This report should consist of short narratives, which provide the status of ALL performance limiting factors (PLF's) identified during the Phase III process. These include limiting factors, which were identified by the PEAC peer review committee AND by the water system itself.

Discuss each PLF individually (see next paragraph for details). The PLF's should be organized in priority order, starting with the most important first. You may find it helpful to begin by addressing PLF's, which were designated as "Areas for Improvement" during the Phase III process, followed by the items designated "Good Faith Effort". If any progress has been made on "Areas of Strength" items, you may also want to include them too.

Discussion on EACH performance limiting factor should:

- **List the Performance Limiting Factor (PLF)** – one or two sentences is sufficient.
- **Briefly explain Prior Status** – PLF status at time of Phase III report submittal OR previous yearly narrative (whichever is most recent).
- **Provide a thorough update on the Current Status** – progress made within the past year. This section should contain the most detailed information.
 - Be sure to include both the **Activities Performed** as well as
 - **Benefits Gained** via implementing these activities (e.g. improved performance, greater understanding of plant operations).
 - The **Individuals Involved** in the process should also be credited.

Note that only activities performed within the past year should be included. If no new activities have been performed, write "Same as previous year"

- **Briefly explain Future Plans** – list future plans & activities for addressing the PLF and provide a time estimate for beginning and/or completing.

An orderly progression should occur within the above three bulleted categories. More specifically, items that are in the *Current Status* section for this year (e.g. 2000) should appear in the *Prior Status* section for the next year (e.g. 2001). More importantly, some items from the *Future Plans* section for this year (e.g. 2000) should be implemented throughout the following year and appear in the next *Current Status* section (e.g. 2001). In this respect, your yearly short narrative can become extremely valuable in that it acts as a yardstick to measure progress completed and a tool to plan future activities. This is the ultimate intent of the Partnership program's requirement that members provide this yearly report.

Additional Suggestions:

Narratives should include any progress made, which has improved/could potentially improve performance of the water system. If, within the past year, new PLF's have been discovered, their status should also be included in the yearly narrative. This type of item should be listed as "New PLF". Follow the previously discussed format - provide a separate section for each new PLF and address all of the above bulleted items.

From year to year, follow the same outline format and update each existing PLF section. As necessary, expand the outline to include additional sections for new PLF's.

Ultimately, after dedicating significant time/effort, you will determine that a PLF has been sufficiently remedied and should no longer be classified as such. At that time, you should include a narrative, in the *Current Status* section, that provides your reasoning.

As always, be sure to include yearly data AND explain any significant performance deviations throughout the past calendar year.

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Example:

The following is a representative example section for ONE performance limiting factor - this example follows the previously discussed suggested format. You should have similar sections for EACH of your performance limiting factors:

#1 (PLF): Filters experience a significant secondary turbidity spike following backwashing and filter to waste procedures.

PRIOR STATUS Potential modifications to operational practices were identified. These included: decreasing length of filter run times, increasing backwash rates, and allowing the filter to rest before returning to service. Operators were to begin implementing these modifications (one at a time) and assess the effectiveness of each.

CURRENT STATUS **Activities Performed:** Numerous operations staff (see below for names) dedicated significant time to implementing several modifications to operational practices. Trials of various filter runs showed that reduction of total run time to 68 hours resulted in significant improvement to post backwash recoveries. Therefore, 68 hours was determined to be the maximum allowable filter run. In addition, operators tested the impact of increasing backwash rates. Operators carefully tested various increases in rates and measured % bed expansions at each rate. After lengthy discussion between all staff involved, it was decided that increasing the backwash rate from 14 gpm/sqft to 17.5gpm/sqft, resulted in the best bed expansion (27%) and post backwash turbidities/recovery. All operators agreed to adjust backwash procedures to allow for a total high wash rate of 1,315gpm or 17.5 gpm/sqft. The Operations and Maintenance manual has been updated to incorporate both the 68 hour maximum run time and the 17.5 gpm/sqft high wash rate.

Benefits Gained: Through implementing the above activities, the magnitude and duration of the secondary turbidity spike has been significantly reduced - from approximately .33 NTU to .14 NTU and from 27 minutes to 9 minutes. In addition, during the initial stages of the testing process, operators discovered that the flow rate controller on filter #2 was malfunctioning and in need of service.

Individuals Involved: John Smith – Operations Superintendent, Michael Jones – Operator II, Jane Kelly – Operator I, and Jack Russell – Operator I.

FUTURE PLANS Operators will continue to implement the operational modifications discussed above (current status, activities). In addition, throughout the next year, operators will assess the impact allowing the filter to rest before returning to service. Various resting periods will be implemented and evaluated. Operators will record their findings and meet each quarter to discuss results.

◆ Partnership Educational Opportunity ◆

**Optimizing Filter Performance
Through Best Operational Procedures
& Preventive Maintenance**

sponsored by

**PA Section AWWA
PA Dept. of Environmental Protection
Penn State University Harrisburg**

Dates & Locations

East: April 4, 2002
City of Allentown Bureau of Water Resources
Water Filtration Plant
1300 Martin Luther King Drive
Allentown, PA 18102

Central: April 11, 2002
City of Harrisburg Bureau of Water
100 Pine Drive
Harrisburg, PA 17103

West: April 18, 2002
Brackenridge Borough
1000 Brackenridge Avenue
Brackenridge, PA 15014

Are all of your plant's filters in good condition? Not sure? When did you last check?

Conducting routine preventative maintenance and practicing best operational procedures is the best way to assure long-term reliability of your filters. The PA Department of Environmental Protection in conjunction with the AWWA and PSU will be conducting three workshops focusing on preventative maintenance procedures and operational practices, which will help assure optimum filter performance. These workshops discuss best practices recognized by the Partnership for Safe Water Program for optimizing filter performance.

This workshop will cover the most common causes of poor filter performance experienced by treatment plants throughout Pennsylvania. In addition to the classroom presentation, you will also observe an actual filter inspection, observe a % bed expansion measurement, receive instructions for making media core sampling tubes, and much, much more...

As a member of the Partnership for Safe Water program, your plant will be eligible for one complimentary registration. Since seating is limited in each location, complimentary registrations will be accepted on a first come-first served basis. We will be holding a maximum of 15 seats per location for complimentary registrations - so register early!

In addition, Penn State Harrisburg - through it's Small Public Water System Technology Assistance Center - is offering to sponsor the registration fee and related travel expenses for educational trainers to attend the program.

For more information or to receive a registration form, please contact Diane Cox at the PA Section AWWA (717) 230-8935.

PLEASE NOTE: If you are planning to advance to Phase IV of the Partnership program, we strongly suggest you contact DEP before completing the Phase IV application. Call Phil Consonery at 717-772-4018 to obtain details about Pennsylvania's Phase IV program.