**AWOP Small Group Discussion Workshop Template**

**2021 National Meeting**

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| **Topic or Issue: Wastewater Optimization**Facilitators: Larry DeMers (PAI), Jim Matthews (CPO2), Bob Hegg (PAI)Participants: Mark Anderson (GRCA), Karina Bynum (TN DEC), David Chapman (GRCA), Kelly Hagen (GRCA), Stephanie Nolet (Haldimand County), Tim Halfhide (KDHE), Jason Schultz (KDHE), David Pratt (EPA Region 7).The following people signed up for the group but did not attend: Callie Acuff (AR DOH), Steven Hoffman (OK DEQ), Devin Moon (AR DH), Joshua Rodriguez (DC DEE), Bethany Shrodo (PA DEP), William Tillman (WY DEQ). |
| **Workshop Approach: 10 minutes**This small group discussion will explore the idea of expanding the wastewater optimization participa­tion at the next AWOP National Meeting in 2023.Question: If wastewater optimization had a *“session”* during the 2023 meeting, what would it look like? What would be the goals and objectives? How could we make it happen? What would be pos­sible topics?Considerations:* Building on existing wastewater optimization activities (AWOP Drinking Water Model, GRCA/Ontario MECP Program, Optimization Demonstration Team, Partnership for Clean Water, State/Province programs, wastewater training – Region of Halton case study (PBT + PfCW)
* Building the network (institutionalizing wastewater optimization, finding champions/facilitators at the agency level, funding, resources, ongoing facilitation support, leadership team)
* Impacting performance of individual WWTPs (Wastewater CPE Handbook – tools, data-based decision making, conducting Special Studies)
* Ideas on building a wastewater program agenda (initially target half-day to full-day session)
* Follow-up activities to make it happen
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| **Part 1 – Building on Existing Programs, Activities, and Operator Training: 10 minutes**GRCA – Mark discussed how GRCA patterned their program after the AWOP drinking water model (three components). They started with wastewater plant data (identifying metrics, data collection).Tennessee – Karina discussed how Tennessee has been supporting plant optimization since about 2011. In 2014 they started a pilot on nutrient removal. They collaborate with wastewater agencies in Tennessee, and TDEC staff visit plants to provide technical assistance (per requests). They have a robust library of training materials available on their website. Case studies have also been published. Equipment loans are available at no cost, but they do not have funding for test supplies. Their SRF program is linked in to provide support for plant modifications. Karina said that it is important for a regulatory agency to understand the benefits of optimization. All of the plants involved in their program have done so on a voluntary basis. Karina emphasized the importance of the operator being *“on board”* to have successful projects.A link to their program is provided below.[Tennessee Plant Optimization Programs](https://www.tn.gov/environment/program-areas/wr-water-resources/tn-plant-optimization-programs.html)Haldimand County – Stephanie explained how their optimization program started in 2010. They con­duct workshops for their operators as well as Special Studies to support process troubleshooting and optimization. She sees her position as support for their operators. Their budget includes support for providing technical assistance to their facilities. They conduct monthly performance reviews with their operators (review graphs, trends) to teach them this skill. They also have a comprehensive start-up program to get operators’ input during design and include operator training of new equipment and processes. All of their facilities target more stringent performance than permit requirements. Studies are targeted based on plant data and performance issues at the plants. An example was a recent study on investigating the best sampling location (representative sampling). An important part of their program activities includes maintaining internal management support for funding. This is done through peri­odic reporting, demonstrating impacts, and emphasizing that optimization is an ongoing process at Haldimand County. Reports to the council were important to keep the program funded.KDHE – Tim and Jason explained that KDHE has one person with their permits program who goes to plants that have problems with nutrients to provide technical assistance. Kansas Rural Water currently does not have technical assistance capability in this area. |
| **Part 2 – Discussion on Institutional Content/Approaches: 10 minutes**Dave – It would be interesting to hear from state programs on challenges faced with monitoring and compliance.Bob – We really need champions at the institutional level (like Tennessee).Mark – A presentation on identifying the champions and how to get them on your side would be use­ful. Bob suggested that Mark could talk about how their program was developed and marketed to their wastewater utilities. Mark said that their GRCA funding is from the Ministry of Environment, Conservation, and Parks and the participating utility fees.Dave – *Why Optimize?* should be presented for wastewater, similar to how it is done with water.Larry – A presentation on how to sell (market) wastewater optimization to utilities would be applica­ble. Consider incentives like compliance assistance, optimization, capacity enhancements, and opera­tor training. Tim commented that it would be important to let the operators know that a program exists and that it is there to help them with issues they might be having.Bob – All of the states and agencies participating have regular jobs to do, but starting a wastewater AWOP would require going above and beyond current responsibilities to get it started in most cases.Jason – This would be a program that we could do under our current job description, but it would require time. We would struggle with having the time due to our responsibilities with compliance being our main area of focus. |
| **Part 3 – Discussion on Technical Content: 10 minutes**Dave – An area that would be useful to cover is available resources. There are a variety of resources available (handbooks, cheat sheets, training modules).Bob – In Ontario an operator survey was sent out for input on training needs. An area of interest was total mass control for activated sludge plants. Few plants were measuring the secondary clarifier mass, so a training effort was developed to support this area (considered a fundamental area for total mass control).Larry – What about a train-the-trainer topic? It may be too early to get into this, but it was a key part of AWOP development. Wastewater optimization champions need to be identified first.Bob – With GRCA, we started training around plant sludge accountability, and that led to key data integrity checks at the plants (flow rates, solids concentrations). |
| **Part 4 – Building an Agenda/Recommendations: 10 minutes**Bob – The next National AWOP Meeting is two years away. It would be nice to make a wastewater optimization session happen sooner than that.Dave – What about having a wastewater session during the off year of the National AWOP Meeting?Bob – It would be important to ask AWOP states to identify their counterparts with their wastewater oversight program. These would be people to contact to participate in a wastewater session.Jason – My goal is to help the environment (i.e., water and wastewater). I think the case studies would be of interest to participants. I have oversight over small mechanical plants, and I would like to have the capability to provide technical assistance to these facilities.Tim – It is important to get citizens and councils to understand that wastewater treatment plants aren’t producing wastewater, but a recycled water product.Bob – Early in the wastewater optimization program, tools were developed to evaluate plants, and they were effective for educating operators and councils.Dave – Refer to Dave’s notes as an attachment to this document. |
| **Follow-up Assignments: 10 minutes** |
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| **Item** | **Description** | **By Whom** | **By When** |
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| 1 | Provide group session notes to participants via email and encourage ongoing communication among the group. | Larry | 8/31/31 |
| 2 | Check with TSC and ASDWA on ability and interest to host a wastewater optimization webinar.Also consider alternative option for PAI to host session using *Zoom*. | Larry | 8/31/21 |
| 3 | Conduct facilitator call and discuss next steps. Invite Rick and Kevin if supportive of wastewater optimization session idea. | Larry, Bob, Jim | 9/30/21 |
| 4 | Identify wastewater optimization champions in AWOP states (discuss with Rick and Kevin, item above). | Larry | 12/31/21 |

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**AWOP Small Group Discussion Attachment**

**2021 National Meeting**

**(notes provided by Dave Chapman)**

**Topic/Issue: Wastewater Optimization – wastewater session during the 2023 meeting**

**Ideas/Questions/Comments**

**Venue:**

* Schedule a virtual meeting for AWOP National Meeting *“off year”* (i.e., 2022).
* A virtual meeting would minimize costs for participants and organizers.
* Duration of meeting – Suggest putting together agenda with key items and time requirements, then determine overall schedule/duration. Allow lots of time for feedback and structured discussion (i.e., small group discussions).
* Provide a 10 minute summary of wastewater meeting to 2023 National (Water) AWOP Meeting.

**Meeting Objectives/Outcomes:**

* This needs further discussion.
* To establish a forum for the development and implementation of wastewater AWOPs building on water AWOP model?

**Participants:**

* This needs further discussion.
* Will this meeting be largely focused on EPA and state regulatory staff or could/should municipal managers and operators or others participate?
* (Several AWOP meetings ago, Rick introduced some of us to a person within an organization respon­sible for managing water resources in the Ohio River. I would ask him about the specifics as this type of contact may be helpful.)

**Agenda Components:**

*Introduction:*

* *Why Optimize?* (for different stakeholders: plant operators, plant managers, regulators)
* Wastewater Treatment Plant Optimization – background and history (Bob Hegg)
* Approach and Status of Water AWOP (Rick Lieberman) (because some of those attending may not be familiar with AWOP)

*Institutional Components:*

* Challenges facing regulators with respect to wastewater treatment plant compliance (two or three state regu­lators – large and small states).
* Incentives for promoting optimization (good ideas in discussion from Tennessee; Rick or other NOLT member could discuss what works for water AWOP).
* Are there sensitive receivers that would benefit from voluntary reductions in effluent discharges (e.g., Lake Erie, Chesapeake Bay, etc.)?

*Technical Components:*

* Sludge accountability (including a workshop).
* Total Mass Control – What is it and why is it important?
* Special Studies – A couple of simple/clear case studies.
* Review of available resources on wastewater optimization (i.e., where to find handbooks, docu­mented case studies, tip sheets, etc.) could be provided as a handout.
* Use of third-party providers for technical assistance?

*Breakout Sessions:*

* Small group discussions on topics to encourage participants to implement information or work on program development.

*Closing Session*:

* Around the table A-HAs from presenters.

**Ideas (=Questions) for Follow-up:**

* Prepare and distribute an on-line survey of AWOP members?
	+ Are some state staff responsible for regulating wastewater systems as well as water systems? (If state staff are familiar with water optimization, there may be an opportunity/incentive for wastewater optimization.)
	+ Can they suggest any potential wastewater optimization *“champions?”* Contact information?
	+ What skills would be helpful in promoting wastewater treatment compliance?
	+ Would they be interested in participating in a wastewater AWOP meeting?
	+ Suggestions for whom else to be contacted?
	+ Other ideas or suggestions for building wastewater AWOP?
	+ Etc., etc.
* Would EPA/ASDWA help support a 2022 virtual meeting?
* Re-connect with July 21 small group members virtually for follow-up discussions on issues?

D.T. Chapman

22 July, 2021