2017

REPORT TO THE GOVERNOR

West Virginia Public Water System Capacity Development Program

September 30, 2017
This report is a requirement from Section 1420(c)(3) of the Safe Drinking Water Act (SDWA), which requires the State Capacity Development Program to submit to the Governor by September 30, 2017. The Report to the Governor shall be made available to the public on the efficacy of the Capacity Development Strategy and progress made toward improving the technical, managerial, and financial capacity of public water systems in the State.
# TABLE OF CONTENTS

Executive Summary ............................................................................................................................................. 1  
Capacity Development Program (CDP) Overview .......................................................................................... 3  
CDP Report to the Governor .......................................................................................................................... 3  
CDP Implementation ........................................................................................................................................ 4  
  Baseline Ranking of Water Systems ............................................................................................................ 4  
  Baseline Ranking Analysis ......................................................................................................................... 5  
  Drinking Water Treatment Revolving Funds ............................................................................................... 13  
  Bureau for Public Health (BPH) Assistance to Water Systems ................................................................. 14  
  Other Resources ........................................................................................................................................... 17  
Future Activities ............................................................................................................................................. 17  
Appendix A (List of Graphs/Figures in Report) ............................................................................................. 19  
Appendix B (Water System Definitions) ........................................................................................................ 20  
Appendix C (List of Acronyms in Report Defined) ....................................................................................... 21  
Appendix D (List of Resources for Small Communities) .............................................................................. 22
EXECUTIVE SUMMARY

The 2017 Report to the Governor on the West Virginia Public Water System Capacity Development Program (CDP) summarizes activities completed, currently underway, and planned by the West Virginia Department of Health and Human Resources (DHHR), Bureau for Public Health (BPH), Office of Environmental Health Services (OEHS). The West Virginia Public Water System CDP supports public water systems in making improvements to their technical operations (including infrastructure), finances, and management so they can consistently provide drinking water that meets federal and state standards as effectively and efficiently as possible. In addition, this report fulfills the State’s obligation under Section 1420(c)(3) of the Federal Safe Drinking Water Act to report the status of the program to the Governor within two years of the program’s inception and every three years thereafter, by September 30. Specifically, the report informs the Governor’s Office of the program’s value and progress made by improving the technical, managerial, and financial (TMF) capabilities of the State’s public water systems.

Capacity Development Program Implementation
The foundation of the CDP is the Capacity Development Assessment (CDA). A CDA is a detailed evaluation of a water system’s TMF capability. Since the program’s inception in 2000, the CDP staff has conducted 307 detailed evaluations at 230 different water systems. Two hundred and seventeen (217) of the systems remain in operation. The evaluation effectively confirms adequate capacity of viable systems or identifies the TMF developmental needs of marginal or failing water systems.

Following a water system evaluation, staff offers direct assistance by helping the water system with tools and resources needed to implement the CDP recommendations. This assistance, to those that are receptive, has been effective at improving the system’s TMF operations. In addition to assistance from CDP staff, water systems are routinely referred to outside partner agencies/organizations for their expertise.

Recently, staff completed an important program component, an update to the baseline ranking of the State’s public water systems. The statewide baseline process identifies water systems’ viability status (i.e., viable, marginal or failing) and those needing assistance to improve their TMF capability. In addition, it provides an evaluation for the CDP overall and its ongoing effectiveness.

Baseline Ranking Analysis
The 2017 baseline ranking data shows 468 (87%) of the 538 community water systems (CWS) and non-transient non-community (NTNC) water systems in West Virginia are viable systems with adequate TMF capacity; 45 (8%) are marginal systems and 25 (5%) are failing systems. (Note: The definition of a CWS and NTNC water system can be found in Appendix B.) Of the population served by CWS and NTNC systems, 1.55 million (96%) people are served by viable systems while failing and marginal systems serve 61,857 (4%) of the population.
Specifically, the 2017 data shows a continuing trend in which populations are shifting to larger, more viable water systems, while populations served by smaller systems that are often marginal or failing, are decreasing. As a result of this trend, there has been an elimination of more than 125 of the smallest water systems (many of which were failing systems) since 2002. This drop in the number of failing and marginal systems can be attributed to systems merging, systems being taken over by larger, more viable systems, systems ceasing operation, and systems that, with the help of the CDP, have become more viable over time.

The 2017 baseline data shows that for systems which have more than 1,000 customers, there are 5 failing systems and 16 marginal systems. West Virginia’s failing and marginal systems pose a constant threat of disruption to their customers’ drinking water supply. Such interruptions threaten the customers’ health and welfare and are an impediment to economic development in areas served by these systems.

While West Virginia has 70 water systems that are marginal or failing, the 2017 baseline data shows that CDP has resulted in steady improvements in water systems’ capacities. Since 2002, the number of viable systems has increased from 399 to 468 (17.3%) while the number of failing systems is down from 94 to 25 (73%) and the number of marginal systems is down from 244 to 45 (82%) as shown in Figure 1.

**Figure 1: Water System Ranking Trends in West Virginia**

<table>
<thead>
<tr>
<th>Year</th>
<th>Viable</th>
<th>Marginal</th>
<th>Failing</th>
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<tr>
<td>2002</td>
<td>399</td>
<td>244</td>
<td>187</td>
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<td>411</td>
<td>94</td>
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<td>65</td>
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<td>2014</td>
<td>470</td>
<td>39</td>
<td>83</td>
</tr>
<tr>
<td>2017</td>
<td>468</td>
<td>45</td>
<td>25</td>
</tr>
</tbody>
</table>

Over the years, the assistance program has identified the following:

In order for water systems to maintain viability, they must have an adequate customer base as well as effective, proactive management.

For 17 years, the CDP staff has been supporting receptive water systems in making advancements by using a proactive, hands-on approach. Water systems are not mandated to utilize assistance from CDP and consequently do so on a voluntary basis.
Capacity Development Program (CDP) Overview
The CDP is part of the West Virginia Department of Health and Human Resources, Bureau for Public Health (BPH), Office of Environmental Health Services (OEHS), Environmental Engineering Division, Infrastructure and Capacity Development Unit. In West Virginia, more than 1.55 million people (85% of West Virginia’s 1.8 million population) are served by community water systems (CWS) and non-transient non-community (NTNC) water systems. The remaining 250,000 people are served by individual water systems (i.e., well, cistern or spring). The CDP supports the CWS and NTNC public water systems in improving their technical operations (including infrastructure), finances, and management in order to consistently provide drinking water that meets or exceeds federal and state standards as effectively and efficiently as possible.

CDP staff work with the State’s CWS and NTNC water systems, helping ensure they acquire and maintain the technical, managerial, and financial (TMF) abilities and resources necessary to meet the requirements of the public drinking water statutes and regulations. CDP staff routinely conducts the following activities:

- Develop and maintain a priority ranking of all water systems (baseline);
- Ensure sustainable infrastructure at all new water systems through monitoring for compliance and adequate TMF capability;
- Ensure Drinking Water Treatment Revolving Fund (DWTRF) loan recipients have adequate TMF capability;
- Assess the present capabilities of existing water systems; and
- Assist existing water systems in achieving and maintaining adequate TMF capability.

CDP Report to the Governor
The 2017 Report to the Governor on the West Virginia Public Water System Capacity Development Program summarizes the effectiveness of activities completed, currently underway, and planned by CDP. The report also fulfills the State’s obligation under Section 1420(c)(3) of the Federal Safe Drinking Water Act that requires the CDP lead agency to report its program status to the Governor within two years of the program’s inception and every three years thereafter. Specifically, the report apprises the Governor’s Office of the program’s value and progress made by improving the TMF capabilities of the State’s water systems. OEHS’s Infrastructure and Capacity Development work, which is grant funded by the U.S. Environmental Protection Agency (EPA), encompasses the following programs:
• Water system TMF assessments and assistance;
• Water system sanitary surveys (e.g., periodic site visits to evaluate SDWA compliance);
• Technical assistance grant to an independent, non-profit contractor to provide small public water system assistance, primarily teaching water treatment operators continuing education to maintain their licenses;
• Public water system loan DWTRF monies to help water systems meet public health and regulatory compliance standards; and
• West Virginia DWTRF program administration.

**Capacity Development Program Implementation**

**Baseline Ranking of Water Systems**

Section 1420(c)(2)(D) of the Federal Safe Drinking Water Act requires all states to develop a baseline ranking of their water systems. The initial baseline conducted in 2002 ranked West Virginia’s 737 CWS and NTNC water systems. Compiling the initial 2002 baseline and the updates of 2005, 2008, 2011, 2014 and 2017 involved gathering information via a voluntary questionnaire sent to the CWS and NTNC systems in addition to obtaining input from the OEHS Environmental Engineering Division District Engineers (district offices are located in Beckley, Kearneysville, Fairmont, St. Albans, and Wheeling).

The systems are ranked (0% – 100%) and categorized as viable, marginal and failing based on responses to the questionnaire. For the data used in the 2017 baseline, West Virginia water systems submitted their questionnaire responses by either mail, fax, or online.

Not all of the question responses are scored for each system. For example, some questions are informational data for CDP. However, all similar types of systems are scored by their responses to the same questions. Raw scores and data sets (questions/answers) are provided to the district office engineering staff who generally provide onsite technical assistance to the water systems frequently. The district engineers review the information and provide a score for the system. The raw score and the district engineer’s score are averaged. Since submitting the questionnaire is voluntary, the district engineers assign a score used for any system not responding to the questionnaire. In 2017, 76% of CWS responded and 53% of NTNC systems responded. For those systems, the average score becomes the final baseline score for each system.

The updated baseline data is being used (in conjunction with other measures) to help evaluate the overall status of West Virginia water systems and the effectiveness of the CDP. Since the 2017 updated baseline scores were compiled in the same manner as previous years, the current score for water systems can be compared with past baselines to measure progress for both the systems and for CDP. The complete 2017 baseline ranking, as well as past baselines, is available on the Capacity Development website at http://www.wvdhhr.org/oehs/eed/i&cd/baseline_assessment.asp.
A high baseline score indicates a viable water system with adequate TMF capability. Similarly, a low score indicates a failing water system with inadequate TMF capability. Systems whose score was 70% or greater are considered viable; those with a score between 41% and 69% are considered marginal; and those with scores 40% or below are considered failing. The lowest ranking (failing) systems are non-viable and are often under consideration for mergers to get the system to a viable state. The lower marginal systems have a higher priority for the CDP staff to conduct CDAs as these systems need focused assistance efforts to build their viability and are generally receptive to improving their TMF capability.

Baseline Ranking Analysis
The 2017 baseline ranking data shows that 468 (87%) of the 538 CWS and NTNC water systems in West Virginia are viable systems; 45 (8%) are marginal systems and 25 (5%) are failing systems as shown in Figures 2 and 3.

*Figure 2: Number of West Virginia Water Systems in Each Viability Classification, 2017*
CWS and NTNC systems serve 1.55 million people, of which 87% are viable and serve 1.49 million people (96%); marginal systems serve 49,069 people (3.2%); while failing systems only serve 12,788 people (0.8%), as shown in Figures 4 and 5.

Figure 4: Number of West Virginia Citizens Served by Each Viability Classification for Water Systems, 2017
The 2017 data continues to show a trend in which the populations are shifting to larger, more viable water systems, while the population served by smaller systems that are often marginal or failing is decreasing. As a result, there has been a decrease of more than 150 of the smallest water systems (systems serving <300 population) since 2002 as shown in Figures 6 and 7.
Figure 7: Number of West Virginia Water Systems by Population Served: Trends Over Time

The 2002 data showed viable water systems had 29 times the average customer population of failing systems and more than four times the population of marginal systems. The 2017 data shows viable systems’ average population served is more than 116 times that of failing systems and 30 times more than marginal systems. The population shift away from failing systems to viable systems has grown significantly since 2002. While the population is also shifting away from marginal systems to viable systems, the rate is slower. Data related to population and system viability are summarized in Figures 8 and 9.

Figure 8: Population Trends of West Virginia Water Systems by Viability Classification
The failing and marginal systems pose a constant threat of disrupting their customers’ drinking water supply. Such disruptions threaten the customers’ health and welfare and are an impediment to economic development in areas served by these systems. While West Virginia still has 70 marginal or failing water systems, the 2017 baseline data shows steady improvements in water systems’ capacities. Since 2002, the number of viable systems has increased from 399 to 468 (+17.3%) while the number of failing systems is down from 94 to 25 (-73%) and the number of marginal systems is down from 244 to 45 (-82%), as shown in Figure 10.

**Figure 10: West Virginia Water System Viability Trends**
This drop in the number of marginal and failing systems can be attributed to small systems merging with other small systems, failing systems being taken over by more viable systems, systems ceasing operation, and systems becoming more viable over time.

The data in Figure 11 shows there are only 5 failing systems and 16 marginal systems which have more than 1000 customers. While there are 5 failing systems in the group of water systems having a population of more than 1000, there is four times the number of failing systems in the systems having less than 1000 population. This continues to support the conclusions in previous reports in which it was noted that adequate customer base is important in achieving and maintaining water system viability, as shown in Figure 11.

**Figure 11: West Virginia Water System Viability Designation by Population Served, 2017**

The average viability of West Virginia water systems (as seen through the baseline score of 87) from 2014 to 2017 remained at the same score. Current and previous baseline scores were analyzed to determine the number of systems with significant score changes over time, either improved or declining, in addition to those whose scores show no remarkable change. The scores were then studied to determine:

- Which systems had changed viability classification since 2014;
- Which systems’ scores changed by more than 10 points, either up or down, since 2002;
- Which systems’ scores did not change by more than 10 points, since 2002;
- Whether or not having had a CDA affected the overall score changes; and
- The overall viability of the systems with/without significant score changes.
The data evaluation of all systems found that since 2014, 37 (7%) systems raised viability classification by an average of 14 points, 34 (6%) systems dropped viability classification by an average of 24 points, and 466 (87%) systems remained in the same viability category.

Looking only at systems that had a CDA, a comparison of scores between 2002 and 2017 revealed:

- 33% of systems had increased scores by more than 10 points;
- 14% of systems had scores that declined by more than 10 points; and
- 54% had scores that did not change by +/- 10 points. Those systems were classified as unchanged.

  ➢ Of those unchanged systems, 82% are viable, 10% marginal and 8% failing. (Figure 12)

Overall, most systems that had a CDA and whose scores changed markedly are making advancements. Only a small number have regressed. Meanwhile, the majority of systems that had a CDA have stable baseline scores (without significant change of ± 10 points).

**Figure 12: Number of West Virginia Water Systems by Baseline Score Changes from 2002 to 2017 in Each Viability Classification for Systems Having a CDA**
The 2014 Governor’s Report showed that systems’ scores between 2002 and 2014 exhibited a plateau between the systems that had received a CDA and those system that had not received a CDA. That report indicated the average score for all systems had increased by 8.3 points while systems that had received a CDA had an increase average score of about 8.9 points. Systems that had both a CDA and DWTRF monies had a score increase of more than 12 points. (Figure 13)

**Figure 13: Changes in Baseline Score Averages for West Virginia Water Systems Overall vs. Those Receiving Capacity Development Support 2002 to 2014**

The 2017 baseline scores show all water systems are making similar improvements in their overall viability with similar gains between those that had a CDA and those that have not with a majority of systems having scores that are not significantly changed (more than 10 points). Looking at trends in the average score since the first baseline in 2002, a plateau is now exposed. The average change for all systems from 2002 to 2017 is +8.08 points while the average scores for systems receiving a CDA was +8.35 points. Meanwhile, systems not receiving a CDA increased scores by an average of 7.47 points, indicating CDAs are continuing to have a positive impact although not quite as big as in the past. Systems that received both a CDA and DWTRF funding for system upgrades show the most progress with more than 12.47 point improvement in baseline scores since 2002 as shown in Figure 14.
Figure 14: Changes in Baseline Score Averages for West Virginia Water Systems Overall vs. Those Receiving Capacity Development Support 2002 to 2017

This plateau can be attributed to several different factors. First, CDP has made broader efforts to provide tools and resources to all water systems at training and conference events, so systems can make changes on their own without having staff provide onsite assistance. Second, the majority of CDAs that were performed in the last three years have been primarily on systems that had compliance troubles, which also tend to have viability issues. Lastly, it is likely that having achieved 87% system viability, the improvements in scores and viability are beginning to plateau due to stable, viable systems maintaining their TMF capacity.

Drinking Water Treatment Revolving Funds (DWTRF)

Water systems needing funds to make capital improvements to their systems can apply for low or zero interest loans and principle forgiveness from the State. For all systems applying for DWTRF funds, the CDP staff evaluates their TMF capabilities to ensure the system is viable and will be able to repay the loan. Water systems with insufficient TMF capabilities are required to address their deficiencies. Typically, infrastructure and technical deficiencies are addressed as part of the upgrade project. However, any financial and/or managerial deficiencies, such as emergency response plans, asset management plans, capital improvement plans, budget, five-year budget projection, etc., must be addressed as part of the project development.

Since the DWTRF began in 1998, 127 loans totaling in excess of $228 million have been provided for water system upgrades in West Virginia. To date, these funds have been distributed to a range of system sizes; systems ranging from 58 customers to more than 56,000 have received funds. It should be noted the EPA defines in CFR 40 Part 35, Subpart L, a small system as any system <10,000 customers. More than 90% of systems
in West Virginia meet this definition. Figure 15 illustrates the funding distribution to various system sizes since the last Governor's Report in 2014.

DWTRF funds have been distributed to various size systems under 100,000 population. Over the last three years, it is important to note a majority of total funds (69%) have been distributed to systems meeting the EPA’s definition (i.e., CFR 40 Part 35, Subpart L) of a small system (<10,000 population). Only 31% of funds went to systems greater than 10,000 population and 0% funds went to systems with more than 100,000 population.

**Figure 15: Distribution of Loan Dollars by System Population Size, West Virginia**

![Distribution of Loan Dollars by System Population Size](image)

**Bureau for Public Health (BPH) Assistance to Water Systems**

All receptive systems, regardless of size, are provided direct water system assistance by CDP staff. In addition, water system industry organizations and other state and federal agencies also provide assistance. Assistance mechanisms include:

- Direct on-site, hands-on technical assistance;
- Workshops, seminars and training sessions;
- Self-help guidance documents; and
- Templates and tools.

Direct water system assistance is primarily provided through OEHS field staff. This assistance includes conducting training courses, sanitary surveys, site visits and meetings with water system operators and managers. The field staff conducts approximately 250 sanitary surveys every year; contacting water systems regularly, checking for compliance and providing advice or assistance. This ongoing water system assistance using field staff is highly effective with receptive water systems.
As part of the CDA process, the CDP staff reviews baseline data/scores, a TMF capability questionnaire, EPA’s enforcement tracking tool (ETT), Public Service Commission annual report submissions, sanitary surveys, etc. The study identifies shortcomings and gaps that are indicative of the system’s inability to be sustainable. These deficiencies can be categorized as site-specific or global, as described below.

As systems have made progress to become more viable over the years, many of the deficiencies have moved from global to site-specific as more and more of the systems have addressed issues.

**Site-specific TMF capability deficiencies:**

These deficiencies are unique to a specific water system. In addition, site-specific deficiencies often require on-site, hands on assistance. Site-specific deficiency examples are:

- Treatment and distribution system leaks and breakdowns;
- Lack of knowledge of critical system components and their condition;
- Inadequate spare parts inventory;
- Failure to follow the sampling schedule;
- Failure to enact adequate rates to sustain system operations;
- Failure to create and enact both long term and short term budgets; or
- Failure to create/implement standard operating procedures, operations and maintenance tasks, and long range asset replacement plans.

Staff can assist water systems in addressing site-specific deficiencies through:

- District office staff assistance;
- CDP staff assistance;
- Educational resources such as draft plans/templates and free software, written material and training seminars; and
- Referral to third party resources.

**Global TMF capability deficiencies:**

The following deficiencies are common to numerous water systems. Many of these deficiencies can be addressed through guidance documents or workshops. Examples of global deficiencies are:

- Failure to update/maintain system maps;
- Failure to ensure that system management/board members are adequately trained;
- Failure of operators to obtain proper, adequate training to keep up to date with changing regulations;
- Use of reserve funds for everyday expenses due to inadequate rates to meet operational expenses;
- Failure to monitor the system’s financial health (i.e., expenses vs income);
- Failure to include the public in long-term planning; or
- Need to explore energy efficiencies/conduct an energy audit.
Global deficiencies are addressed using tools such as:

- Workshops
- Group training sessions or seminars
- Guidance documents

While there are a number of shortcomings found when systems are reviewed, there are several deficiencies that are noted more often and are seen as key indicators in system viability. Those deficiencies are:

- No long-term repair/replacement planning such as asset management;
- Little or no long-term (and sometimes short-term) financial planning;
- No preventive maintenance procedures or policies;
- No budgeting or poor financial planning and tracking;
- No health and safety procedures or policies;
- No emergency/contingency plans; and
- System management staff not understanding their ultimate responsibility for ensuring the water system’s technical capability to provide reliable, safe drinking water and an adequate budget and rates supporting long-term water system viability.

Since the program’s inception, the CDP has recognized the need for tools and resources to address deficiencies identified during assessments. These tools have been created or acquired by CDP staff and include operations and maintenance procedures, health and safety procedures, cross-connection/backflow prevention procedures, asset management plans, capital improvement plans and emergency/contingency plans. The documents include guidance, procedures and plan templates. These resources serve as a framework/blueprint for the water system to develop future plans and procedures. These guides help water systems develop and implement the necessary procedures which in turn ensures vital water system operational areas are addressed.

The EPA continues placing increased emphasis on proper water system management. This emphasis has resulted in their Sustainable Infrastructure initiative, Full Cost Pricing focus, asset management and other financial evaluation tool development. The CDP has been actively involved in bringing these EPA initiatives to West Virginia water systems. Often, this is accomplished through training sessions held by the Public Service Commission of West Virginia. BPH staff assists in the training for the Public Service Commission’s Public Service District Board Member Seminar, Municipal Officials Training, and Advanced Utility Topics Seminars. Training topics include sustainable infrastructure, long-term planning and asset management in all of these courses.

All DWTRF loan applicants are now required to complete a BPH approved asset management plan (AMP) as a condition of their loan. The CDP staff has created guidance documents, examples, templates, conducted training webinars, and encouraged use of a basic plan by using a series of spreadsheets or an advanced plan by using computer software programs to assist systems in creation of a comprehensive AMP. Still, these tasks were too overwhelming for water systems to undertake by themselves. Therefore, more recent projects have included funds for systems to utilize in hiring an engineering
firm or other third party to assist with AMP development. The CDP AMP work has drawn national attention and has been recognized by the EPA as an example for other states. For all DWTRF recipients, the CDP reviews AMP components during development with suggested potential improvements as well as reviewing the whole AMP when completed. Trainings, tools, and resources are available on the CDP website for use by all water systems. CDP staff is available to provide assistance in development of AMP components and review all plans submitted.

Other Resources
In addition to assistance from CDP staff, water systems are commonly provided with outside resources or referred to outside partner agencies. Staff includes a list of these partner agencies in every TMF assessment report. The primary partner agencies available for water systems include:

- Public Service Commission of West Virginia
- West Virginia Rural Water Association
- Maryland Center for Environmental Training
- National Environmental Training Center for Small Communities
- Rural Community Assistance Program
- Regional Planning and Development Councils
- West Virginia Environmental Training Center
- Peer assistance from other water systems
- West Virginia Water/Wastewater Agency Response Network (WVWARN)

A complete list of assistance providers is included in Appendix D.

Future Activities

The CDP will continue to use a proactive, hands-on approach in supporting water systems. The need for a CDA will be determined through the recommendations of district office staff, direct request from a system, request of OEHS’s compliance/enforcement staff, and by CDP staff review of baseline scores. All initial assessments are onsite and include resources, tools and guidance needed to improve water systems’ TMF.

The CDP monitors the ETT list and continues to work with the OEHS Enforcement Section and other water utility related organizations (e.g., Public Service Commission, Rural Community Assistance Program, Regional Planning and Development Councils, adjacent Public Service Districts, etc.) to aid water systems having long-term compliance problems.

The CDP will follow-up with systems for a full year following an assessment to assist implementation of the CDP recommendations to improve their TMF.
The CDP also monitors newly formed water system’s ETT scores for violations related to failure to follow the monitoring and compliance schedules. These system’s scores for the previous four quarters are available in the annual CDP Report located at http://www.wvdhhr.org/oehs/eed/i&cd/Capacity_Development_Annual_Reports.asp.

The CDP will continue to offer a CDA to all public water systems requesting DWTRF funds for projects. This will be an opportunity to:

- Identify systems that need a CDA;
- Obtain improvement in TMF for facilities requesting funding; and
- Suggest additions to the projects that can address identified shortcomings in the system.

CDP staff will continue to provide training opportunities to water systems including:

- Teaching portions of the water system operators courses; and
- Teaching Public Service Districts and Municipalities Courses on Capacity Development, TMF, and asset management through the West Virginia Public Service Commission.

The CDP will further programmatic improvements by:

- Continuing the development of asset management plan processes, tools, resources and skills of CDP staff, water system staff, and engineering firms staff;
- CDP secession planning including the development of standard operating procedures for review of consumer confidence reports, which are submitted by water systems as an annual water quality report for their customers;
- Incorporating recently developed databases for CDA, baselines, consumer confidence reports, and asset management into the daily practices of the Engineering Division staff more broadly than just CDP;
- Exploring the need to include, in the CDA process, questions/discussions regarding the understanding of and compliance with source water protection planning requirements; and
- Exploring options for additional onsite, hands-on support to systems for implementation of CDA recommendations for identified shortcomings.
APPENDIX A

Graphs/Figures

Figure 1: Water System Ranking Trends in West Virginia (pg. 2)
Figure 2: Number of West Virginia Water Systems in Each Viability Classification, 2017 (pg. 5)
Figure 3: Percentage of West Virginia Water Systems in Each Viability Classification, 2017 (pg. 6)
Figure 4: Number of West Virginia Citizens Served by Each Viability Classification for Water Systems, 2017 (pg. 6)
Figure 5: Percentage of West Virginia Population Served by Each Viability Classification of Water Systems, 2017 (pg. 7)
Figure 6: Trends in Numbers of West Virginia Water Systems by Population Served (pg. 7)
Figure 7: Number of West Virginia Water Systems by Population Served Trends Over Time (pg. 8)
Figure 8: Population Trends of West Virginia Water Systems by Viability Classification (pg. 8)
Figure 9: Viability of West Virginia Water Systems: Trends Over Time (pg. 9)
Figure 10: West Virginia Water System Viability Trends (pg. 9)
Figure 11: West Virginia Water System Viability Designation by Population Served, 2017 (pg. 10)
Figure 12: Number of West Virginia Water Systems and the Baseline Score Changes from 2002 to 2017 in Each Viability Classification for Systems Having a CDA (pg. 11)
Figure 13: Changes in Baseline Score Averages for West Virginia Water Systems Overall vs. Those Receiving Capacity Development Support 2002 to 2014 (pg. 12)
Figure 14: Changes in Baseline Score Averages for West Virginia Water Systems Overall vs. Those Receiving Capacity Development Support 2002 to 2017 (pg. 13)
Figure 15: Distribution of Loan Dollars by System Population Size, West Virginia (pg. 14)
APPENDIX B

Water System Definitions

Community Water System (CWS)
A public water system that conveys water for human consumption to year round residents (e.g., municipality, subdivision, etc.).

Municipal, Town, or City Water System
A community water system owned and operated by a municipal government.

Non-transient Non-community Water System (NTNC)
A non-community water system, often privately owned, that serves 25 or more of the same persons over six months per year (e.g., schools, factories, office buildings, etc.).

Public Service District (PSD) Water System
A community water system owned and operated by a Public Service District created by the County Commission.

Public Water System (PWS)
A system for the provision of water to the public for human consumption through pipes or other constructed conveyances, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals, 60 or more days out of the year.
APPENDIX C

Acronyms

AMP – Asset Management Plan
BPH – Bureau for Public Health
CDA – Capacity Development Assessment
CDP – Capacity Development Program
CWS – Community Water System
DWTRF – Drinking Water Treatment Revolving Fund or State Revolving Fund
EPA – U.S. Environmental Protection Agency
ETT – Enforcement Tracking Tool
NTNC – Non-transient Non-community Water System
OEHS – Office of Environmental Health Services
TMF – Technical, Managerial and Financial (Water System Capabilities)
## APPENDIX D

### Resources for Small Communities

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<tr>
<th>Name/Address</th>
<th>Phone, Fax, Website</th>
<th>Resource Information</th>
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<td>WV Department of Health and Human Resources, Bureau for Public Health Office of Environmental Health Services 350 Capitol Street, Room 313 Charleston, WV 25301</td>
<td>Phone: 304-558-2981 Fax: 304-558-0691 Website: <a href="http://www.wvdhhr.org/oehs">www.wvdhhr.org/oehs</a></td>
<td>The Capacity Development Program evaluates water systems’ financial, technical and managerial abilities and provides tools and resources to support water systems in increasing their competence.</td>
</tr>
<tr>
<td>National Environmental Services Center (NESC) West Virginia University P.O. Box 6064 Morgantown, WV 26506</td>
<td>Phone: 1-800-624-8301 or 304-293-4191 Fax: 304-293-3161 Website: <a href="http://www.netc.wvu.edu">www.netc.wvu.edu</a></td>
<td>National Center for wastewater, drinking water, and solid waste training information at your fingertips.</td>
</tr>
<tr>
<td>National Drinking Water Clearing House P.O. Box 6064 Morgantown, WV 26506</td>
<td>Phone: 1-800-624-8301 Website: <a href="http://www.nesc.wvu.edu.ndwc">www.nesc.wvu.edu.ndwc</a></td>
<td>WV Technical Advisory Program (associated with the National Drinking Water Clearing House) provides training and assistance to small water systems at no cost to the systems.</td>
</tr>
<tr>
<td>WV Rural Water Association 100 Young Street Scott Depot, WV 25560</td>
<td>Phone: 1-800-339-4513 or 304-201-1689 Fax: 304-201-1694 Website: <a href="http://www.wvrwa.org">www.wvrwa.org</a></td>
<td>Non-profit organization of rural and small publicly owned water and wastewater systems. Rural water focuses on providing training and technical assistance to the managers and operators of systems. Rural water works with other non-profit organizations in representing the interest of public water and wastewater systems.</td>
</tr>
<tr>
<td>Public Service Commission 201 Brooks Street Charleston, WV 25301</td>
<td>Phone: 304-340-0300 or 1-800-344-5113 Fax: 304-340-0325 Website: <a href="http://www.psc.state.wv.us/div/ww.htm">www.psc.state.wv.us/div/ww.htm</a></td>
<td>Oversight and review of management of water systems to provide consumer protection in the operation of water systems in West Virginia.</td>
</tr>
<tr>
<td>American Water Works Association (AWWA) 6666 Quincy Avenue Denver, CO 80235</td>
<td>Phone: 303-794-7711 or 1-800-926-7337 Fax: 303-347-0804 Website: <a href="http://www.awwa.org">www.awwa.org</a></td>
<td>Standards for design and operation of water systems.</td>
</tr>
<tr>
<td>WV Environmental Training Center (ETC) Cedar Lakes, Ripley, WV</td>
<td>Phone: 304-372-7878 Fax: 304-372-7887</td>
<td>Training center for water and wastewater operations personnel.</td>
</tr>
<tr>
<td>Name/Address</td>
<td>Phone, Fax, Website</td>
<td>Resource Information</td>
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| WV Water Development Authority (WV WDA)                                      | Phone: 304-414-6501  
Fax: 304-414-0866  
Website: www.wvwda.org                                                          | Administration of financing programs for the State of West Virginia.                  |
| WV State Agency for Surplus Property                                           | Phone: 304-766-2626 or 800-576-7587  
Fax: 304-766-2631  
Website: www.state.wv.us/admin/purchase/surplus |
| WV State Agency for Surplus Property                                           | Phone: 304-766-2626 or 800-576-7587  
Fax: 304-766-2631  
Website: www.state.wv.us/admin/purchase/surplus |
| Investment Management Board                                                   | Phone: 304-345-2672  
Fax: 304-345-5939  
Website: www.wvimb.org                                                          | Investment services for eligible entities in the State of West Virginia.              |
| Municipal Bond Commission                                                      | Phone: 304-558-3971  
Fax: 304-558-1280                                                             | Collect and track all loan repayments to state funding agencies.                      |
| USDA – Rural Development                                                       | Phone: 304-284-4860  
Fax: 304-284-4893  
Website: www.rurdev.usda.gov/wv/officestate.htm                                  | Financial programs to support essential public facilities and services such as water and sewer systems. |
| U.S. Environmental Protection Agency (EPA) Region 3                           | Phone: 215-814-5780  
Water protection: 215-814-2300  
Drinking water: 215-814-2322  
Website: www.epa.gov/region3                                                   | Overview of small water systems and State Capacity Development programs.              |
| Water Environment Federation                                                   | Phone: 703-684-2400 or 800-666-0206  
Fax: 703-684-2492  
Website: www.wef.org                                                          | Not for profit technical and educational organization with embers from varied disciplines who work toward preservation and enhancement of the global water environment. |
| WV Rural Community Assistance Program                                          | Phone: 304-842-9287  
Fax: 304-842-5727  
Website: www.wvcommunity.org/recap.htm                                           | Non-profit organization that provides technical assistance to small communities in the areas of water, wastewater, and solid waste. |
| WEAP – Water Evaluation and Planning                                           | Website: www.WEAP21.org/index                                                    | Is a comprehensive, flexible and user-friendly computer based framework for planning and policy analysis. It can be a useful addition to water systems toolbox of models, databases, spreadsheets and other software. |
| Sustainable Water Infrastructure – Online Course from VA Tech                 | Phone: 540-231-9420 or 1-866-791-4898  
Website: www.cpe.vt.edu/swim/index.html                                         | |
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</table>
| National Rural Water Association  
29115 13th Street  
Duncan, OK 73533 | Phone: 580-252-0629  
Fax: 580-255-4476  
Website: www.nrwa.org | National Rural Water Association, through its state affiliates, is the largest water and wastewater utility membership organization in the nation representing over 26,696 public water and wastewater utilities. While membership includes utilities of all sizes, they primarily service populations of 10,000 or less and comprise 94% of the public water systems in America. |

Water System periodicals:  
- Water Sense  
- Water World  
- Water and Waste Digest  
- Mountain State Water Line by WV Rural Water Association  
- Ontap – by NESC  
- Journal of Water Resources Planning and Management by American Society of Civil Engineers