



## Partnership for Safe Water

Distribution System Optimization Program

### Phase III Completion Report CHECKLIST

*(Version 1 – June 18, 2013)*

Below is a checklist of the minimum requirements for your self-assessment completion report. Tips are also provided to assist in the preparation of the report. Please submit this checklist with your Phase III self-assessment completion report (electronic submittals only).

Utility Name: \_\_\_\_\_

Distribution System Name: \_\_\_\_\_

Contact for Report Questions: \_\_\_\_\_

Date Report Submitted: \_\_\_\_\_

#### **Minimum requirements:**

- Submit the Report and all supporting documents electronically (hard copies are not accepted) using the provided software and report tools.**  
Files larger than 10MB cannot be accepted by e-mail. Files must be compressed and/or sent in multiple emails to reduce the size to <10MB. If electronic submission is not possible under these guidelines, please contact the Partnership Coordinator.
  
- Cover Letter** (pdf or WORD®)  
Identify the document as the "completion report" for Phase III of the Partnership Distribution System Optimization Program. Identify utility contacts for questions and provide updated contact information.

- Regulatory Compliance** (pdf or WORD<sup>®</sup>): Indicate by checking this box that your distribution system has not received a Notice of Violation during the period ending no more than two months prior to the report submission date. If the distribution system received a Notice of Violation, explain the circumstances, provide a copy of the notice, and describe any follow up actions taken by the utility (check the box indicating that you have provided this information).
- Performance Assessment Data Spreadsheets (4)** (EXCEL<sup>®</sup>)  
Include the output from the Partnership software for all of the following:
1. **Disinfectant residual** (2),  
*Disinfectant Residual Performance Assessment v1.3* or later,
  2. **Pressure**, *Pressure Performance Assessment v1.2* or later,
  3. **Main break frequency**, *Main Breaks and Leaks Self-Assessment Tool v1.00* or later.  
(use required data entry fields, optional data entry fields and completion of self-assessment checklist embedded within this software are NOT required)
- Disinfectant residual performance assessment - Baseline and most current year ending no more than two months prior to the report submittal date (**two years** of disinfectant residual data is required).
  - Pressure and main break frequency data - A minimum of one year is required ending no more than two months prior to the report submittal date (data may span multiple years). A minimum of 5 years of main break data is required to demonstrate a 5-year decreasing trend.
  - For all - Include the software output data summary TABLES and CHARTS.
- Distribution System Schematic** (pdf or other file type)  
Include a line drawing of your distribution system with major facilities (storage tanks, pump stations, booster stations, entry points, and other important features) and pressure zones labeled. Indicate on this map (or a separate map, depending on resolution) **all** routine disinfectant residual monitoring locations, as well as a detailed view of disinfectant residual monitoring locations in at least one area with characteristically low disinfectant residuals. This item is submitted to provide PEAC reviewers with a spatial understanding of the system and its components, as well as assist utility staff and reviewers with visualizing placement of sampling sites and monitoring sensors.
- As an option, utilities may consider submitting additional maps to highlight different system components; for example, pressure sensor locations, water age, pipe material
- Assessment Team and Schedule** (pdf or WORD<sup>®</sup>)  
Demonstrate the involvement of parties at **all** levels in the Partnership self-assessment process by providing a list of the assessment team members, team member organization affiliation (departments and positions), meeting schedules, meeting summaries, team member work assignments, and report review steps. Demonstrate how the Partnership distribution system goals have been actively accepted and adopted throughout the organization and how Partnership principles are incorporated into daily work and decision making. The purpose of this item is to document how the various staff members were actively involved in the process.
- Optimization Assessment Tool** (pdf or EXCEL<sup>®</sup>)  
Answer all of the questions and complete the Optimization Status Summary Table using the provided Excel software titled "Optimization Assessment Tool". Answers to questions that have numerical comparisons or goals must include the utility value(s) for these measures unless indicated as optional within the software, as denoted by (\*\*). A copy of the completed Optimization Status Summary must be included.

- Reporting of selected financial data marked (\*\*) is optional. The purpose of requesting financial information is to provide reviewers with information regarding long term financial viability of the utility. If specific financial benchmarks are not reported, consider an alternate means of describing the utility's finances to the PEAC review team in order to document long-term financial viability.

**Self-Assessment Worksheets** (pdf or WORD®)

Include the completed worksheets from the self-assessment guide. Copies are provided in WORD® for your use, in a file titled Self-Assessment Worksheets. Add a short discussion for each Table in the worksheets describing any observations regarding the optimization status for each topic. The purpose of this document is to provide reviewers with an understanding of distribution system components and performance goals.

**Copies of Specific Distribution System Standard Operating Procedures (SOPs)** (pdf or WORD®)

Attach up to date copies of SOPs for each of the following procedures (3). SOPs are ideally system-specific and routinely updated. Dates of creation and revision should be provided. If SOPs are not currently available, this is considered a performance limiting factor and should be included in your action plans. Providing additional SOPs (used to optimize water quality) is encouraged, but optional. Additional SOP's should demonstrate how the utility addresses not only routine; but, also non-routine and/or emergency situations with consideration for maintaining optimal water quality and quantity.

1. **Corrective Flushing** - Procedures for flushing an area that is experiencing low disinfectant residual values or poor water quality. Include a summary of any water quality sampling that would occur in conjunction with the flushing.
2. **Disinfectant Residual Sampling** - Procedure for **collecting and analyzing** samples for disinfectant residuals.
3. **Emergency Repair of Mains** - Procedures for responding to and repairing main breaks, including disinfection procedures and follow-up sampling.

**Prioritization of Performance Limiting Factors (PLFs)** (pdf or WORD®)

Using the Optimization Status Summary Table software provided within the Optimization Assessment tool, list performance limiting factors (PLFs) from your self-assessment (a Not Optimized or Partially Optimized indication). Rank the PLFs using the ranking and prioritization tool, and describe the utility's process for determining prioritization – including who is responsible for setting priorities, limitations, and the use of special studies to address limiting factors. Utilities may modify the results from the prioritization tool and substitute other PLFs with a brief justification describing the change and how it helps progress towards meeting optimization goals. PLFs that are currently impacting performance on a repetitive basis should normally be ranked highest.

**Development and Initial Implementation of Action Plans** (pdf or WORD®)

Create detailed action-implementation plans for the highest ranking performance limiting factors (include more factors at your discretion). Briefly discuss why these performance limiting factors were selected. The action plans should include short and long term (as applicable) tasks necessary to strengthen each performance limiting factor, specific staff assigned responsibility for each task, and a projected completion date. Include any progress that has been made towards achieving action items and any quantitative impact that has been realized. An action-implementation plan development tool is provided for your use. Once Phase III is achieved, utility staff will need to include a discussion of these factors and optimization progress on each in each annual report to the Partnership.

### ***Self-Assessment Completion Report Tips***

1. There are many subjects included in this assessment. You must give the reviewer confidence that you have evaluated the optimization status of each item. Include numbers where applicable to illustrate that you have collected system-specific information to evaluate current versus past performance.
2. Provide your assessment of any identified results or trends in the performance assessment charts or tables shown in the (1) disinfectant residual, (2) pressure, and (3) main break frequency software outputs.
3. Make sure that your observations are consistent with your data. Throughout the self-assessment process, keep in mind that your system-specific data is a powerful tool and should be used as the basis for your decisions and action plans.
4. **Utility systems may list several (many) non-optimized “performance limiting factors.” This is expected, and is the intent of the Phase III self-assessment. No distribution system is perfect and you should not develop a report which attempts to explain why no problems exist at your system. Rather, focus time and effort on development of feasible plans to make improvements.**
5. Be sure to include an explanation of all system specific optimization goals or targets you have developed, along with summary of when and why you established these goals.
6. If, despite your efforts to date, you are still operating outside of an optimal range for a particular parameter make sure that you let the reader know you have thoroughly considered this, and include a feasible action plan to further improve this parameter over the long term. Include information about any interim goals.
7. Show that the administration (managers) and operators are all dedicated to meeting the same distribution system performance goals. It may be that a system substitutes its own goals. This is acceptable but there should be a plan to meet those goals over time.
8. Use the Partnership software and comment on performance results.
9. Reports can vary in length; but, report content is more important than overall length. Keep the report focused on the checklist items, actions you've taken and plan to take to improve overall distribution system integrity. More is not necessarily better.
10. **Include as many of your administrative, operations, and maintenance staff in the evaluation as feasible. Indicate HOW they were involved (input on a specific report section). Team members are listed in the roster tool and most importantly in the action plans. If consultants are used, utility staff input must be extensive and this should be documented.**

If you have questions contact:  
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