WORKSHOP EXERCISE INSTRUCTIONS:
STATE OPERATOR CERTIFICATION REPRESENTATIVE

Congratulations! You have been selected to be the **State Operator Certification Representative** for this exercise.

Your Role:

Your job title may be Operator Certification Coordinator, Licensing Coordinator, Operator Licensing Officer, Operator Training and Certification Coordinator, or Environmental Quality Analyst. Your day-to-day job may include some of the following duties: organizing and conducting training sessions, operator recruitment activities, writing, administering, and grading exams, working with operators to renew their certifications, processing course applications, reviewing applications for water operator licenses, reviewing applications for training courses and continuing education credit, and assisting water systems with licensing issues.

You generally have good insight as to the operations of individual water supplies that you work with and may have inside knowledge of the status of skilled professionals overseeing the treatment and distribution of safe drinking water.

Your Packet Includes:

1. *Acronym List.*
2. *Systems Details for Operator Certification Representative.*
3. *Public Water System Inventory Data.*
4. *Systems Map.*
5. *A worksheet to organize information.*
6. *Ranking for State Assistance to Public Water Systems.*

Your packet also contains a list of *Background Resources* for future reference; you will not need this document to complete the exercise.

Overview:

You have been given information about the PWSs in your state, some of which are in need of state assistance (i.e., Technical Assistance [TA] or Drinking Water State Revolving Fund [DWSRF] loan assistance) in the upcoming year. You will work with your team to rank the PWSs in order of need for state assistance.

For purposes of this exercise, the current year is 2019, and the month is October.

This exercise is organized into three phases:

- **Phase 1: PWS Review** – Read through the materials, assess the needs of each PWS, and independently rank the PWSs in order of need for state assistance (i.e., TA or financial assistance). **You are the only team member that has an accurate list of the PWSs' operators and their backgrounds and certifications.** Note: If your team has more than one person playing this role, you can work together.
- **Phase 2: Team Discussion** – Discuss your rankings with the rest of the team members to develop an overall team ranking.
- **Phase 3: Report Out** – Report out your rankings to the whole group.

There is no single correct answer! The goals of this exercise are to share **as a team** how the PWSs were evaluated based on the available information and identify the steps the state will take to assist these PWSs. Be sure to collaborate and share ideas (during Phase 2).

EXERCISE STEPS

Phase 1: PWS Review (30 Minutes)

Step 1.1: Review Operator Certification Details for Each PWS. Use the *Public Water System Inventory Data, Systems Map*, *System Details for State Operator Certification Representative,* and the *Operator Certification: Quick Facts* to review the operator certification details for each PWS. With this information:

1. Use the provided *Worksheet for State Operator Certification Representative* to document the PWS classification, minimum required operator certification level, and the number of Continuing Education Units (CEUs) required based on the table below.
2. Determine and record the operator's current licensure level and how many CEUs they have acquired using the *System Details for State Operator Certification Representative* sheet.
3. Fill in the row on *Worksheet for State Operator Certification Representative* for the Required Certification Level necessary for each PWS;
4. Note whether each operator is certified to the correct level;
5. Note whether the operator has the correct number of CEUs for their required certification level for this renewal cycle; and
6. Indicate if you are recommending TA or financial assistance for the PWS. Include any notes that will help you explain your recommendations during Phase 2.

Considerations

- **PWS Operator:** Look for issues or situations in the "Notes from Third-Party TA Contractor" on the *System Details for State Operator Certification Representative* sheet that may suggest a concern with a PWS's operator (e.g., an operator that does not properly maintain the PWS).
- **PWS Partnerships:** Consider how PWS partnerships (e.g., sharing an operator) or the use of a contract operator might aid a PWS. Use the *Systems Map* as needed.

Operator Certification: Certification Classification System

PWS Classification	PWS Description	Minimum Required Operator Certification Level	Required Number of CEUs (3-Year Renewal Cycle)
4	Any NTNCWS or CWS that serves more than 4,000 people	4	20
3	Any NTNCWS or CWS that serves no more than 4,000 people and provides treatment other than hypochlorination (e.g., UV, membrane technology, conventional treatment)	3	15
2	Any NTNCWS or CWS that serves no more than 4,000 people and provides no treatment or uses only hypochlorination.	2	10
1	Any NTNCWS or CWS that serves no more than 300 people and provides no treatment.	1	5

The state requires the direct supervision of a water system (treatment and/or distribution) to be under the responsible charge of an operator holding a valid certification equal to or greater than the classification of the treatment facility or distribution system.

1 CEU = 1 training hour on any topic related to water treatment or distribution.

Operators must renew their certifications every 3 years (3-year renewal cycle). In order to keep his/her certification current, the operator must acquire the required number of CEUs. Note that in this exercise, there is one month remaining until the end of the renewal cycle.

Step 1.2: Rank the PWSs in Order of Need for State Assistance. Using the information gathered on the worksheet rank the PWSs. On your *Ranking for State Assistance to Public Water Systems* form, you should list:

1. Your ranking for each PWS;
2. The reasons for the ranking; and,
3. Your recommended actions to aid the PWSs. Note that the aid for these PWSs can be TA (i.e., through set-asides), financial assistance (i.e., through a DWSRF loan), or both.

ACRONYM LIST

CEU	Continuing Education Unit
CWS	Community Water System
DWSRF	Drinking Water State Revolving Fund
ERP	Enforcement Response Policy
ETT	Enforcement Targeting Tool
NTNCWS	Non-Transient Non-Community Water System
PWS	Public Water System
TA	Technical Assistance

A ranking of 1 should be assigned to the PWS with the greatest need for assistance, and a ranking of 7 should be assigned to the PWS with the least need for assistance. It's okay to make assumptions when ranking the systems, just make sure that they can be explained during Phase 2 of this exercise. If new information is brought up during discussions with your team members, you can amend the rankings accordingly.

Phase 2: Team Discussion (30 Minutes)

Step 2.1: Present your Findings to the State Drinking Water Administrator. Once each team member is done establishing his/her ranking, the State Drinking Water Administrator will lead the team discussion. When it is your turn, present to the rest of the team and the State Drinking Water Administrator: 1) your ranking, 2) the reasons for the ranking (i.e., how you defined PWS needs and why certain needs were greater than others), and 3) your recommended actions (TA and/or DWSRF funding, or none) for each PWS. Do not be surprised if the rankings differ from role to role, since different information is available to each team member.

The team will help the State Drinking Water Administrator make a final decision about: 1) the final ranking for state assistance, 2) the reasons for that ranking, and 3) the recommended actions to aid the PWSs.

BONUS! Program Challenges and Improvements: If your team has time, discuss suggested improvements that could be made to this state drinking water program.

Operator Certification: Quick Facts

Operator certification helps protect human health and the environment by establishing minimum professional standards for the operation and maintenance of PWSs. In 1999, EPA issued operator certification program guidelines specifying minimum **standards for certification** and **recertification** of the operators of CWSs and NTNCWSs. These guidelines are implemented through **state operator certification programs**.

While the specific requirements **vary from state to state**, one goal of all operator certification programs is to ensure that **skilled professionals** are overseeing the treatment and distribution of safe drinking water. State regulations require an operator to be in **direct responsible charge** of a PWS. An operator in direct responsible charge is the certified operator at a PWS that has the authority to make operational decisions that affect water quality or quantity.

Certified operators must attend or participate in a certain number of hours of relevant continuing education to keep their certifications current. The number of **CEUs** required varies from state to state. Typically, operators receive units by attending training events, such as workshops, webinars or conferences. An operator must obtain the required number of CEUs within the state's designated **renewal cycle** in order to keep his/her certification current.

Phase 3: Report Out (30 Minutes)

Step 3.1: Report Team Results to the Entire Group. Once your team has finalized the ranking and list of PWSs that will receive assistance, the State Drinking Water Administrator will present the information to the entire group of teams, or a subset of the entire group (e.g., 1-2 other teams). The Administrator will report: 1) your team's final ranking for DWSRF projects and TA, 2) the reasons for those rankings, and 3) the recommended actions to aid the PWSs.

Drinking Water Regulations (Applicable to All CWSs Serving Less than 10,000 Customers)	
Consumer Confidence Rule (CCR)	
Lead and Copper Rule (LCR)	
Phase II/V Rules for Inorganic Chemicals (IOCs), including Arsenic; Synthetic Organic Chemicals (SOCs); and Volatile Organic Compounds (VOCs)	
Public Notification (PN) Rule	
Radionuclides Rule	
Revised Total Coliform Rule (RTCR)	
Based on a CWS's use of disinfection, they may also be subject to: ▪ Stage 1 & 2 Disinfectants and Disinfection Byproducts Rule (DBPR)	
Based on a CWS's source water type, they may also be subject to: ▪ Ground Water Rule (GWR) ▪ Surface Water Treatment Rule (SWTR)	▪ Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR) ▪ Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR)

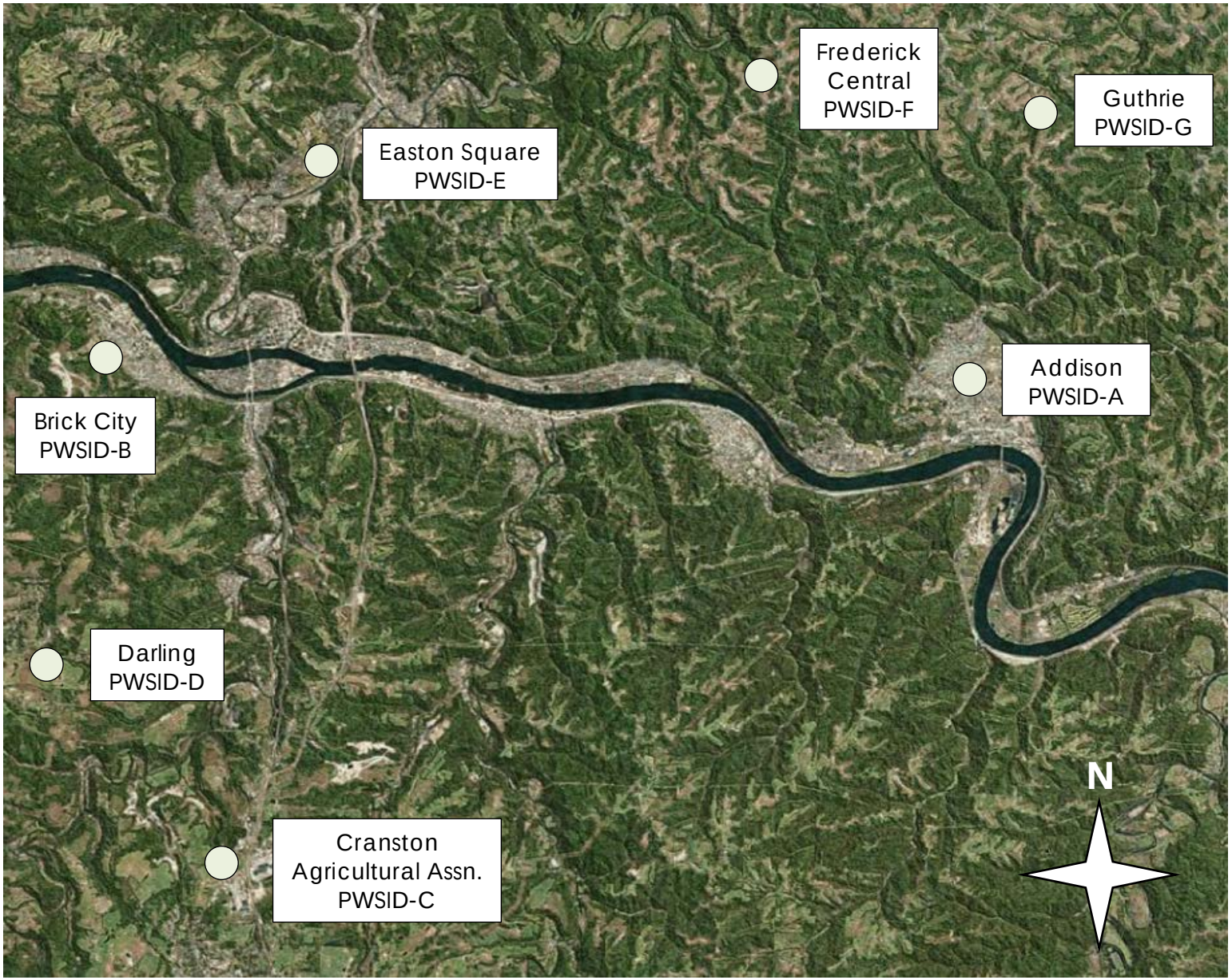
System Details for State Operator Certification Representative

PWSID	PWS Name	Population Served	PWS Type	Name of Operator in Charge	Operator's Current Licensure Level	CEUs Acquired	Notes from Third-Party TA Provider
PWSID-A	ADDISON COMMUNITY WATER SYSTEM	6,000	CWS	Steve Mack	4	20	Some infrastructure, including ground-level water tank, needs replacing. PWS has established a mutual aid agreement with Frederick Central Water Works, in the event of an emergency.
PWSID-B	BRICK CITY WATER SYSTEM	2,772	CWS	Erin Flower	3	2	Little to no communication between the Board and the Operator.
PWSID-C	CRANSTON AGRICULTURAL ASSOCIATION	2,100	CWS	Renee Halls	2	15	Operator needs additional training.
PWSID-D	DARLING MOBILE HOME PARK	294	CWS	Donald Harris IV	2	10	There was a water main break in 2019 that the operator was not able to respond to quickly.
PWSID-E	EASTON SQUARE WATER DISTRICT	3,000	CWS	Donald Harris IV	2	10	Chlorinator is poorly designed and does not provide adequate disinfection.
PWSID-F	FREDERICK CENTRAL WATER WORKS	394	CWS	Robert Davis	2	10	PWS has established a mutual aid agreement with Addison CWS, in the event of an emergency. Two board members are interested in training on Rate-Setting and Asset Management.
PWSID-G	GUTHRIE WATER SYSTEM	326	CWS	?	?	?	Unable to find an operator. The clerk said that the operator retired a while ago.

PUBLIC WATER SYSTEM INVENTORY DATA

PWSID	PWS Name	Population Served	PWS Type	Source Water	Major Infrastructure
PWSID-A	ADDISON COMMUNITY WATER SYSTEM	6,000	CWS	Surface Water	▪ Conventional Filtration Plant ▪ 1 Ground-level Water Tank ▪ 62 Miles of Pipe ▪ 100% Metered
PWSID-B	BRICK CITY WATER SYSTEM	2,772	CWS	Surface Water	▪ Conventional Filtration Plant ▪ 1 Elevated Water Tank ▪ 40 Miles of Pipe ▪ 0% Metered
PWSID-C	CRANSTON AGRICULTURAL ASSOCIATION	2,100	CWS	Ground Water	▪ Disinfection (Membrane technology) ▪ 1 Elevated Water Tank ▪ 23 Miles of Pipe ▪ 0% Metered
PWSID-D	DARLING MOBILE HOME PARK	294	CWS	Ground Water	▪ Disinfection (Hypochlorination) ▪ 1 Ground-level Water Tank ▪ 20 Miles of Pipe ▪ 100% Metered
PWSID-E	EASTON SQUARE WATER DISTRICT	3,000	CWS	Ground Water	▪ Disinfection (Hypochlorination) ▪ 1 Elevated Water Tank ▪ 30 Miles of Pipe ▪ 90% Metered
PWSID-F	FREDERICK CENTRAL WATER WORKS	394	CWS	Ground Water	▪ Disinfection (Hypochlorination) ▪ 1 Elevated Water Tank ▪ 17 Miles of Pipe ▪ 100% Metered
PWSID-G	GUTHRIE WATER SYSTEM	326	CWS	Ground Water	▪ Disinfection (Hypochlorination) ▪ 1 Ground-level Water Tank ▪ 10 Miles of Pipe ▪ 98% Metered

MAP OF AREA WATER SYSTEMS



1 inch = 8 miles

WORKSHEET FOR STATE OPERATOR CERTIFICATION REPRESENTATIVE

Criterion	PWSID-A	PWSID-B	PWSID-C	PWSID-D	PWSID-E	PWSID-F	PWSID-G	
PWS Classification								
Minimum Required Operator Certification Level								
Required Number of CEUs								
Operator's Current Licensure Level								
CEUs Acquired								
Notes								
Technical Assistance (TA)								
Financial Assistance (DWSRF infrastructure projects)								
Rank								

RANKING FOR STATE ASSISTANCE TO PUBLIC WATER SYSTEMS

Remember to evaluate each PWS to determine if the operator is certified to the correct level (i.e., an operator's "current certification" is equal to or greater than the "required certification"); determine if each PWS's operator has the correct number of CEUs for their required certification level; look for issues or situations of concern with the PWS's operator (e.g., an operator that does not properly maintain the PWS); and consider how PWS partnerships (e.g., sharing an operator) or the use of a contract operator might aid a PWS.

Team Name:_____ **Role:** State Operator Certification Representative

PWS Name / PWSID	Rank	Reason for Ranking / Recommended Actions to Aid PWSs Note that the aid for these systems can be TA, financial assistance (DWSRF infrastructure projects), or both.
Addison Community Water System PWSID-A		
Brick City Water System PWSID-B		
Cranston Agricultural Association PWSID-C		

PWS Name / PWSID	Rank	Reason for Ranking / Recommended Actions to Aid PWSs Note that the aid for these systems can be TA, financial assistance (DWSRF infrastructure projects), or both.
Darling Mobile Home Park **PWSID-D**		
Easton Square Water District **PWSID-E**		
Frederick Central Water Works **PWSID-F**		
Guthrie Water System **PWSID-G**		

BACKGROUND RESOURCES

Overall Resources:

- EPA's Drinking Water Standards Quick Reference Guides: https://www.epa.gov/dwreginfo/drinking-water-rule-quick-reference-guides
- EPA's Compliance Guidance under the Safe Drinking Water Act by Regulation: https://www.epa.gov/dwreginfo/drinking-water-regulatory-information

FOR FUTURE REFERENCE

You can refer to these resources, as needed, after the exercise.

State Drinking Water Administration:

- The Association of State Drinking Water Administrators Website: http://www.asdwa.org/
- Information About State Drinking Water Systems Programs: https://www.epa.gov/ground-water-and-drinking-water

Capacity Development:

- EPA's Small Public Water Systems and Capacity Development Website: https://www.epa.gov/dwcapacity
- EPA's Guidance on Capacity Development: https://www.epa.gov/dwcapacity/information-states-about-building-capacity-drinking-water-systems
- EPA's Tools/Resources for States and TA Providers: https://www.epa.gov/dwcapacity/technical-managerial-and-financial-tmf-capacity-resources-small-drinking-water-systems

Operator Certification:

- EPA's Operator Certification Website: https://www.epa.gov/dwcapacity
- EPA's Guidance on Operator Certification: https://www.epa.gov/dwcapacity/information-states-about-certifying-operators-drinking-water-systems
- The Association of Boards of Certification: http://www.abccert.org/

EPA's Drinking Water ERP and the ETT:

- EPA's Drinking Water Enforcement Policy: https://www.epa.gov/sites/production/files/documents/drinking_water_erp_2009.pdf
- EPA's ETT Scores Tracker and ETT Report (Note: you must be a registered user): https://echo.epa.gov/
- SDWA Dashboard: https://echo.epa.gov/trends/comparative-maps-dashboards/drinking-water-dashboard?state=National
- SDWIS Federal Reports Search: https://ofmpub.epa.gov/apex/sfdw/f?p=108:200:::NO:::

Drinking Water State Revolving Fund:

- EPA's Drinking Water State Revolving Fund Website: https://www.epa.gov/drinkingwatersrf

Drinking Water Trainings:

- Drinking Water Trainings Website: https://www.epa.gov/dwreginfo/drinking-water-trainings
- Small Systems Monthly Webinar Series: https://www.epa.gov/water-research/small-systems-monthly-webinar-series

Additional Partners:

- American Water Works Association: http://www.awwa.org/
- National Rural Water Association: http://www.nrwa.org/
- Rural Community Assistance Partnership (RCAP): http://www.rcap.org/
- Environmental Finance Center Network (EFCN): http://efcnetwork.org/