

2018 WARN Chairs Meeting Summary

Date and Time: October 28, 2018, 8:30 AM – 3:30 PM Eastern

Location: Atlanta, Georgia

Objectives:

1. Discuss current initiatives
 2. Identify future capabilities of the WARNs and resources needed to accomplish them
 3. Identify emerging issues and potential solutions
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Action Items

AWWA

- Continue to share information about potential water sector needs during emergencies.

EPA

- Notify WARN Chairs when WARN Video is available for posting and distribution (DONE).
- Incorporate water sector aspects of DHS's Crisis Event Response and Recovery Access (CERRA) framework into outreach activities for state and local governments to increase awareness of the recognition of water utility personnel as first responders during emergencies.

Welcome and Update – Kevin Morley, AWWA and Dawn Ison, EPA

Kevin welcomed all the WARN chairs and provided information about updates to the America's Water Infrastructure Act of 2018. Among many provisions, the Act will require all community water systems serving more than 3,300 people to:

- Prepare or update Risk and Resilience Assessments and certify to EPA that the systems conducted the assessment. Deadlines for submission of these certifications to EPA vary by system size but begin on March 31, 2020 for large systems.
- Prepare or revise, where necessary, Emergency Response Plans (ERPs) that incorporate the findings of the Risk and Resilience Assessments and certify to EPA that the ERPs have been completed no later than 6 months after completion of the Risk and Resilience Assessments.

The Risk and Resilience Assessment, and subsequent ERP revision, are required to be reviewed at least every 5 years after the initial deadline for certification, as described above.

Kevin and Dawn recognized the new WARN Chairs who were present at the meeting.

WARN Successes Keynote Speakers

The following presenters discussed the role their WARNs played in response to Hurricane Florence and Hurricane Michael, as well as a WARN funding initiative.

NCWaterWARN – Kenny Waldroup (Chair), City of Raleigh

Kenny Waldroup detailed how NcWaterWARN facilitated the response to Hurricane Florence in September 2018. NcWaterWARN has a desk at the State Emergency Operations Center (SEOC) and access to WebEOC. NcWaterWARN is divided into seven geographical regions, with individuals in each region trained to staff the desk at the SEOC.

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Hurricane Florence was a Category 1 hurricane with weather effects lasting for five days. WARN deployment in the Washington County region brought generators to communities that were isolated by flood waters. There was also a deployment from the Raleigh region to areas around Fayetteville. Pump stations lost power, and trucks were brought with pumps and generators. Onslow County, where the water source begins and ends in the same county, received over 30 inches of rain in the five-day period, and they had to rebuild all the electrical components at the water plant.

The Cape Fear Public Utility Authority (CFPUA) experienced massive devastation in their community; however, they never lost water service to over 68,000 accounts, even though the raw water main almost washed out. CFPUA staff fielded 180 emergency calls, repaired 14 private services and logged over 3,000 extra hours through the storm response.

A lesson learned for CFPUA was that fuel supply is a major issue for communities that get isolated due to flooding. Their contracted supplier, and other outside sources, were unable to deliver fuel due to washed out road conditions. Future planning is necessary for the possibility that contractors will not be able to deliver fuel supplies, including purchasing alternate fuel supply trucks or storage tanks. There were also issues with worker burnout due to the long hours and days worked without sleep and food.

In the Barrier Islands, everything was buried under sand, making it hard to find meter boxes and other equipment. A SCADA repair crew provided support. This was the first use of the AWWA Resource Typing Manual, which was very helpful for acquiring resources.

Some lessons learned from Florence include:

- NIMS/ICS works. Past exercises, trainings, and identification of gaps led to successful responses in CFPUA and other utilities.
- Pre-established working relationships with local, state, and federal emergency management contacts facilitated the process of finding needed resources and maintaining situational awareness. The NCWaterWARN seat at the SEOC is critical for the industry.
- Embedding information technology teams in EOCs across the state increases effectiveness.
- 800MHz radios worked when primary and secondary communications were lost.
- Contingency plans for critical items such as fuel are important, especially during flooding, which is occurring more often.
- Drone technology is valuable for conducting assessments in areas that have been isolated.
- Certificates of entry are critical; all NCWaterWARN members have them.

SCWARN – Jerry Baxley, South Carolina Rural Water Association (SCRWA)

Jerry Baxley discussed the SCWARN response to Hurricane Florence in September 2018. In Northeastern South Carolina, the issue was not the wind but the rain. The Town of Cheraw and surrounding areas received 22.5 inches of rain in a short period of time. The Great Pee Dee River reached a level of 48 feet (50 feet is the flood stage record from 1945). Cheraw serves approximately 6,500 people and supports many industries. The town's river water source was cut off due to severe flooding of a local creek that destroyed the raw water line and plant access road, making entry for repairs impossible. The town has a 13-acre back-up storage pond, which provided 7-10 days of water, but the pond wasn't large enough to meet demand for the amount of time needed to rebuild the raw water line. SCWARN was directing resource efforts in the SEOC, with the City of Columbia providing pumps and HDPE piping

Rain for Rent responded to Cheraw's emergency by bringing in four rolls of 12-inch flat line piping containing 660 feet of pipe in each roll. Town personnel rebuilt approximately 2,700 feet of the road to

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the river, laid down the flat line piping, and brought in pumps to move water from the river to the backup storage pond.

Town staff worked tirelessly, with very little sleep or regular meals for days, and in the end were able to maintain water service. The SCRWA assisted with a plan of action, pumps and piping acquisition, contractor selection, and physical labor. SCWARN members were ready to send heavy equipment and other necessary resources, but local rental service companies were used instead.

Other water systems in South Carolina were severely impacted by the heavy rain, flooding and power outages. Most systems were equipped with generators. Fuel was an issue for one flooded river pump station and two surface water plants temporarily dealt with raw water issues, but water service generally remained uninterrupted.

FlaWARN – Carol Hinton, TREEO Center

Carol Hinton discussed FlaWARN involvement in the response to Hurricane Michael in October 2018. Carol received a call from the EOC to help the water and wastewater utilities. Because the EOC in Tallahassee was potentially impacted by the path of Hurricane Michael, they worked out of the Orlando district of the Department of Environmental Protection (DEP). DEP helped with the call center and had all the necessary IT equipment.

One challenge encountered was working with the existing FlaWARN database, which did not meet the needs of the incident. While the database deficiencies were known, funds were not available to make changes and plans were already in place to integrate the database into Storm Tracker, the online system DEP uses to track water utility status (operational, partially operational, or not operational).

Tallahassee, which deployed WARN resources numerous times in past incidents, and the Talquin co-op requested assistance, and WARN crews were dispatched to those locations. Bay County Water provides water to five systems and FlaWARN members helped Bay County Water restore all services and issues within their own system first, and then worked their way to all the consecutive systems. Cell service was inconsistent on AT&T and completely down with Verizon, so FlaWARN was unable to contact Bay County for two days. Panama City had two hospitals evacuated, but city water service was restored in a few days due to assistance from some local utilities. Mexico City took a direct hit from the hurricane. The entire city received damage and new pipe had to be laid from the Bay County connection after the road and lines were washed away.

The big takeaway for WARN is that while large utilities responded, several small utilities were able to respond as well, helping deliver generators. One challenge identified was how to assist the impacted private utilities in Florida that may not be eligible for FEMA assistance. Rural Water is working with these private systems to get funding.

The following list presents some lessons learned from the response to Hurricane Michael:

- Before the hurricane hit, an EPA mobile laboratory was procured. The EPA mobile laboratory cannot test private wells, so the DOH laboratory conducted those tests.
- The ICS is crucial.
- Ensure that generators are available for deployment.
- FlaWARN may start looking into mission-ready packages.

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SDWARN – Brad Lawrence (Chair), City of Madison, SD

SDWARN, a 501(c)3 non-profit committee under the South Dakota Association of Rural Water Systems, identified the following equipment needs:

- Augment 2”-6” pumps with suction and discharge hoses with camlocks
- Needed a complete kit
- Sewer balls with remote inflation hoses, valves, and gauges

In response, the City of Madison issued a “Funding Challenge” as follows:

- Madison donated \$500 to fund WARN – challenge all other systems to meet or beat that donation
- Voluntary participation
- Certifications for bronze, silver, gold, platinum levels
- Current donations are now at **\$12,001**
- Rural Water Center will make up gap in funding

South Dakota will have the ability to purchase at least three pumps and have them geographically located throughout the state.

SDWARN keeps the equipment in environmentally stable buildings and use “race gas” to exercise the motors since it does not leave residue because it is 108-octane and evaporates. Local parts house has it in 5-gallon containers. Sonoco, BP, and Phillips are commonly available brands.

WARN Reports – Accomplishments and Challenges

Kevin Morley, AWWA, and Dawn Ison, EPA, asked each WARN Chair to describe their WARN’s recent accomplishments and current challenges. The results are presented in the table below.

State	Response
AZ	AZWARN is a special committee within the Arizona Water Association. AZWARN finally updated their mutual aid agreement (it took over a year) by converting from an intergovernmental agreement to a standardized mutual aid agreement. The updated agreement will allow private entities to join AZWARN. AZWARN has 23 active members and are currently trying to get more private utilities. A current challenge is informing the many local councils and legislators about AZWARN.
CA	California has experienced nine major wildfires over the past two years. CalWARN’s role has shifted from being a responder to information managers, gathering the right contacts for the needs. CalWARN expanded their ability to work with AWWA by conducting a conference and training. One challenge that has come from the fires is that power companies have instituted power outages on “red flag” days, which is impacting health care facilities and water utilities. There is a need to coordinate with the power companies to lessen the impacts. CalWARN has implemented GIS mapping so now can provide active location support. CalWARN is working with counties to use the WEA “Wireless Emergency Alert” system. Google docs is utilized frequently to communication throughout region. Membership stays high at 87%-89%. CalWARN is investigating becoming a 503c non-profit and looking to vendors to donate to the cause and getting status (bronze, silver, etc.) for those donations. CalWARN has similar challenges as other WARNs with keeping people a part of the steering committee and involved in WARN.

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State	Response
CO	Colorado has been under significant drought for some time and 84% of the state remains under moderate to severe drought levels. The dry conditions have resulted in many wildfires, which are causing major runoff issues into source water. Some utilities had to abandon their source water and others had to bring in bottled water. CoWARN increased membership by 44%. Colorado has 2,000 utilities in the state, but many of those are very small “parks” which are spread out into rural areas. CoWARN continues to conduct outreach to increase visibility in the state. The CoWARN Chair has joined several committees, including the Colorado Critical Infrastructure Alliance, which includes FEMA, the Department of Homeland Security, cyber experts, and others. CoWARN held tabletop trainings over the past year and has a direct point of contact with the Colorado Municipal League (mayors), which will lead to a presentation or booth at their annual meeting. Two current challenges include getting utilities to join who don’t realize they need WARN until there is an issue and securing funding. CoWARN finally deployed their website (similar to SCWARN’s). They received money from the state to produce flyers and banners.
CT	CtWARN challenges include maintaining active membership, proving value to attract new members, and securing additional funding since initial sources have dried up since startup. CtWARN does not get a lot of activations. They send out emails when there is a potential hurricane, but typically do not receive responses. CtWARN is exploring the potential of becoming absorbed by the Connecticut Section of AWWA, which currently handles all financials. CtWARN developed a resource database, but it is hard to get the members to update it. Utilizing a joint database with other agencies would be helpful. Collaboration with rural water is sometimes difficult, but those synergies would be helpful.
DE	Although Delaware is a small coastal state, it has not been impacted by a large event since a near-miss from Sandy; therefore, it is challenging to maintain relevancy. DEWARN would like to conduct training but does not have funding from the state. DEWARN does have a good relationship with Delaware Rural Water Association. Membership covers 85% of the population, but only one wastewater system has joined. Many systems in the state are small utilities and they do not have the time or resources to engage in WARN. DEWARN does not do resource typing due to lack of funding.
FL	FlaWARN facilitated a response to Hurricane Michael, as reported by Carol Hinton earlier in the meeting. FlaWARN implemented as many lessons learned from last year’s hurricane season as possible. As far a membership is concerned, experience shows that members join during hurricanes and sign the mutual aid agreements.
GA	Georgia had 161 systems on generators after Hurricane Michael. The state of New Jersey offered and deployed over 25 generators they had from Super Storm Sandy through the Emergency Management Assistance Compact (EMAC). GAWARN is planning on a comprehensive website update in 2019 and will remove the member profiles with equipment since members don’t update them. The website will be used for mass communications. GAWARN is working with the Georgia Emergency Management Agency (GEMA) to conduct outreach workshops. GAWARN is trying to get local EMAs and utilities to communicate. Challenges include an increased amount of liabilities becoming apparent, and political issues causing miscommunication of resources.

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ID	IdWARN has increased membership, gained recognition as an emergency response network from the Idaho Department of Emergency Management, and enjoyed more cooperation from other response agencies on training and tabletop exercises. Challenges include membership recruitment and keeping current members fully engaged, building and maintaining relationships between local emergency managers and utilities, and securing equipment.
IL	Illinois historically does not have a lot of activations, so it is hard to keep ILWARN members engaged, though they have added a couple of new members. Illinois experiences mainly flooding and winter storm events. ILWARN is updating the website to BPro (to be similar to SCWARNs). ILWARN has a good relationship and communication with emergency management, who reached out a couple of times to utilities who had issues and needed help. ILWARN still does not have a seat at the state EOC but is continuing to work on it.
IN	InWARN is actively involved in the state EOC and Indiana Department of Homeland Security. InWARN is heavily involved in implementing the cybersecurity plan template. In Indiana, if a utility requests SRF funding, they have to have a cybersecurity plan, which contains a section with InWARN contact information. One challenge is high water utility staff turnover, which makes it difficult to keep WARN contacts up to date and ensure that systems know they are actually part of InWARN.
IA	IOWARN is a committee under the Iowa Section AWWA. IOWARN has similar issues with membership that other WARNs experience. IOWARN sees and promotes WARN as basically insurance. IOWARN conducted three successful exercises with Homeland Security and EPA, addressing topics such as EMPs, ice storms and EMAC. An IOWARN member was asked to speak at a future DNR field office meeting, which will be a good opportunity to enhance coordination. Current concerns include the cost of the website and high turnover causing contacts to constantly be out of date.
KS	KSMAP conducted six regional trainings for participating utilities over the past year. They also conducted tabletop exercise as well as a participated in an EPA Region 7 EMAC workshop which helped identify gaps. Their greatest challenge involves increasing membership. Another challenge is complacency, since it is hard to keep active engagement on top of other priority issues. A current issue Kansas is facing is drought and KSMAP has concerns about how water utilities are handling the situation. Drought may take a long time to become an emergency, but once it does it comes on quickly and utilities can't respond fast enough.
ME	MEWARN is made up of 121 members. Membership is just over 50% of eligible utilities. Maine does not have that many natural disasters, which makes it harder to showcase the value of joining MEWARN. They have a great relationship with emergency management and conduct tabletop exercises, and recently a full-scale exercise, with them. The state primacy agency has developed templates for emergency response plans that has MEWARN contacts in it, which helps promote the WARN. MEWARN also maintains a webpage for promotion. MEWARN also utilizes the Health Alert Network, which is promoted by State agencies and is how MEWAR stays connected with those agencies. All 16 different Maine state agencies use different communication tools (code red, reverse 911). Future goals would include knowing what is available for communication tools to get notifications out, so a combined system could be utilized.

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MN	MnWARN added eight new members this year, with five coming on board as a result of flooding events in the southern part of the state. MnWARN currently has over 400 members, covering 65% of the population. An educational video, which was produced free of charge thanks to the generosity of the Minnesota Pollution Control Agency, went out this past winter and was seen in council meetings and resulted in two more members. MnWARN held their annual meeting, which was funded by the Minnesota Department of Health, and had over 60 attendees, which provided a great networking opportunity for members and non-members. MnWARN is currently maintaining relationships with DNR, MN Department of Health, Department of Homeland Security, and other agencies. Many of the MnWARN Regional Directors have retired, but each of the Directors have alternates and MnWARN created binders that contained a lot of documentation and contact information, which really helped with the transitions.
NC	NCWaterWARN had seven formal deployments but had many smaller informal deployments. NCWaterWARN increased membership to 107 members, implemented a strategic plan, and the new website is now live. NCWaterWARN conducts annual and quarterly training on WebEOC to keep members up to speed on the software. NCWaterWARN is in the process of finalizing a merger with NC Rural Water which includes bringing 548 total members together (90 overlapping) and adding sustained funding for NCWaterWARN.
NCR	NCRWARN had one deployment in the past year, assisting DC Water with the sampling efforts after they had a Boil Water Notice. NCRWARN is currently revising the operational plan. After a recent oil spill, utilities built a cooperative monitoring plan for future responses. The recent boil water incident at DC Water identified some communications and questions from the media and emergency responders on when to use the Emergency Alert System.
NV	NvWARN hosted an EPA-sponsored emergency services sector workshop. The workshop got emergency management involved in the water sector. First responders often do not understand the criticality of infrastructure. The workshop provided an avenue to show first responders critical assets of the water sector, such as pump stations and explain that many critical assets, such as backflow preventers, get stolen because they are made of brass and copper. A Fusion Center member also described their typical roles and responsibilities. EPA then ran a contamination tabletop exercise. The emergency services workshop was a big success. NvWARN has excellent communication with the county and state EOC. The biggest challenge is getting the smaller systems involved in WARN. Smaller systems call when they need help, but it is hard to get them to join.
NY	NYWARN has a solid relationship with the NY Department of Health and was able to help them with some schools that were without water, providing filling stations and bulk water. New York had 200 significant water bodies with blue/green algae this year. One community had a "do not use" directive. NYWARN is trying to be pro-active on education and recommended response actions. Another concern relates to legacy contamination, which is a slower-moving, long-standing issue. Bigger concerns are emerging contaminants and if cyanotoxins get to the Great Lakes.
OH	OHWARN is working on mission ready packages (MRPs) and on their operational plan and how to deal with associate members. OHWARN held their annual workshop and EPA's water Response On-The-Go app was very popular. OHWARN conducted training for all of its steering committee members at the state EOC on WebEOC in order to have continuity.

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OR	The city of Salem had a cyanotoxin event in May 2018 which resulted in a “do not drink” advisory for at risk people. WARN members pitched in across the state and provided a lot of assistance to the community, including providing flatbeds and dump trucks that could hold water bladders and distribution trailers. One issue identified during the cyanotoxin event was that ORWARN does not have good coordination with the county and state and ORWARN will work on that. ORWARN is also working on a stranded worker agreement. If a utility worker cannot access their job location due to an incident, a plan should be in place where that utility can work with another utility in order to keep working.
PA	PaWARN collaborated with Glatfelter Public Practice (GPP) insurance to offer water and wastewater systems a 15% discount if they join PaWARN and offered to publicize PaWARN. PaWARN serves as a liaison between emergency management and the water sector. PaWARN is part of the Black Sky Steering Committee, which investigates extended loss of power. PaWARN is establishing emergency contacts for communications, including those with amateur radios. Pennsylvania is a commonwealth, so EMAC is a challenge. The Pennsylvania Emergency Management Agency informed PaWARN that EMAC is for state-owned resources only and PaWARN members are not a state-owned resource so they cannot deploy. A common question that continues to be unaddressed is, “Why can’t we deploy WARN to WARN?”
RI	RIWARN had a quiet year so they spent time reviewing their operational plan. RIWARN also updated their website, which is hosted by NEWWA. RIWARN had a small scare about a potential cybersecurity hacking incident, but it turned out to be a false alarm. The response from local authorities was very proactive, which is great. RIWARN continues to maintain a good relationship with emergency management. Challenges include getting wastewater systems to join and with current members not posting their resource types or updating information.
SC	SCWARN continues to increase membership but would like to increase the number of rural utility members. The WARN Chair went to each Emergency Manager around South Carolina to promote WARN. SCWARN sent emails prior to the hurricanes to encourage people to sign up ahead of time through the website. All requests and responses for help also come through the website. SCWARN now conducts an annual meeting to educate people about WARN.
SD	SDWARN had many accomplishments over the past year with establishing equipment sites, creating a successful WARN donation project and receiving \$4,500 from the state Department of Natural Resources. One challenge for SDWARN is finding extra time to do outreach on behalf of WARN. The Chair and all members have full-time jobs. Long term funding is also a challenge. They can’t depend on donations and state funding continuing. SDWARN is also concerned about the “silver tsunami” of staff with years of service being eligible to retire and losing that institutional knowledge. SDWARN and other utilities across the state are looking at regionalization because the competition for operators will be fierce and there won’t be enough operators. Systems need to GIS everything to help encapsulate knowledge that will be leaving once people retire. The DNR sanitary survey checklist has a question asking if the utility is a member of WARN. As a follow-up, CTWARN commented that Connecticut has a high school program to get water and wastewater operator certifications. Florida has a similar program.

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State	Response
TN	TNWARN has a seat at the SEOC and continues to maintain a strong relationship with state emergency management, emailing with them periodically. During Hurricane Irma and Hurricane Florence deployments from TN, they kept them in the email loop. As a result of the deployment to Florida after Hurricane Irma, the city of Nashville public utility established a standing team with different trade skills that are always ready for deployment. Challenges continue to be getting utilities to join WARN. TNWARN receives many calls requesting assistance from non-members. They have offered to get them set up, but there is still reluctance. TNWARN would like to see a requirement for utilities to be a member of WARN as part of the emergency response plan. There is still low participation in TNWARN, often because some non-members say that they cannot sign the MAA. It would also be beneficial to have a requirement for WARN members to report status during an incident.
TX	TXWARN is housed under the TXAWWA, which provides structure and financial support, and is fully funded through 2022. The main challenge in Texas this year was flooding. There were 14 straight days of rain in South Texas. TXWARN assisted by finding pumps to move the floodwater. Currently, the city of Austin is under a voluntary “boil water” notice due to the flooding and amount of sediment in their source water. The voluntary notice resulted in public panic because the messaging was inefficient. One challenge for TXWARN is the Public Works Response Team, which is state team, also works with utilities after an incident, but they also work on all public works, such as debris, and not just drinking water and wastewater. Utilities don’t want to work with the state and would rather operate under mutual aid.
UT	UTWARN and UT Rural Water maintains a good relationship with emergency management and is the point of contact for them for water incidents. The Utah Rural Water Association administers the WARN and 98% of communities are members of URWA, so UTWARN considers all of them WARN members. The main challenge this year in Utah is the wildfires and post-fire debris flows and possible suppressant contamination. A future concern relates to drought. As conservation improves, systems will have to find other response actions to mitigate drought and need to update their emergency response plans to specifically address this.
VA	VA WARN conducted an EPA-sponsored tabletop exercise in February 2018. The exercise demonstrated a flooding event which actually happened later this year. VA WARN plans on conducting another tabletop exercise on their own in November. VA WARN added 18 members and are currently at 51 members. VAWARN created a WARN package and Virginia Rural Water circuit riders are handing them out as they do site work, Virginia Department of Health (VDH) staff are handing them out during sanitary surveys and the Virginia Municipal League is also handing them out. The main challenge is getting smaller systems to understand the benefits of joining WARN. Many smaller communities have workers who are also on rescue squads and other volunteer organizations and can’t do it all at the same time. Other challenges include steering committee involvement and communication issues with VDH who does not communicate utility needs to VAWARN. When VA WARN reaches out to systems, they don’t respond because they are working with VDH. It is an issue VA WARN will address.

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State	Response
WA	WAWARN has experienced similar successes and challenges as the other WARNs. WAWARN held an EPA-sponsored functional exercise. WAWARN has not had any formal activations but has had smaller incidents that used peer to peer assistance. There was a small, but significant, landslide in Eastern Washington with localized impacts where neighboring utilities helped the affected utilities. Peer to peer training, where member agencies host classes and open them up to other WARN members, has worked very well. WAWARN hasn't updated their operational plan for a few years; however, some laws about mutual aid have changed so there is a need to update. The main challenge for WAWARN is that lack of big incidents equals lack of interest. Also, wastewater engagement is an issue. Most of wastewater members are dual water/wastewater systems. The wastewater primacy agency in the state is not engaged in WAWARN like the drinking water primacy agency is, and that affects wastewater system membership and engagement.
WY	WYOWARN conducted a tabletop exercise with rural water using a scenario where an isolated area is cut off from neighboring areas. This exercise resulted in five new communities signing up for WARN. WYOWARN is working with power utilities on how to address the possibility of a long-term power outage (from an EMP). WYOWARN is a Chair on the CERT and is also working with local emergency planning commissions (LEPCs). Some challenges include membership (systems receive assistance but still don't want to join), a current recession causing funding shortages for operator training, and utilities not being considered first responders. There have been two events where water operators weren't allowed into the area so WYOWARN is working with legislature to get that changed.

DHS Resource Typing Update – Kevin Morley, AWWA and Christine Herndon, Herndon Solutions Group

AWWA is updating the AWWA Resource Typing Manual, which was originally published in 2008. The goal is to integrate lessons learned over the last 10 years, work with FEMA to meet the guidelines set by the National Integration Center and publish to the Resource Typing Library Tool (RTLTL). Once the update is completed, AWWA will work with the water sector to determine how best to implement.

Project Milestones

- Gap Analysis
 - Reviewed 2008 Resource Typing Manual and 2014 efforts with FEMA
 - Assessed current teams in the RTLTL and EMAC mission ready packages (MRPs)
- Workshop #1
 - Reviewed gap analysis
 - Discussed each resource type (RT) from the 2008 manual
 - Developed initial list of resource types and assignments
- Since Workshop #1
 - Developed drafts for all RTs (i.e., the “heavy” lift)
 - Modified/Revised initial list from Workshop #1
 - Submitted draft RTs on October 27, 2018 to WARN Chairs and workshop #1 attendees
- Workshop #2
 - GOAL: adjudicate comments received on draft teams in “real-time”

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Key Elements of Resource Typing Update

- Leveraged lessons learned from workshop attendees to identify gaps and opportunities for improvement
- Streamlined similar capabilities across resource types
- Evolved the RTs to be more modular and simplified
- Examples
 - 509: Utility Worker Specialist
 - 508: Rapid Needs Assessment Team – Water Sector Infrastructure
 - 508: Damage Assessment Team
 - 508: Generator Support Team

Crosswalk of Changes

- Teams
- Equipment
 - Pumps
 - Valve Maintenance Equipment
 - Focused on equipment not in FEMA but unique to water sector
- Personnel
 - Updated
 - Hydraulic Modeler (does not exist in FEMA but need support here)
 - Water Lab Support Personnel because Laboratory Technician Specialist – Water Sector
- Kept it organized the same way the 2008 AWWA Manual

WARN Questions/Discussion

- What are challenges to getting utilities prepared to use resource typing during incidents?
- What needs to happen from an educational standpoint to build the case for the value of resource typing in overall preparedness?
- Does the need for updated ERPs under S.3021 help motivate utility engagement?

Path Forward

- “Final” draft of resource types submitted via email on Saturday, October 27, 2018 to WARN Chairs, workshop #1 attendees and workshop #1 invitees
- Request feedback via SurveyMonkey by 11/7 (to meet project deadline)
- A comment adjudication meeting is scheduled during workshop #2 on 11/15/18 at AWWA in DC
- Submit final RTs by 12/17/18
- Text Christine 702-271-4673 with any questions

Crisis Event Response and Recovery Access (CERRA) Framework Update – Brian Pickard, EPA

- Released in March 2018, the CERRA Framework is intended as voluntary guidance for State, Local, Tribal and Territorial government and law enforcement entities when planning and developing access management plans or programs.

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- While water utilities are not the primary audience, the CERRA Framework can help water utilities integrate into local access programs to ensure water and wastewater crews have access to their assets following disasters.
- To clarify, access procedures for responders include 3 parts: 1) proper credentials; 2) valid reason for entry; and 3) permission from local authorities to enter.
 - Credentialing and access procedures are not synonymous, but credentialing is integrated into the overall access process.
- DHS actively reached out to all sectors during development; EPA WSD and the Water Sector Coordinating Council (Jonathan Reeves and Lisa McFadden) participated as work group members.
- CERRA Framework actively promotes:
 - Inclusion of water utilities into access procedures
 - Water personnel having the same degree of access as traditional first responders
- A specific Water Case Study is included in the CERRA Appendix, alongside Healthcare, Chemical Facilities, Urban Search/Rescue.
- Recommendation: EPA and/or DHS should conduct outreach to state governments to increase awareness of this document so that it is coordinated effort.

Status Update/Discussion on Harvey/Irma AAR – Kevin Morley

AWWA developed an after-action report (AAR) in April 2018 for Hurricane Harvey (local activity) and Hurricane Irma (local activity and EMAC deployment). The AAR does not cover Hurricane Maria, since there was no WARN activation, nor the CalWARN responses to mudslides and wildfires.

2017 AAR Findings

- Elevate the priority status of water infrastructure
 - National Response Framework – there is no designated lead for the water sector
 - i. ESF 3: USACE responsible for emergency repair and EPA responsible for identifying needs and infrastructure protection activities
 - ii. ESF 4: USDS/Forest Service - EPA responsible for identifying water systems that require priority restoration
 - iii. ESF 6: DHS/FEMA, Red Cross
 - iv. ESF 8: HHS – EPA may be required to assess potable water
 - Should be changed – 20 years old and did not work in Puerto Rico for Maria
 - New ESF 14: FEMA wants to bring in all critical infrastructure, including private industry, but it still will not solve the problem or help operators
- Energy and Water Nexus
 - FEMA and DOE should designate drinking water and wastewater as a top priority for power restoration
 - EPA, USACE, DOE, and FEMA should review the regulatory constraints the Clean Air Act on critical lifeline functions for emergency power
- Common Operating Picture
 - Current Practice – written listing of descriptive information
 - Pilot Program – graphical map that gives better sense of incident. Need to come together in how to frame information to emphasize the criticality of water.

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- i. ASDWA suggestion – work more with State Primacy Agency
 - ii. UTWARN – work with the State Emergency Agencies
 - iii. ORWARN – depends on the state. Drinking water services may not have the bandwidth to address these issues
 - iv. EPA – different Regions and States use different data management systems and there is no requirement to use a specific system. The cost of changing to a different system is also significant.
- Intrastate Mutual Aid and Assistance (WARN)
 - Intrastate Mutual Aid and Assistance (EMAC)
 - Documentation to support cost recovery
 - Utility Operational Policies and Procedures

Ned Worcester WAWARN – Functional Exercises - Objectives and Value

WAWARN had over 100 attendees, including those at satellite locations via webinar, at a recent EPA-sponsored WAWARN Functional Exercise. The exercise utilized a volcano scenario with ash fall impacts. The exercise allowed WAWARN to be promoted to non-members and agencies, identified how to exchange information and identified resource needs and the availability of other utilities to meet those needs. One lesson learned was that the webinar was extremely useful with the ability to engage participants at a distance. Attendees of the exercise included water and wastewater utilities, EPA headquarters and the region, State seismic program, Federal USGS, and Department of Health (drinking water agency). WAWARN was unable to get the state environmental protection agency to come to the exercise. Discussions included not only water sector impacts, but also impacts to the supply chain, transportation, and power. More coordination will be needed with emergency management staff, as evidenced by the emergency officials asking WAWARN four hours after the exercise where they could find a needed asset. Overall it was deemed a great success and WAWARN encourages other WARNs to participate if EPA sponsors more in the future.

Funding WARNs – Various approaches – Kenny Waldroup- NCWaterWARN

Formed in 2008, NCWaterWARN currently has 107 utility members representing 68% of the population, including public and private utilities. Three members have dedicated Incident Management staff. NCWaterWARN also has an operational plan, and a new website that follows the SCWARN model.

The NCWaterWARN “Executive” Committee has a chair, vice chair, and secretary, who are elected every year. There are three members from the west, three from the east, and three at large. They are aligned with the NC Department of Environmental Quality regions. NCWaterWARN is supported by an “Advisory Board” representing the sponsoring agencies.

Path Forward: A strategy workshop identified short, medium and long-term goals:

- Member outreach and education
- Acquire new members
- Administration and directory maintenance
- Enhanced website
- Establish a closer relationship with a sponsoring agency
 - NCWaterWARN went to all agencies in the state, but only the NC Rural Water Association (NCRWA) could meet all of the WARN’s needs. NCRWA has 548 members, is

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a501c6 classified non-profit organization, has enhanced website management experience and has 25 employees including 5 circuit riders. NCRWA conducted 2,896 visits to 409 systems in 2018.

- Agreement structure:
 - i. Have all NCWaterWARN members become NCRWA members (very controversial decision).
 - ii. Collect \$3,000 from all members >50k connections (would result in about \$30K)
 - iii. NCRWA provides \$20k from existing funding structure
 - iv. Funding used to support NCWaterWARN activities
 - v. Circuit Riders engage the 473 NCRWA members who are not NCWaterWARN members for enrollment.
 - vi. NCWaterWARN still wants one board member from each sponsoring agency to remain on the board.

Current and Next Steps

- NCWaterWARN and NCRWA approve MOU - Done
- Create training manual (updating Mutual Aid agreement) - Done
- Sixty-day review clock starts for the MOU - Done
- Traveling “road show” to educate members - Done
- Early voting is open now – week of December 10th final
- NCRWA staff develop 2019 budget with WARN expenditures

NCRWA covering budget for agencies with less than 50,000 population. This approach may be specific to North Carolina.

Membership – Dawn Ison EPA

So many utilities have never heard of WARN. Disaster brings in membership, but what if there is no disaster? Ohio went to their emergency managers to promote WARN, but this is only possible if you have time. Sanitary surveys mention WARN.

What is the incentive for a non-member utility to join WARN if member utilities are willing to help the non-member utility anyway?

- If a utility needs help and has already signed the mutual aid agreement, assistance happens more quickly.
- Some WARNs say a “gentleman’s agreement” for repair the first time is fine, but the second time they should become a member.
- By signing the agreement, the utility’s council has given the utility leadership formal permission to both respond to incidents and receive assistance.
- One Chair said that for their WARN if you are not a member, the WARN will post the need on the website – but if you are a WARN member, you will get a faster response.
- WARN agreements do not require a federal declaration, so members are more assured of assistance during emergencies.
- One WARN Chair asked whether WARN membership could be mandated nation-wide; however, EPA cannot mandate WARN membership.
- NC example - Advisory committee has members from the state primacy agency, which helps promote WARN. In TN, utilities are more inclined to attend functions if their regulators are in

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attendance. If state agencies want to provide some incentives, such as with bonus points on surveys for being a part of WARN, it could perhaps help.

- The Texas Commission of Environmental Quality (TCEQ), the drinking water primacy agency, drafted a letter with the TCEQ and TXWARN logos on it to encourage people to be part of the WARN program. TXWARN did the mailings, but it was successful because it had the regulatory logo on it. TCEQ agreed to have a checkbox on sanitary survey forms asking if you are a member of TXWARN.
- Indiana gives points on your SRF application if you are a WARN member as an incentive to join.

How does the new America's Water Infrastructure Act impact the incentive to join WARN?

- Systems serving over 3,300 people must certify they have conducted a resilience assessment and updated their emergency response plan. Perhaps WARN could be considered as increasing system resilience.
- Mutual aid is a voluntary system among all sectors – so to do something that looks like mandating could be troublesome. Tying to incentives is a strong idea.
- For smaller cities that do not have a lot of incidents, getting help with documentation is helpful because they do not do it very often. For systems in Minnesota, insurance might not cover costs if something happens and the system is not part of MNWARN.
- Giving and receiving of aid should be voluntary, but membership should not be voluntary. Utilities should be planning for incidents and should be required to be members.
- Signing up indicates they are willing to give and receive aid.
- State of Oregon will not provide assistance until a utility has attempted to enact a mutual aid agreement. A large city in Oregon refused to join until their general manager retired and they immediately joined, which means personalities can also affect who does and doesn't join the WARN.

Updates on EPA Video and Additional Discussion

At the request of WARN Chairs in previous meetings, EPA created a WARN promotional video. It focuses on the top myths related to WARN. EPA is waiting on final approval but will inform WARNs when they can use it on their websites and for promotion.

Kevin Morley mentioned a situation after Hurricane Harvey when a utility in Florida called for assistance but did not know if they were a member of FlaWARN.

How does your WARN maintain a registry of the WARN agreements?

- Florida has the agreements in a filing cabinet but can upload to their membership website.
- Texas utilities can sign the agreement online and submit it, which captures the date/time/person. They maintain an Excel file with this information.
- Wyoming uses Google docs so anyone in the group can access the files.
- Some states have a list of non-member utilities.
- Oregon reaches out to every contact and reminds them to keep their information up to date.
- California has scanned laser fiche.
- Minnesota has poster boards for each region.
- Delaware's primary agency keeps a hard copy.
- Rhode Island has a website link of DOH website.
- ASDWA would like to ask primary agencies if the lists could be displayed on website.

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The EPA WARN website now has all the WARN websites linked. States need to keep their sites up to date and inform EPA if there are changes.

2019 WARN Webinars

EPA asked the WARN Chairs to rank the below list of potential webinar topics from 5 to 1, in decreasing level of interest. Participants ranked the following ideas for the 2019 webinars:

Topic	Description	Ranking (weighted tally)
WARN Management Best Practices	<ul style="list-style-type: none"> • WARN activation processes • Planning effective TTXs and other events • State agency engagement 	1 (105)
EMAC and WARN	<ul style="list-style-type: none"> • Deployment briefings • Lessons learned • How a utility could be involved and steps to prepare 	2 (99)
FEMA paperwork and reimbursement	<ul style="list-style-type: none"> • Important forms • Lessons learned 	3 (87)
Resource Typing and MRP Development	<ul style="list-style-type: none"> • Promote resource typing • Practical applications for resource typing • Step-by-step instructions regarding how to develop MRPs 	4 (83)
2018 WARN-facilitated Responses Overview	<ul style="list-style-type: none"> • Overview of selected WARN-facilitated responses in 2018 	5 (73)
ADDED: Digital Resources	<ul style="list-style-type: none"> • Apps and other digital resources that make response more efficient. How to integrate data management systems 	1
ADDED: WARN to WARN Deployment	<ul style="list-style-type: none"> • Pros and cons of Interstate WARN to WARN deployment 	1
ADDED: ICS Certified Teams	<ul style="list-style-type: none"> • Developing certified Command and General Staff teams from within the water sector 	1

2019 WARN Chairs Meeting

The 2019 WARN Chairs meeting is scheduled to take place in St. Louis, Missouri. More details will be available in the summer of 2019.

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Participants:

Count	First name	Last Name	Representing	Email
1	Carol	Adams	PaWARN	Carol.adams@alcosan.org
2	Marty	Aman	NYWARN	maman@wcwsa.org
3	Sue	Andrade	RIWARN	sandrade@bcwari.com
4	Tom	Bahun	MEWARN	tbahun@mainerwa.org
5	Hal	Balthrop	TNWARN	hal.balthrop@nashville.gov
6	Jerry	Baxley	SCWARN	jerry@scrwa.org
7	Steve	Bieber	NCRWARN	sbieber@mwcog.org
8	James	Blevins	OHWARN	james.blevins@daytonohio.gov
9	Angelo	Carrieri	CoWARN	ACARRIERI@pwsd.org
10	Tom	Coleman	DEWARN	Tcoleman@Newark.de.us
11	Mike	Dimmick	IdWARN	mdimmick@ci.moscow.id.us
12	Jaimie	Foreman	InWARN	jforeman@carmel.in.gov
13	Mark	Forrester	SCWARN	mwforrester@comporium.net
14	Christine	Herndon	HSG	christine.herndon@herndon-grougroup.com
15	Timothy	Hewett	MnWARN	timothy.hewett@ci.stcloud.mn.us
16	John	Hines	NvWARN	john.hines@lvvwd.com
17	Carol	Hinton	FlaWARN	chinton@treeo.ufl.edu
18	Mike	Howe	TXWARN	mikehowe@austin.rr.com
19	Dawn	Ison	US EPA	Ison.Dawn@epa.gov
20	Krista	Johnston	WYOWARN	kjohnston@casperwy.gov
21	Fadi	Khayatt	TNWARN	Fadi.khayatt@nashville.gov
22	Mary Jo	Kricorian	GDIT	MaryJo.Kricorian@gdit.com
23	David	Kuzminski	CtWARN	Dkuzminski@portlandct.org
24	Brad	Lawrence	SDWARN	brad.lawrence@cityofmadisonsd.com
25	John	Lins	IOWARN	lins@dmww.com
26	Michael	Lynn	VA WARN	mlynn@serviceauthority.org
27	Katie	Miller	KSMAP	kmiller@kmunet.org
28	Kevin	Morley	AWWA	kmorley@awwa.org
29	Bridget	O'Grady	ASDWA	bogrady@asdwa.org
30	Brian	Pickard	US EPA	Pickard.Brian@epa.gov
31	Dale	Pierson	UTWARN	dale.pierson@rwau.net
32	Carlito	Rayos	NVWARN	Carlito.Rayos@lvvwd.com
33	Ray	Riordan	CalWARN	rayriordan@comcast.net
34	Kevin	Rose	AzWARN	krose@scottsdaleaz.gov
35	Aaron	Schaller	TNWARN	Aaron.Schaller@nashville.gov
36	Sandy	Smith	GAWARN	sasmith2@dekalbcountyga.gov
37	Josh	Stewart	ILWARN	josh.stewart@cwlp.com
38	Kenny	Waldroup	NCWaterWARN	kenneth.waldroup@raleighnc.gov
39	Chris	Wanner	ORWARN	Chris.Wanner@portlandoregon.gov
40	Ned	Worcester	WAWARN	ned.worcester@seattle.gov

WARN CHAIRS AGENDA – OCTOBER 28, 2018

Hyatt Regency Atlanta, Hanover Room

- 8:15 a.m. Sign-in**
- 8:30 a.m. Welcome**
- Review of administrative details and meeting overview
 - Introductions
- 8:45 a.m. WARN Successes**
- Florence Response – Kenny Waldroup, NCWaterWARN; Jerry Baxley, SCWARN
 - Michael Response – Carol Hinton, FlaWARN
 - WARN Challenge Grant and Equipment Purchases – Brad Lawrence, SDWARN
- 9:45 a.m. Break**
- 10:00 a.m. WARN Report-Outs**
- WARN Reps list top 3 accomplishments and top 3 challenges
- Noon Working Lunch**
- 12:30 p.m. DHS Resource Typing Update**
- Kevin Morley, AWWA and Christine Herndon, Herndon Solutions Group
- 1:15 p.m. Crisis Event Response and Recovery Access (CERRA) Framework Update**
- Brian Pickard, EPA
- 1:30 p.m. Status Update/Discussion on Irma/Maria AAR**
- Kevin Morley, AWWA
- 1:45 p.m. Break**
- 2:00 p.m. Critical Issues Roundtable Discussion (Kevin Morley/Dawn Ison)**
- Functional Exercises – Objectives and Value – Ned Worchester, WAWARN
 - Funding WARNs – Various approaches
 - EMAC mobilization
 - Other discussion based on WARN Chair feedback from morning session
- 3:00 p.m. EPA – Upcoming Training Available**
- 2 Functional Exercises
 - Webinars – top ideas from 2017 still relevant?
 - WARN promotional video
- 3:15 p.m. Closing Comments**
- 3:30 p.m. Adjourn**