



# Potomac Drinking Water Source Protection Partnership (DWSPP) Utility Spill Response Plan

**Prepared by**

**DWSPP Water Quality Workgroup**

**June 2019**

## **Project Team**

### **Fairfax Water**

Niffy Saji, Justin Law, Scott Powers, Joel Thompson, Mishelle Noble-Blair, Jojean Bolton

### **Washington Suburban Sanitary Commission (WSSC)**

Priscilla To, Jin Shin, Julie Karceski

### **Town of Leesburg**

Russell Chambers

### **Washington Aqueduct**

Alex Gorzalski

### **Loudoun Water**

Thomas Barrack, Roddy Mowe, Catherine Cogswell, Pam Kenel

### **Interstate Commission on the Potomac River Basin (ICPRB)**

Jim Palmer, Renee Bourassa, Karin Bencala, Carlton Haywood

### **Metropolitan Washington Council of Government (MWCOG)**

Lisa Ragain

## Table of Contents

Table of Appendices.....	4
Table of Tables.....	5
Table of Figures.....	5
<b>Executive Summary.....</b>	<b>6</b>
1.Introduction.....	8
2.Incident Command and Unified Command Structure.....	8
3.Regional Utility Spill Response Framework.....	10
3.1Track the Contaminant.....	10
3.1.1ICPRB’S Emergency River Spill Model (ERSM).....	10
3.1.2Spill Communication Website (Groups.io Web Portal).....	15
3.1.3Sampling by Utilities.....	15
3.1.3.1Initial Evaluation and Sampling.....	16
3.1.3.2Site Hazard Assessment.....	16
3.1.3.3Sampling Kits.....	16
3.1.3.4Chain of Custody.....	16
3.1.3.5Sampling Instructions.....	17
3.1.3.6Samples for Treatability Studies and Identification of Contaminant.....	17
3.2Control the Source.....	17
3.2.1Unknown Source.....	17
3.2.2Known Source.....	18
3.3Identify the Contaminant.....	19
3.3.1Laboratory Capabilities of DWSPP Utilities.....	20
3.3.2Other Laboratories Available to Utilities.....	20
3.3.3EPA’s Compendium of Environmental Testing Laboratories.....	20
3.3.4Maryland Department of Health (MDH) Laboratory.....	20
3.3.5Laboratories Available through MWCOG.....	20
3.4Protect Drinking Water.....	21
3.5Communications.....	21
3.5.1Communications with the Office of Local Emergency Management.....	21
3.5.2Groups.io Web Portal.....	22
3.5.3Teleconference Calls.....	22
3.5.4Communication via Emails.....	22
3.5.5Emergency Contact List.....	23
3.5.6Public Messaging.....	23
3.6End of Event.....	23
3.6.1Regional End of Event.....	23
3.6.2Utility Specific End of Event.....	24
3.6.3Small Spill Events.....	24
4.After Action Spill Response Meeting.....	24
5.Conclusion.....	25
<b>References.....</b>	<b>26</b>

## Table of Appendices

Appendix A – Regional Utility Spill Response Framework

Appendix B – Basic Emergency Sampling Kit

Appendix C – Chain of Custody Record

Appendix D – Sample Collection Instructions

Appendix E – Regional Laboratory Capabilities

Appendix F – Protocols for Uploading and Sharing Information on Groups.io Web Portal

Appendix G – Contact List for Drinking Water Emergencies

## Table of Tables

Table 1 – Potential Sampling Locations for ERSM Model (on Maryland side unless otherwise indicated).....	13
Table 2 – Link to Access Different Tools.....	19

## Table of Figures

Figure 1 – ICS Structure.....	8
Figure 2 – UC Structure.....	9
Figure 3 – Extent of ERSM Model.....	11
Figure 4 – Overview of the Potomac River Intakes and Potential Sampling Locations.....	12

## Executive Summary

The occurrence of a significant spill in the region can involve numerous agencies, stakeholders and organizations simultaneously conducting and supporting response and cleanup efforts. To ensure quick coordination and effective response during a spill event, the primacy agencies use the Incident Command System (ICS) or the Unified Command (UC) structure, to provide a comprehensive framework for managing the spill event. The DWSPP Utility Spill Response Plan (Plan) does not delve into the response under the regional ICS or UC structure but was developed to provide the tools and guidelines for the regional water utilities to respond to a significant spill event in their source waters that has the potential to impact and/or challenge the integrity and reliability of water supply. The priority for water suppliers is to provide safe, clean and reliable drinking water to their customers. Most water suppliers in the region have conventional treatment processes in their water treatment facilities. Not all contaminants can be removed by conventional treatment. Therefore, during a spill it is important to identify the contaminant and have information about its characteristics and treatability.

The Plan lists the different steps involved in spill response and provides utilities with guidelines to respond to a spill event. The framework has six main elements to it. Spill response typically begins with the 'Track the Contaminant' element, which includes spill notification and generally ends with the 'End of Event' element, which generally involves a regional consensus on 'End of Event'. It is possible that the response activities for an individual utility can still be ongoing due to localized circumstances despite the event having ended regionally. This Plan can then be used by the individual utility to form its response and reach a conclusion. The elements of this Plan are often interdependent and pursued simultaneously.

- *Track the Contaminant* – This step is generally initiated with spill notification. Based on available information, the Interstate Commission on the Potomac River Basin (ICPRB) then runs the calibrated Emergency River Spill Model (ERSM) that provides estimates for the arrival times of the plume's leading edge, the peak, the trailing edge and estimates of maximum concentration. At this time sampling is also initiated by the utilities.
- *Control the Source* – One of the most important steps in spill response is to identify the source, contain the contaminant and stop the spill. It is possible that the source of the spill may not be immediately known and can require employment of several resources and systematic inquiry and investigation.
- *Identify the Contaminant* – Once a source has been identified, information is gathered on the contaminant. It is also important to know the concentration of the contaminant in the source waters to determine its treatability. Guidelines are also provided for situations where the contaminant is unknown. Laboratory resources available to the utilities are also listed in the document
- *Protect the Drinking Water* – The focus of the drinking water utilities is to maintain the reliability and integrity of the drinking water supply. Therefore, it is important to know the treatability of the contaminant. Guidelines are provided based on the nature of the contaminant.
- *Communications* – Communications play a vital role in spill response. ICPRB has a dedicated web portal (<https://groups.io/g/PotomacSpills>) to help utilities share information during the spill response. Communication between laboratory personnel, Public Information Officers (PIOs) of utilities and with the ICS or UC structure are mainly facilitated through teleconferences.

Communication must also be maintained with the office of local emergency management, for assistance during spill response and also to evaluate if alternate plans (e.g. distribution of bottled water etc.) need to be implemented. It is also important that there is consistent messaging across the region during spill response. General templates can be drafted which can then be tailored to meet individual utility needs.

- *End of Event* – The regional ‘End of Event’ generally occurs when the primacy agency or the Incident Commander declares it. However, for water utilities the ‘End of Event’ may be defined differently based on how the water supply source is affected and/or the utility treatment facilities available. It is possible that the event might be ongoing for an individual utility because of special localized circumstances, despite it having come to an end regionally. The individual utility ‘End of Event’ is based on individual internal evaluations and protocols. Guidelines are provided in this document to assist the utility. There might also be small spill events, like sewer overflows which do not require a formal response. Therefore, there can be several considerations for a spill event to end.

An after-action meeting or conference call can be useful after a significant spill event, but it is at the discretion of the stakeholders. The goal of the after-action meeting or conference call is generally to study the effectiveness of the spill response based on actions taken, to discuss the lessons learned and to identify areas for improvement.

Spill response is generally a far-reaching effort which can involve many stakeholders and agencies. Therefore, a lot of coordination and corporation is needed to ensure that the goals and the interests of all involved agencies and stakeholders are protected and taken into consideration.

The complete DWSPP Utility Spill Response Plan is available on the password protected groups.io web portal (<https://groups.io/g/PotomacSpills>).