



STATE OF WEST VIRGINIA
DEPARTMENT OF HEALTH AND HUMAN RESOURCES
BUREAU FOR PUBLIC HEALTH

Commissioner's Office

350 Capitol Street, Room 702
Charleston, West Virginia 25301-3712
Telephone: (304) 558-2971 Fax: (304) 558-1035

Jim Justice
Governor

Bill J. Crouch
Cabinet Secretary

December 15, 2017

The Honorable Mitch Carmichael, President
West Virginia Senate
Room 227M, Building 1
State Capitol Complex
Charleston, West Virginia 25305

The Honorable Tim Armstead, Speaker
West Virginia House of Delegates
Room 228M, Building 1
State Capitol Complex
Charleston, West Virginia 25305

Dear President Carmichael and Speaker Armstead:

As required by West Virginia Code §22-31-2, please find enclosed the Public Water System Supply Study Commission Report to the Joint Committee on Government and Finance of the West Virginia Legislature.

If you have any questions or concerns, please feel free to contact the West Virginia Department of Health and Human Resources, Bureau for Public Health at 350 Capitol Street, Room 702, Charleston, West Virginia 25301-3714 or call (304) 558-2971.

Sincerely,

A handwritten signature in blue ink, appearing to read "Rahul Gupta".

Rahul Gupta, MD, MPH, MBA, FACP
Commissioner and State Health Officer

RG/alf

Enclosure

Report to the Joint Committee on
Government and Finance
of the
West Virginia Legislature
by the
Public Water System Supply
Study Commission



Rahul Gupta, MD, MPH, MBA, FACP
Chairman

December 15, 2017

TABLE OF CONTENTS

Introduction	3
Members of the Commission	4
Acronyms	5
Commission Recommendations	6
Work Group 1	6
Work Group 2	8
Work Group 3	9
Work Group 4	10
Work Group 5	10
Appendix A: Public Water System Supply Study Commission Meeting Minutes	14
Appendix B: Public Water Systems as Defined by SB423	43
Appendix C: Public Water Systems' Evaluation of Alternative Sources of Water	47
Appendix D: Public Water System Supply Study Work Group Membership	54
Appendix E: Department of Environmental Protection Aboveground Storage Tank Program Status Report.....	56
Appendix F: Public Water System Supply Study Commission Recommendations Matrix	57

INTRODUCTION

This report represents the fourth report of the West Virginia Public Water System Supply Study Commission since its establishment pursuant to the passage of Senate Bill No. 373 (SB373) in 2014. The first meeting of the Commission commenced on September 22, 2014. The Commission filed its initial report to the West Virginia Legislature's Joint Committee on Government and Finance on December 15, 2014 followed by the second report filed on December 15, 2015 and third report on December 15, 2016.

In 2015, following the passage of SB373 (2014), the West Virginia Legislature passed Senate Bill No. 423 (SB423) which amended the Aboveground Storage Tank Act to address and correct certain unintended consequences of the original enactment. Much of W.Va. Code §22-31 has been deleted although key provisions have been moved into W.Va. Code §22-30.

Additionally, SB423 modified the original membership of the Commission to add two representatives designated by the West Virginia Business Industry Council; and one representative designated by the West Virginia Rivers Coalition in addition to the previous members appointed by the Governor, one of whom to be a professional engineer experienced in the design and construction of public water systems; one a professional hydrologist and one an environmental toxicologist or other public health expert familiar with the impact of contaminants on the human body and one citizen representative. No longer included in the Commission are the appointees from the West Virginia House and Senate. The state agencies and other organizations that served previously under SB373 remain on the Commission. However, the position of Commission Chair transferred from the Director of the Division of Homeland Security and Emergency Management to the Commissioner of the Bureau for Public Health.

No further changes have been made to any portions of the statute related to aboveground storage tanks or the composition of the Commission. The purpose of the Commission has remained unchanged from its original charge to study source water protection plans; evaluate the effectiveness of the legislation as well as financing and funding alternatives available to public water systems; review of the recommendations of the U.S. Chemical Safety Board regarding the Bayer Crop Science incident in 2008; and provide recommendations or suggestions regarding public water system infrastructure. The following is a list of the current members of the Commission.

MEMBERS OF THE COMMISSION

Rahul Gupta, MD, MPH, MBA, FACP, Chair
Representing Bureau for Public Health

Jimmy Gianato
Representing West Virginia Division of Homeland Security and Emergency Management

Tim Ball - Morgantown Utility Board
Representing the West Virginia Municipal League

David Acord (Designee)
Representing West Virginia Public Service Commission

Michael McCawley, PhD - West Virginia University School of Public Health
Representing an environmental toxicologist or other public health expert who is familiar with the impact of contaminants on the human body

Pam Nixon
Citizen Representative

Terry Polen, PhD (Designee)
Representing the West Virginia Department of Environmental Protection

Rick Roberts - E.L. Robinson Engineering
Representing a professional engineer experienced in the design and construction of public water systems

Amy Swann – Executive Director
Representing the West Virginia Rural Water Association

Evan Hansen - Downstream Strategies
Representing West Virginia Rivers Coalition

Ed Watson, Canaan Valley Institute
Representing a hydrologist or other expert experienced in determining the flow characteristics of rivers and streams

Laura Martin - West Virginia American Water Company
Representing West Virginia Business Industry Council

Rebecca McPhail, President - West Virginia Manufacturers Association
Representing West Virginia Business Industry Council

ACRONYMS

AST	Aboveground Storage Tank
BPH	Bureau for Public Health
CSB	United States Chemical Safety Board
DEP	West Virginia Department of Environmental Protection
DHHR	West Virginia Department of Health and Human Resources
DHSEM	West Virginia Division of Homeland Security and Emergency Management
EWDS	Early Warning Spill Detection System
GIS	Geographic Information System
GPS	Global Positioning System
IJDC	West Virginia Infrastructure and Jobs Development Council
LEPC	Local Emergency Planning Committee
NOV	Notice of Violation
NPDES	National Pollution Discharge Elimination System
OEHS	Office of Environmental Health Services
PSC	Public Service Commission
PWS	Public Water System
PWSSSC	Public Water System Supply Study Commission
RAIN	River Alert Information Network
SB373	Senate Bill 373
SB423	Senate Bill 423
SDS	Safety Data Sheet(s)
SWIG	Surface Water Influenced Groundwater
SWPP	Source Water Protection Plan(s)

COMMISSION RECOMMENDATIONS

The Commission has been charged by SB423 with making recommendations related to five specific tasks. Recommendations were submitted to the Legislature in 2014, 2015 and 2016 in order to achieve the tasks set out through passage of SB373 in 2014. SB423 updated provisions of the previous bill.

Since its original appointment in 2014, the Commission has met on 23 occasions, five times in 2014, five times in 2015, seven times in 2016 and six times in 2017. The Work Groups which were created in 2014 continued in 2015, 2016 and 2017 to take on the tasks as outlined in SB423.

The following is a compilation of the recommendations organized by the respective Work Groups and their assigned task. The recommendations have been approved by the full Commission and are being advanced as recommendations of the full Commission.

The minutes of the Commission's 2017 meetings may be found in Appendix A. Appendix B contains a list of all PWSs as defined by SB423 while Appendix C contains the cost estimates for alternative water sources as identified by PWSs. The composition of the Work Groups is listed in Appendix D and Appendix E provides a status report of the DEP aboveground and underground storage tank programs. Appendix F is a brief listing of the recommendations and their current status.

Work Group 1

(1) A review and assessment of the effectiveness and the quality of information contained in updated SWPPs required for certain public water systems by the provisions of section nine-c, article one, chapter sixteen of this code.

Recommendations of Work Group 1:

Recommendation 1.1

The Commission advances the recommendation to require either an annual evaluated and documented exercise of the SWPPs or a documented annual review, and update if necessary, of the SWPPs, with the utility reporting this information to the BPH.

Narrative

An annual exercise of the SWPPs would allow the PWS to review, refine and update the actions and goals identified in the plan. An exercise allows the opportunity for integral responding partners outside of the PWS to become more aware of the SWPPs and the water system. Exercises can benefit all parties in implementing plans, identifying deficiencies and/or weaknesses which can subsequently be addressed. The exercise would benefit the necessary first responders and parties that would be involved in an emergency event. This allows the public water utilities to have a better working relationship with the partners that would be responding outside of the utility and vice versa. Exercises could be conducted and maintain confidentiality, if that is desired, while still notifying BPH of the exercise. Exercises should be conducted in a format prescribed by the DHSEM that follows federal Homeland Security exercise guidelines. An alternative would be to have an annual review and update of the SWPPs. This would consist of bringing together emergency responders and other stakeholders to review and provide comments on the SWPPs as necessary. BPH is surveying the PWSs to determine if they are going to voluntarily participate in an annual exercise. The initial survey (based on 49 responses) indicated that approximately

ninety five percent (95%) will hold an annual plan review exercise with the protection team members.

Recommendation 1.2

The Commission advances the recommendation that DEP and/or DHHR notify downstream water utilities if there is a change in substance and/or a substantive change within an AST as outlined in W.Va. Code §22-30- 9 (b) 1-6. Such notification is to be made as soon as possible with as much detail as possible.

Narrative

As the owners of ASTs modify the tanks or contents, the downstream water utilities should be notified as soon as possible of the changes. The notifications would allow the water utilities to make any necessary adjustments to their SWPPs, thereby keeping the plans as current as possible. Notification also keeps the water utility knowledgeable of potential contaminants within the watershed. Work Group 1 discussed the online website application available at the DEP showing “Flow Distance Above Public Water Supplies” at <http://tagis.dep.wv.gov/pswcheck/> and recommended that DEP and DHHR collaborate to possibly add additional contact information concerning the public utilities. DHHR and DEP have developed a method to update the database of potential contaminates on a quarterly basis. The PWSs can access the database through the portal. It would also be appropriate to notify downstream water systems of AST changes through multiple methods, such as emails and written communications.

Recommendation 1.3

The Commission advances the recommendation that the State contract with an outside organization to review and evaluate the effectiveness of SWPPs and practices.

Narrative

The State needs better information about the effectiveness and the quality of information contained in updated SWPPs as well as the effects on surface water and groundwater resources. To help meet this need, BPH would procure a contractor to evaluate the effectiveness of the efforts to prevent the movement of contaminants into surface and groundwater systems from land uses. Outcomes from this study would enhance understanding of the effectiveness of key protection practices in preventing surface and groundwater degradation and guidance for refining and implementing practices to strengthen surface and groundwater protection effectiveness. The study could include an investigation of spill notification to PWSs as well as gathering information on insurance coverage related to impacts on public water utilities. Since the last report, the BPH has worked to develop a contract with Horsley Witten for the source water protection evaluation. This study should be complete by Spring 2018.

Recommendation 1.4

The Commission advances the recommendation that the Legislature review the proposed alternative water sources (Appendix C) so that it will be aware of the scope of needs and funding necessary as it considers further guidance.

Narrative

Included in Appendix C is a listing of the primary initial alternative from each of the PWSs protection plans. This listing includes the alternative sources and an estimate for the necessary infrastructure improvement. These alternatives have not been fully studied and are only initial alternatives. The cost estimates for the alternative water sources was developed in 2016. These cost estimates have not been adjusted.

Work Group 2

(2) A review and assessment of the effectiveness of legislation enacted during the 2014 Regular Session of the West Virginia Legislature, as it pertains to assisting PWSs in identifying and reacting or responding to identified potential sources of significant contamination, and increasing public awareness and public participation in the emergency planning and response process.

Recommendations of Work Group 2:

Recommendation 2.1

The Commission advances the recommendation that additional funding be considered to continue implementation of electronic databases from BPH and DEP which will allow for more complete, efficient and error free analyses and reporting.

Narrative

These databases provide updated information for PWSs to update SWPPs. Therefore, it is recommended that this process be expedited to the extent possible and that funding for this process be implemented through the Legislature. Funding may be required for continual full implementation.

Recommendation 2.2

The Commission advances the recommendation that current and past Commission reports be used to craft future legislation.

Narrative

There has been concern that the PWSSSC reports have not been afforded the proper hearing.

Recommendation 2.3

The Commission advances the recommendation that the spill reporting hotline should collect information on whether spills came from an AST, and whether and when downstream public water systems were notified of the spill.

Narrative

Information is collected to know what spill is related to ASTs and relayed to the downstream water system. The spill reporting hotline collects information on spills that come from ASTs and could track as to whether and when downstream water systems are notified of the spill.

Recommendation 2.4

The Commission advances the recommendation that any future reduction in the number of tanks regulated by the Aboveground Storage Tank Act be based on sound science demonstrating that the tanks pose no threat to drinking water. In addition, all tanks currently required to register under the AST Act should continue to be required to register, in order to provide important information to downstream PWSs for use in source water protection.

Narrative

Since it was enacted in 2014, the AST Act has been amended twice, and both amendments significantly reduced the number of regulated tanks. Continuing to reduce the number of regulated tanks may threaten human health and the environment, unless it can be demonstrated with sound science that current regulated tanks pose no threat to drinking water. Further, even for tanks that are unregulated, information provided via the registration process is important for downstream PWSs to use in source water protection activities.

Work Group 3

(3) The extent of available financing and funding alternatives which are available to existing PWSs to pursue projects which are designed to create alternate sources of supply or increased stability of supply in the event of a spill, release or contamination event which impairs the water system's primary source of supply.

Recommendations of Work Group 3:

Recommendation 3.1

The Commission advances the recommendation that the Legislature should make a \$2.0 million continuing appropriation to the DHHR, BPH in furtherance of its source water protection efforts. This funding shall also be used to provide grant monies to systems as they begin their statutorily required three year updates and to help fund the RAIN or other type of system. In addition, the BPH should commence an investigation of the RAIN, or other type systems, to determine if such a statewide network could be implemented.

Narrative

The West Virginia Legislature made a \$1.7 million appropriation to the BPH in response to our recommendation last year, and we commend them for doing so. This year's recommendation for a \$2.0 million annual appropriation recognizes the fact that water systems are now completing the adoption of their plans following approval of BPH, implementing the recommendations contained therein and beginning the process of updating the plans so they are compliant with the statutory mandate contained in SB373. All of this costs money. Any grant funds sent to the systems minimizes the rate impact to customers for statutorily mandated source water protection planning efforts.

Recommendation 3.2

The Commission advances the recommendation that the West Virginia Legislature amend West Virginia Code 16-1-9c to include a new subsection designated as subsection (i) to read as follows:

- (i) The Secretary is authorized to propose legislative rules for promulgation pursuant to article three, chapter twenty-nine-A to implement the provisions of this section that may include a schedule for the submission of Source Water Protection Plans by public water utilities pursuant to subsection (f) that staggers the schedule for the submission of Source Water Protection Plans, except that for the purpose of staggering the dates of submission of updated Source Water Protection Plans, the Secretary may designate a schedule of submission greater than three years from the initial submission required by a legislative rule promulgated pursuant to this subsection.

Narrative

The intent of this recommendation is to allow the DHHR Cabinet Secretary to propose legislative rules that stagger the statutorily required, updated SWPPs. The first statutory deadline in submitting SWPPs was met by all systems, except one. The outstanding SWPP was submitted shortly after the deadline. PWSs understand the importance of source water protection planning, but they also understand that the State of West Virginia has limited resources within the DHHR to review the plans, suggest changes and then review the updated plans; all while planning and conducting the statutorily required hearings.

This change will provide for more efficient processing of the SWPPs and should be adopted.

Recommendation 3.3

The Commission advances the recommendation that the IJDC amend their preliminary project ranking and/or scoring structures to add emphasis for source water protection projects. The BPH's Drinking Water Treatment Revolving Fund has made the change to their scoring system to give credit to source water protection projects.

Narrative

Currently, the IJDC does not give preference to source water protection projects. Public utilities have expended great resources in creating their SWPPs. Many of the SWPPs have proposed construction projects in order to fully implement their plans. If source water protection is to occur, the IJDC must have those projects in its project ranking and/or scoring structures. The BPH has included source water protection projects in the criteria for scoring for projects seeking Drinking Water Treatment Revolving Funds.

Recommendation 3.4

The Commission advances the recommendation that the Legislature resume the appropriation of \$40 million per year from the video lottery proceeds to the IJDC to allow the Council to play an active role in source water protection.

Narrative

For the past few years, the Legislature has reduced the amounts appropriated to the IJDC. This has caused a serious issue with the many projects seeking funding. As SWPPs are approved by the DHHR and move toward implementation, a shortage of funding could mean a lack of implementation of SWPPs. Lack of implementation means systems will not have the tools to further react if a spill occurs that threatens its water supply.

Work Group 4

(4) A review and consideration of the recommendations of the U.S. Chemical Safety and Hazard and Investigation Board after its investigation of the Bayer Crop Science incident of 2008.

Recommendation of Work Group 4:

The Emergency Planning Community Right to Know Act (EPCRA) Tier II information, as appropriate, should be required to be made available to water utilities within 30 days of receipt of the request of the information from a water utility.

Work Group 5

(5) Any recommendations or suggestions the study commission may offer to improve the infrastructure of existing PWSs, to provide safe and reliable sources of supplies, and to pursue other measures designed to protect the integrity of public water service.

Recommendations of Work Group 5:

Recommendation 5.1.A

Advance the recommendation that the Legislature should clarify that the utility doesn't have an implied duty to complete gaps in information on SDSs that are provided/submitted. SB373 previously required SDSs to be submitted with the Spill Prevention Response Plan, but changes made in SB423 the following year removed this requirement. It is our recommendation that the legislation be amended to require SDS information be provided with the Spill Prevention and Response Plans. If there is missing information, the entity submitting the SDS should have the

burden of providing additional information. Furthermore, a current web link shall be provided by DEP to ensure that SDS information is available at a central repository accessible to PWSs.

Recommendation 5.1.B

Advance a recommendation that WV Code §22-30-10(a) be modified to ensure that downstream PWSs are provided with the type and quantity of fluid stored in the regulated ASTs at the facility and the SDS associated with the fluids in storage.

Recommendation 5.1.C

Advance a recommendation that WV Codes §22-11-6 and §22-30-10 be modified to require direct notification to downstream PWSs of Notices of Violation (NOVs) and subsequent actions with the potential to impact water quality of a source of drinking supply. This would include violations related to the Water Pollution Control Act for discharges to waters of the state and the Aboveground Storage Tank Act.

Recommended modifications are as follows:

§22-30-10. Notice to local governments and water companies.

(a) The owner or operator of a regulated aboveground storage tank shall provide notice directly to the public water system and to state, county and municipal emergency response organizations of the type and quantity of fluid stored in the regulated aboveground storage tanks at the facility and the location of the safety data sheets (SDS) associated with the fluids in storage. Subject to the protections afforded in section fourteen of this article, the information required in this subsection shall be delivered to the specific public water system and to state, county and municipal emergency response organizations that are designated by the secretary to receive required notice.

(b) In lieu of the information required in subsection (a) of this section, the tank owner or operator may provide the inventory forms and applicable documents required by sections 311 and 312 of the Emergency Planning and Community Right-to-Know Act, subject to the protection of trade secrets and site security information allowed by section fourteen of this article.

(c) Any owner or operator of a regulated aboveground storage tank who is issued a Notice of Violation (NOV) and subsequent actions citing deficiencies related to the provisions of §22-30 and associated rulemaking shall provide notice directly to the downstream public water system within three (3) days of receipt. The notice shall include a copy of the violation citation and description of any corrective action measures planned or taken to address the observed condition.

(New section under Water Pollution Control Act after 22-11-6. Requirement to comply with standards of water quality and effluent limitations)

§22-11-6a. Notice to downstream water systems

(a) Any person affected by a National Pollutant Discharge Elimination System (NPDES) permit who is issued a Notice of Violation (NOV) and subsequent actions related to the discharge or disposition of any pollutant or combination of pollutants into waters of the state shall provide notice directly to the downstream public water system within three (3) days of receipt. The notice shall include a copy of the violation citation and description of any corrective action measures planned or taken to address the observed condition.

Narrative

DEP should communicate this responsibility to any recipients of a NOV related to a NPDES permit.

Recommendation 5.2

Advance the recommendation that the State contract with an outside organization to audit the effectiveness of, and to provide recommendations for, the Spill Reporting Hotline. This audit should consider the importance of reporting spills promptly and accurately to PWSs and the BPH in order to protect human health and the environment.

It is recommended that, upon reporting to the Spill Reporting Hotline, all spills must, as soon as possible, be reported to all potentially-impacted PWSs and to the BPH. It is further recommended that such notification be coordinated, where possible, with emergency response systems (e.g., county 911 systems) and should make use of existing GIS and databases (such as those operated by the DHSEM, county 911 systems and the DEP), if possible.

Additionally, it is recommended that steps be taken to capture accurate spill locations using latitude/longitude, where possible, which can be generated using GPS receivers or other tools. The material(s) released and the stream(s) potentially impacted must also be accurately captured. Additional training/scripts for those taking the calls is recommended to obtain accurate information for each event.

Furthermore, correction notices will be issued, as necessary, and confirmation of the response and of the resolution shall be distributed to potentially-impacted PWSs and to the BPH.

Narrative

The intent of the recommendations is to ensure the timeliest and most accurate information regarding spills that may enter the waterways is provided to the appropriate entities. At times, reports received related to spills are incomplete, are received too late, and in some cases, are inaccurate. Downstream PWSs and the BPH are not routinely notified when spills are responded to and pollution is addressed. Additional training/scripts provided to those receiving the spill notification calls would improve consistency and accuracy of the information obtained from the entity submitting the notification for the event.

Recommendation 5.3

Advance the recommendation that DHSEM and LEPC provide available information to the PWSs, that they are not statutorily prohibited from providing to the public, to assist PWSs in identifying mobile threats.

Narrative

The Work Group recommendation focuses on mobile threats which were not specifically addressed in SB373 or SB423. Mobile threats pose as great or greater threat to PWSs as fixed facilities. Due to the dynamic nature of chemicals moved in transportation, this presents a difficult challenge to having complete SWPPs. LEPCs and local emergency responders are an invaluable resource to PWSs and should be consulted in the development of SWPPs. LEPCs have information such as commodity flow studies, hazard analysis, transportation routes and other key information that is vital to PWS's SWPP development.

Recommendation 5.4

Advance the recommendation that the Legislature should consider legislation, should it be introduced, to establish income tax credits for landowners for source water protection.

Narrative

Similar programs have succeeded in many states, including Maryland (Md. Code § 10-723) and Virginia (Va. Code Ann. § 58.1-510-513) and provide incentives for landowners to protect source water. Any tax credits would be offset by other revenue sources.

Recommendation 5.5

Advance the recommendation that the BPH evaluate, and potentially implement, the RAIN, or another similar system, to establish a statewide network in West Virginia in coordination with water systems throughout the state.

Narrative

Currently, RAIN is in place and being used in the north central part of the state. The recommendation focuses on the importance that RAIN or a similar water quality system be evaluated for other areas of the state. RAIN appears interested in possible expansion if funding is available. In early 2012, West Virginia joined RAIN with ten active monitoring sites along the Upper Monongahela with the help of funding grants provided by the federal Environmental Protection Agency (EPA) and the BPH. The BPH is in the process of providing additional grant funding to RAIN aimed at providing technical support to help in the coordination and development of the current system and possible expansion of the Early Warning Spill Detection System (EWDS). The EWDS continuously monitors water quality on-line, in real time, to ensure the protection of public health for its member water suppliers. Also, RAIN will help conduct outreach and education related to the EWDS.

APPENDIX A

Public Water System Supply Study Commission Meeting Minutes

January 19, 2017

West Virginia Public Water System Supply Study Commission Meeting
January 19, 2017
10:00AM – 12:00PM
Office of the Cabinet Secretary – 1 Davis Square CR 93

Attendees

Commission Members Present:

Walt Ivey (*proxy - participated as Chair in Dr. Rahul Gupta's absence*); Tim Ball, Morgantown Utility Board; Rick Roberts, E.L. Robinson Engineering Company; David Acord, Public Service Commission; Amy Swann, WV Rural Water Association; Dr. Terry Polen, WV Department of Environmental Protection; and Evan Hansen, Downstream Strategies;

Participated via conference call:

Ed Watson, Canaan Valley Institute

Commission Members Absent:

Dr. Rahul Gupta, Chair; Pam Nixon; Dr. Michael McCawley, WVU School of Public Health; Rebecca McPhail, WV Manufacturers Association; Jeffrey McIntyre, WV-American Water Company; and Jimmy Gianato, WV Division of Homeland Security and Emergency Management

Community Members Present:

Barb Taylor, Bureau for Public Health (BPH); Brian Skinner, BPH; and Angie Rosser, WV Rivers Coalition

Welcome & Meeting Overview

Walt Ivey welcomed everyone to the meeting. All Commission members introduced themselves.

December 8, 2016 meeting minutes were presented for approval. Rick Roberts motioned to approve December 8, 2016 minutes as presented. Amy Swann seconded motion. Vote was taken and all were in favor. **December 8, 2016 meeting minutes were approved as presented.**

Develop Draft Plan/Discuss Communication Efforts for Upcoming Legislative Session

Walt Ivey stated main topic of today's meeting is to develop a draft plan to discuss communication efforts for the upcoming legislative session. Last year, Dr. Gupta did a presentation to the Legislature of the recommendations. Currently, no invitation has been received. Report was submitted to the Legislature on December 15, 2016, and posted on legislative website. If requested, Dr. Gupta would do another presentation to the Legislature to review the recommendations.

Walt Ivey opened the floor to Commission members for discussion on the communication efforts.

Rick Roberts mentioned that Commission talked previously about identifying the recommendations that would require the Legislature's involvement/action. He asked if the Commission should identify those recommendations.

Walt Ivey agreed. Rick Roberts suggested putting them in groups.

Evan Hansen stated some (recommendations) are appropriation issues, some are changes to the state code, and some might involve changes to the rules. He suggested to review each one, and the ones that require change to state code to draft that bill. Evan Hansen said doesn't feel will be particularly big changes, just addition of some language.

Amy Swann asked if the report has been given to the new incoming administration yet. Terry Polen replied not yet to the Cabinet Secretary of DEP; will provide once he settles in. Amy Swann suggested department heads should receive a copy. Terry Polen and Walt Ivey both agreed will share once new administration settles into their positions.

Rick Roberts suggested putting the recommendations into three categories: Rules; Codes; and Appropriations.

Evan Hansen suggested to add a "Miscellaneous/Other" category.

Recommendations will be divided into four groups.

Evan Hansen stated that he feels Recommendation 1.1 (*The Commission advances the recommendation to require either an annual evaluated and documented exercise of the SWPPs or a documented annual review, and update if necessary, of the SWPPs, with the utility reporting this information to the BPH.*) is related to source water protection (SWP) plans that are in code 16.1.9C and has other requirements about the Bureau approving them and holding public hearings, etc. Evan Hansen suggested that Recommendation 1.1 becomes a new paragraph in 16.1.9C. – which currently doesn't say anything about annual exercises.

Walt Ivey commented that it should go through code first before being in the rule. Brian Skinner added legislative rules can't be contrary to the statute.

Walt Ivey suggested to start with state code and then follow-up with modifying the rule.

Recommendation 1.2 (*The Commission advances the recommendation that DEP and/or DHHR notify downstream water utilities if there is a change in substance and/or a substantive change within an aboveground storage tank as outlined in W.Va. Code §22-30- 9 (b) 1-6. Such notification is to be made as soon as possible.*) Walt Ivey says is an agency defined exercise rather than the need to change any code or rule. Suggestion made for DEP/BPH develop a taskforce/team to meet regularly to periodically review incidents and methods that could be approved upon.

Evan Hansen asked if it was proposed to make a change to state code, could a paragraph be added that there is a responsibility of the agencies to notify downstream water utilities in these situations. Code could be modified to require agencies to notify downstream water utilities.

Rick Roberts stated if that logic is applied, amending code would apply to all recommendations. Amy Swann agreed. Rick Roberts suggested to make it an action item, and at the next Commission meeting the agencies could provide an update on what to do to fix it then. Rick Roberts ask if this is the reasonable way to deal with it. Walt Ivey agreed it was reasonable.

Evan Hansen suggested going through the recommendations without making final decisions. He believes there are five that would have a change in code. Suggests keeping an open mind while reviewing, until the end where a final decision is to be made.

Amy Swann suggested when dealing with the Legislation, it would be best to say these 12 have already been dealt with administratively between the agencies and these five require legislative action.

Recommendation 1.3 (*The Commission advances the recommendation that the state contract with an outside organization to review and evaluate the effectiveness of SWPPs and practices.*) is a funding issue – should be placed under the appropriation category.

Tim Ball asked if there was a local news article to the effect that this Commission was shirking these duties by making this recommendation? Walt Ivey replied yes, the article implied that; reporter posed that question.

Recommendation 1.4 (*The Commission advances the recommendation that the Legislature review the proposed alternative water sources (Appendix C) so that it will be aware of the scope of needs and funding necessary as it considers further guidance.*) is an item to just be aware of – should be placed under the other category.

Recommendation 2.1 (*The Commission advances the recommendation that additional funding be considered to continue implementation of electronic databases from BPH and DEP which will allow for more complete, efficient and error free analyses and reporting.*) is a funding issue – should be placed under appropriation category.

Recommendation 2.2 (*The Commission advances the recommendation that current and past Commission reports be used to craft future legislation.*) should be placed under the other category.

Recommendation 2.3 (*The Commission advances the recommendation that the spill reporting hotline should collect information on whether spills came from an aboveground storage tank, and whether and when downstream public water systems were notified of the spill.*) should be placed under the other category. Evan Hansen asked if anyone knows whether the spill reporting hotline comes from the code itself or an administrative created entity. Terry Polen doesn't know of one. Walt Ivey says there is a requirement that spills be reported. It may be that DEP went the route of a spill line to make it more efficient. Barb Taylor replied that DEP used to have a spill line. The line was answered by environmental enforcement and a separate 24-hour line was maintained by Homeland Security. DEP developed a contract with Homeland Security to take over and answer multiple 24-7 call-in lines.

Evan Hansen asked does that mean that DEP maintains a current arrangement with Homeland Security? Barb Taylor replied that's what she understands. She suggested Terry Polen could investigate further. Terry Polen replied he knows there is a relationship with Homeland Security but doesn't know how formal. Evan Hansen suggested if that was the case this would be categorized as an administrative recommendation. Walt Ivey believes it comes from DEP because DEP has the checklist they give to Homeland Security to follow. It was suggested this recommendation be placed under the other category.

Recommendation 3.1 (*The Commission advances the recommendation that the Legislature should make a \$2,000,000 continuing appropriation to the DHHR, BPH in furtherance of its source water protection efforts. This funding shall also be used to provide grant monies to systems as they begin their statutorily required three year updates and to help fund the RAIN or other type of system. In addition, the BPH should commence an investigation of the RAIN or other type systems to determine if such a statewide network could be implemented.*) is a funding issue – should be placed under appropriation category.

Recommendation 3.2 (*The Commission advances the recommendation that the West Virginia Legislature amend West Virginia Code 16-1-9c to include a new subsection designated as subsection (i) to read as follows: (i) The Secretary is authorized to propose legislative rules for promulgation pursuant to article*

three, chapter twenty-nine-A to implement the provisions of this section that may include a schedule for the submission of Source Water Protection Plans by public water utilities pursuant to subsection (f) that staggers the schedule for the submission of Source Water Protection Plans, except that for the purpose of staggering the dates of submission of updated Source Water Protection Plans, the Secretary may designate a schedule of submission greater than three years from the initial submission required by a legislative rule promulgated pursuant to this subsection.) is a change to state code. Evan Hansen suggested to note that once a change in state code, there is a rule that needs updated.

Recommendation 3.3 (*The Commission advances the recommendation that the IJDC and BPH, Drinking Water Treatment Revolving Fund amend their preliminary project ranking and/or scoring structures to add emphasis for source water protection projects.*) is an agency item – should be placed under the other category. David Acord suggested that Bob DeCrease, being a member of the IJDC, introduce the recommendation at a Board Meeting.

Recommendation 3.4 (*The Commission advances the recommendation that the Legislature resume the appropriation of \$40 million per year from the video lottery proceeds to the IJDC to allow the Council to play an active role in source water protection.*) is a funding issue – should be placed under the appropriation category.

Recommendation 4 (*The Commission advances that the recommendations of the CSB be followed without redundancy using the existing rules and agencies of the state.*) is a general recommendation; not a legislative topic. Evan Hansen suggested that a group needs to figure out those recommendations and how to operationalize them. Terry Polen added this goes back to what he has said before about understanding the PSM standards out of OSHA – need to work on throughout the year.

Walt Ivey suggested it would be educational to work through, but uncertain if it is a full commission or a workgroup task.

Tim Ball asked if it was the intention of the workgroup for the Commission to take the subject on. Terry Polen commented he thinks it is only looking for the toxicology piece. Evan Hansen commented that the recommendation is broadly written, and referenced the recommendations of the CSB. Would be nice to know the recommendations of the CSB we want implemented. Terry Polen volunteered to have his graduate students from Maryland look at the report.

Walt Ivey commented that the initial intent was the Bayer report. Walt Ivey suggested maybe a process of looking at the recommendation, learning what the agencies are doing and identify holes; meet frequently to have a better understanding of where we are at.

Recommendation 5.1.A (*The Commission advances the recommendation that the Legislature should clarify that the utility doesn't have an implied duty to complete gaps in information on SDSs that are provided/submitted. SB373 previously required SDSs to be submitted with the Spill Prevention Response Plan, but changes made in SB423 the following year removed this requirement. It is our recommendation that the legislation be amended to require SDS information be provided with the Spill Prevention and Response Plans. If there is missing information, the entity submitting the SDS should have the burden of providing additional information. Furthermore, a current web link shall be provided by DEP to ensure that SDS information is available at a central repository accessible to PWSs.*) is a change in code (removal of words from code) – should be placed under the code category.

Recommendation 5.1.B (*Advance a recommendation that WV Code §22-30-10(a) be modified to ensure that downstream PWSs are provided with the type and quantity of fluid stored in the regulated aboveground storage tanks at the facility and the SDS associated with the fluids in storage.*) is a change in code (removal of words from code) – should be placed under the code category.

Recommendation 5.2. *(The Commission advances the recommendation that upon reporting to the spill response hotline all spills must, as soon as possible, be reported to any potentially-impacted PWSs and to the BPH. We further recommend that such notification be made through protocols established and coordinated with existing spill notification systems (e.g. spill reporting hotlines), with emergency response systems (e.g. county 911 systems) and with existing GIS and databases (such as those operated by the DHSEM, county 911 systems and the DEP), if possible. By efficiently utilizing existing GIS data, the spill location should be cross-referenced with a database of PWS information and the PWSs which may be impacted so that they can be quickly determined and automatically notified. Every effort will be made to determine location using GIS coordinates.)* should be placed under the other category. It's about the agencies working together.

Recommendation 5.3 *(The Commission advances the recommendation that DHSEM and LEPC provide available information to the PWSs, that they are not statutorily prohibited from providing to the public, to assist PWSs in identifying mobile threats.)* should be placed under the other category.

Evan Hansen stated that this recommendation is broad. It is similar to the issue that came up last year that ended up in SB625. Evan Hansen knows SB625 passed, but where did it end up in state code? Reply - Changes made in 16.1.9A.

Suggested to get with Homeland Security to identify what they can release and a mechanism to release it. Should be placed in other category with agencies working together to see what can be done. It may eventually role into a code change.

Recommendation 5.4 *(The Commission advances the recommendation that the Legislature should consider legislation, should it be introduced, to establish income tax credits for landowners for source water protection.)* should be placed in the other category. Could eventually be a code change with a low priority – would be supported if someone introduced it.

Recommendation 5.5 *(The Commission advances the recommendation that the BPH evaluate, and potentially implement, the RAIN, or another similar system, to establish a statewide network in West Virginia in coordination with water systems throughout the state.)* is a funding issue – should be placed under the appropriation category.

Rick Roberts asked if recommendation 5.5 could be worked into the 2 million dollars received annually. Walt Ivey replied yes it could.

Amy Swann asked when the Commission sunsets. Reply was in June 2019 – Commission has two reports left to submit.

Commission recapped categories:

- Appropriations: 5 (1.3; 2.1; 3.1; 3.4; and 5.5)
- Code: 6 (1.1; 1.2; 3.2; 5.1A; 5.1B; and 5.4)
- Other: 7 (1.4; 2.2; 2.3; 3.3; 4; 5.2; and 5.3)

Evan Hansen volunteered to draft something on the code changes and send to the Commission for review/comments. Rick Roberts asked if finding a sponsor would be an issue? Evan Hansen replied he has already spoken to his delegates and it would not be a problem, but a republican and a senator are needed.

Public Comments

Walt Ivey opened the floor for discussion/questions from the public regarding the Commissioner meeting.

Angie Rosser suggested presenting the report with focus on code/appropriation changes to the Legislature. She said it is not a good idea to assume the Legislature knows about the report even the Commission. Ms. Rosser stated the Commission and Chair need to be active to get everyone informed.

Angie Rosser asked if the Commission had any suggestions for her group that could be helpful. Walt Ivey replied as far as the Commission's side, her group could present the accomplishments of the Commission. Ms. Rosser asked if the Chair could request a meeting with the Legislative leadership. David Acord added that maybe the Chair could provide a presentation again this year with the action items.

Brian Skinner stated that the Commission only has the authority given to it by the Legislature which is to study and report to the Joint Committee on Government and Finance. The extent of the Commission is to provide recommendations to the current Legislature. The Commission has done what it has been asked to do. It is outside of the scope if out looking to pitch recommendations to different committees.

David Acord suggested to draft a presentation in case Dr. Gupta is asked to present.

Evan Hansen stated that the best way to get attention as non-government employees or Commission is the Rivers Coalition and the Manufacturing Association. Amy Swann said she is willing to get it in front of a legislative committee if someone will draft the legislation. Evan Hansen volunteered to draft legislation and get back with the Commission in a couple of weeks at the latest.

No other public comments were received.

Commission suggested to meet mid-late February 2017 – suggested February 16, 2017 at the same time.

Rick Roberts motioned to adjourn meeting. David Acord seconded motion. Commission meeting was adjourned at 11:25AM.

October 13, 2017

West Virginia Public Water System Supply Study Commission Meeting
October 13, 2017
10:00AM – 12:00PM
Office of the Cabinet Secretary – 1 Davis Square CR 93

Attendees

Commission Members Present:

Dr. Rahul Gupta, Chair; Tim Ball, Morgantown Utility Board; Rick Roberts, E.L. Robinson Engineering Company; Pam Nixon; Dr. Michael McCawley, WVU School of Public Health; Bill Nelson (designee for David Acord, Public Service Commission); Dr. Terry Polen, WV Department of Environmental Protection; Evan Hansen, Downstream Strategies; and Laura Martin, WV-American Water Company

Participated via conference call:

Ed Watson, Canaan Valley Institute; and Rebecca McPhail, WV Manufacturers Association

Commission Members Absent:

Jimmy Gianato, WV Division of Homeland Security and Emergency Management; and Amy Swann, WV Rural Water Association

Community Members Present:

Barb Taylor, Bureau for Public Health (BPH); Brian Skinner, BPH; Walt Ivey, BPH; Patrick Murphy, BPH; Bill Toomey, BPH; and Ken Ward, Gazette-Mail

Welcome & Meeting Overview

Dr. Gupta, Chair, welcomed everyone to the meeting. All Commission members introduced themselves.

January 19, 2017 meeting minutes were presented for approval. Dr. McCawley motioned to approve January 19, 2017 minutes as presented. Rick Roberts seconded motion. Vote was taken and all were in favor. **January 19, 2017 meeting minutes were approved as presented.**

Laura Martin will replace Jeffrey McIntyre on the Commission representing the WV Business and Industry Council. Jeffrey McIntyre was promoted to Senior Vice President of American Water's Mid-Atlantic Division and has relocated to Pennsylvania. The Work Group Listing and Commission Member Directory will be updated to reflect this change and distributed to members.

Dr. Gupta, Chair, provided a recap to date: On April 1, 2014 Senate Bill 373 passed by the West Virginia Legislature requiring source water protection plans (SWPP) to be developed under Chapter 16 of the code; established the Aboveground Storage Tank Act in Chapter 22; and development of the Public Water Supply System Study Commission. Additional staff was hired for technical assistance in developing and implementing activities and educational resources. The source water grant funding program was designed to provide funding for the development and implementation of local source water programs. To date, a total of \$1.6 million has been allocated to 34 projects selected from the 2016-2017 application process, of which 25 systems are looking at monitoring systems. Staff is currently reviewing the potential of the 2017-2018 grant program to encourage local source water program initiatives. Surface water influenced groundwater (SWG) is another interest of the Bureau. USGS has been contracted to assist in developing tools to support in determining the SWG systems. Bureau staff are reviewing 106 ground water systems to determine if they are surface water influenced and will need to prepare protection plans. This is in addition to the 125 approved plans that met the July deadline. Bureau is moving forward with looking at the SWG systems to see if they would be able to become a part of the SWPP. Staff are preparing to fund up to 25 of these systems to develop protection plans, and providing funding for (River Alert Information Network) RAIN to assist with early warning systems.

Update on the Source Water Protection Program and Funding

Dr. Gupta, Chair, introduced Bill Toomey, Source Water Protection Program Manager, to provide an update on the SWPP and funding. (*Bill Toomey provided a handout – one page summary.*)

Mr. Toomey reiterated that 125 water utilities submitted SWPP by the deadline of July 1st. Public hearings were held around the State prior to plan approval. Plans must be updated at least three years or if a significant change has occurred. Bureau is looking at staggering submittals of the plans in the future – estimating starting the submittal staggering in mid-2018.

State supplied the program 1.8 million dollars for FY2018. For FY2015 – FY 2018 a total of 6.8 million dollars supplied by the State to the program.

Source Water GIS web applications are up and running with secure and non-secure sites available for access. Currently, information is updated quarterly. Bureau is working on a SWPP online application. This application is being built by West Virginia Interactive and in phases: Phase 1 of the application has been developed – called the data entry report. Phase 2 is currently under development which is referred to as the Administrative Site. Phase 3 is the reporting stage which is due to be developed by Spring 2018.

Mr. Toomey stated staff is currently reviewing the 106 ground water utilities to determine if any of those would be determined to be SWIG utilities. The Office of Environmental Health Services (OEHS) has contracted with USGS to develop a draft guidance document to help establish if a ground water system could be a SWIG. They are also conducting a study along the Ohio River out of WVU to look at ground water wells that are closely situated to the river and the interaction between ground water and surface water. They identified conditions that likely indicate whether a ground water supply is directly or indirectly influenced by temperature, chemical analysis or pressure variance to help determine if classified as a SWIG. USGS is preparing a follow-up study looking at systems along the river for wells a little farther back from the river to help decide on those systems.

A new SWIG system has been added – Parkersburg West Virginia. Due to its Ranney wells, it has been determined they would fit this new category. They did develop a SWPP and held a public hearing.

Mr. Toomey said that they are looking at providing funding to the RAIN to address the challenge of developing and implementing an early warning system to notify members of potential downstream problems while also archiving data for the future. Mr. Toomey is also hoping thru funding that RAIN will be able to provide operation maintenance to the current set up in the Monongalia River basin and be able to provide water shed and drinking water outreach. Broad hope is expansion of the RAIN in West Virginia.

OEHS is collaborating with WV Rivers Coalition through a grant comparing plan integration with source water protection along with water shed protection efforts. Working to see where SWPP activities can be integrated with the clean water activities as well – should be completed by the end of this year.

Dr. Gupta, Chair, opened the floor to Commission members for discussion/questions on what Bill Toomey presented.

Tim Ball asked if expansion of the RAIN is expected beyond the Monongalia River watershed. Bill Toomey said hoping to look at it as an option.

Rick Roberts stated he was curious how the public meetings went – were they well attended? Bill Toomey replied some were and some were not. Meetings were held various times throughout the day to increase attendance. Some meetings were well attended, others not so much. This may be an area to work on in the future to improve attendance at these meetings.

Evan Hansen asked if we are looking at legislative action to change the code to stagger submission of the SWPP. Bill Toomey replied at this time, we are trying a voluntarily approach/request with the utilities. Hopefully with the application that is being developed, the process should be smooth and beneficial to the water system.

Dr. Gupta, Chair, asked if the SWIG is modeled after another state - how did it come into genesis? Bill Toomey replied the SWIG term is specific to West Virginia. As an agency, we have had to

look and develop a process on how to review those type of systems – trying to build information from the USGS on how to develop a process to review those systems. Walt Ivey asked Mr. Toomey to inform everyone on the ground water under the direct influence (GUDI) system on how it leads into the SWIG. The GUDI is a federal safe drinking water guideline within the drinking water program for states to determine if a system is a ground water under the direct influence system – which has been used for years. After SWIG definition came out under code, we indicated that if anything was ground water under the influence it would fit into SWIG definition. Again, its state only – and if you are considered a SWIG then you must have a protection plan developed.

No other questions/comments received from the Commission members regarding SWPP and funding.

Update on Movement to Contract with Outside Organization on Review/Evaluate Effectiveness of SWPP and practices.

Bill Toomey said that the contractor, Horsley Witten, was hired to assist in developing a study to look at the effectiveness and quality of information within the protection plans. They are charged with developing the evaluation process; looking at understanding the successes and challenges; and making recommendations to address gaps to improve water system efforts and enhance protection efforts.

OEHS is looking at inviting stakeholders to review the evaluation and develop the criteria. October 4, 2017 was initial meeting with some stakeholders. Horsley Witten is evaluating 12 protection plans.

Horsley Witten will interview source water protection managers from 12 systems and develop and disseminate a survey to all water contacts in West Virginia. Horsley Witten will hold a half-day stakeholders meeting to review the survey results and from that, develop an evaluation report.

Bill Toomey also added that in the last Commission Report to the Legislature, there were questions about insurance and the spill notification process. These questions will be raised as well in the evaluation process.

Bill Toomey provided a handout which listed the systems that Horsley Witten is evaluating.

Dr. Gupta, Chair, opened the floor to Commission members for discussion/questions on Bill Toomey's presentation of the contractor, Horsley Witten, and their charge.

Evan Hansen asked what the timeline was – will it be ready in time for the next report? Bill Toomey replied the tentative timeframe is to have it done in six months from now. It will be ready for the final commission report.

Rick Roberts asked how did you select the utilities to be monitored – he didn't see any public service systems – was this by design? Bill Toomey replied systems were chosen by size and geographically across the state.

No other questions/comments received from the Commission members regarding Horsley Witten.

Review of Existing Workgroup Structure: Confirmation of Workgroup Chair Positions

Dr. Gupta, Chair, reviewed the existing Work Group structure. Dr. Gupta, Chair, asked

Commission if there were any issues to discuss.

Dr. McCawley mentioned that at a prior meeting, Evan Hansen commented about Work Group # 4's recommendations to find out how the agencies are operationalizing the CSB recommendations. Dr. McCawley agrees this needs to be done. Dr. McCawley suggested two possible paths forward – (1) the Work Group #4 can meet with the agencies and report back to the Commission; or (2) the agencies report to the Commission as a whole. He wanted to get a sense on how everyone wants to proceed. Dr. McCawley recommends letting the Work Group do it and report back to the Commission. Commission members agreed – consensus was to let the Work Group do it and report back to the Commission for discussion.

Dr. Gupta, Chair, reminded the Commission that the report is due December 15th and discussion needs to take place as to the report content.

Evan Hansen suggested to review last year's recommendations to see what has or hasn't been completed. Dr. Gupta, Chair, suggested developing a matrix as to what has been completed or not. Tim Ball wanted to clarify if DHHR staff is creating the matrix. Dr. Gupta, Chair, replied yes support staff can provide a summary of the recommendations and actions to date, and it would be the work groups' responsibility to make sure its correct.

Evan Hansen mentioned at the last meeting in January 2017 the group spent a lot of time discussing what was the best way to communicate the recommendations to the Legislature in order to try and push implementation. He was assigned a piece of homework – drafting of a couple of bills, which he did – and shared with the Commission. There was never any follow through. He would like to request this year, if effort is put into crafting actual implementation that it is moved upon – he believes that is why we are here. He also thought there was an understanding that different commission members had the ability or willingness to work with the Legislature.

Dr. Gupta, Chair, stated that any presentations on the recommendations to the Legislature must be requested by the Legislature. We need to be invited to present.

Brian Skinner added that the Commission speaks through their report, and the Chair is the spokesperson of the Commission. Members have the ability to advocate in their own capacity. As everyone knows there was new administration last year and the Legislature's attention was elsewhere.

Establish Meeting Schedule and Timeline for Completion of Report to the Legislature

Dr. Gupta, Chair, suggested to work backwards from the December 15th date. Commission decided to have an early December meeting and a couple of meetings during November. A doodle poll will be sent out to check member's availability.

Rick Roberts suggested to keep the time slot at 10:00AM-Noon if possible. Commission had no objections. Dr. Gupta, Chair, added that it may change depending on if the Commission had a speaker/presenter and their availability.

Proposals for Upcoming Meeting Topics

Evan Hansen mentioned last year there was discussion about being better educated on what information is confidential vs non-confidential regarding tanks and other things. The Commission talked about obtaining a speaker on that. He recollects there are federal guidelines with the

confidentiality pieces. Suggests an expert or federal individual that that is familiar with Tier II and tank issues. Dr. Gupta, Chair, asked Dr. Terry Polen if he thought he could get someone from Homeland Security to speak next month on the subject. Dr. Polen will get with Homeland Security to arrange. Dr. Polen said to remember there are a variety of different regulations and individuals – this lives in different places.

Evan Hansen suggested an Environmental Manager from a chemical plant could speak. Dr. Polen suggested Rebecca McPhail could volunteer someone. Rebecca McPhail requested Evan Hansen to send her an email with what is specifically being asked.

Dr. Gupta, Chair, mentioned there must be national people from contractors or federal entities that present on this on a regular basis – probably already has presentation available.

Public Comments

Dr. Gupta, Chair, opened the floor for discussion/questions from the public regarding the Commission meeting.

No public comments were received.

Dr. Gupta, Chair, motioned to adjourn meeting. Rick Roberts seconded motion. Commission meeting was adjourned at 10:58AM.

November 7, 2017

West Virginia Public Water System Supply Study Commission Meeting
November 7, 2017
10:00AM – 12:00PM
Office of the Cabinet Secretary – 1 Davis Square CR 93

Attendees

Commission Members Present:

Walt Ivey (proxy – participated as Chair in Dr. Rahul Gupta's absence); Tim Ball, Morgantown Utility Board; Rick Roberts, E.L. Robinson Engineering Company; David Acord, Public Service Commission; Amy Swann, WV Rural Water Association; Evan Hansen, Downstream Strategies; and Laura Martin, WV-American Water Company

Participated via conference call:

Ed Watson, Canaan Valley Institute; Rebecca McPhail, WV Manufacturers Association; Dr. Michael McCawley, WVU School of Public Health; and Pam Nixon

Commission Members Absent:

Jimmy Gianato, WV Division of Homeland Security and Emergency Management and Dr. Terry Polen, WV Department of Environmental Protection

Community Members Present:

Brian Skinner, Bureau for Public Health (BPH); Patrick Murphy, BPH; Bill Toomey, BPH; and Angie Rosser, WV Rivers Coalition

Welcome & Meeting Overview

Walt Ivey welcomed everyone to the meeting. All Commission members introduced themselves.

October 13, 2017 meeting minutes were presented for approval. An edit was noted to be incorporated – page 4 regarding development of a matrix on the status of the 2016 recommendation – minutes noted Rick Roberts wanted to clarify if DHHR staff was creating the matrix. Tim Ball asked the question. Minutes to be corrected to show question asked by Tim Ball.

Laura Martin questioned the spelling of “ranney wells” on page 2. Ranney is the correct spelling, but need to use a capital “R” – Ranney wells.

October 13, 2017 meeting minutes will be corrected to reflect question asked by Tim Ball and spelling of Ranney wells. Rick Roberts motioned to approve October 13, 2017 minutes with noted corrections. Laura Martin seconded the motion. Vote was taken and all were in favor. **October 13, 2017 meeting minutes were approved with noted corrections.**

Update on the Source Water Protection Application Tool

Walt Ivey, introduced Bill Toomey, Source Water Protection Program Manager, to provide an update on the source water protection application tool. Mr. Toomey invited WV Interactive, Steve Boyer, to provide an overview to the Commission on the tool which is currently in development. *(Mr. Boyer had a PowerPoint presentation that showed examples of the screens.)*

Idea of this application tool is to standardize and be available online for submission of source water protection information.

Project is divided into three phases. Phase I is the Water System Portal which is complete. Phase II is the Administrative Dashboard which is complete. Phase III is the Protection Plan Reports which is still in progress.

Overall plan cannot be approved, until each section is fully complete.

The key features of the Water System Portal are the ability to manage permissions and user roles; complete SWPP at their own pace; and submission of plan for review.

Goal of the portal was to give water systems a way to log in to the system, manage users, fill in their information, allow someone to review/finalize plan and submit to the Bureau.

The key features of the Administrative Dashboard are the ability to manage users to assigned administrative roles, view completed SWPP, and capturing of history when processing a plan.

Protection plan reporting is anticipated to be completed on January 31, 2018.

Walt Ivey opened floor for questions from members regarding WV Interactive’s presentation.

Rick Roberts asked is it was keyed to the PWS ID#. Mr. Boyer replied yes.

Tim Ball asked if it was possible for a single user to make global changes to multiple SWPP at one setting? Mr. Boyer replied, yes, it is possible – link to change systems, drop down box allows them to see the systems they have access to and switch that way. Tim Ball added, if they want to make a change uniformly to all systems they are authorized, can they make that one change and apply it? Mr. Boyer replied, no they must go into each of the water systems. Each water system has a unique identifier to make sure info is being put where it needs to go.

Walt Ivey asked what the status was on the portal being made available to any water system to start testing? Bill Toomey replied that currently information is being put into the system and hope is the first of the year the Bureau will reach out to several systems to test the application.

Walt Ivey asked if all systems are populated now from the initial plans? Bill Toomey replied no – not totally – 126 plans to submit – 70 have been entered. Plans on paper are a little different trying to put information in a standardized format.

Tim Ball asked if DHHR is translating the current hard copy report from the water system to the template? Bill Toomey replied yes, we are, plans are to submit to public water supply for comment, revisions, etc. Public water systems will have access to that for review prior to any approval.

Bill Toomey added that close to 85% of the systems followed a template. Some developed their own protection plan. Trying to translate back into the system without down playing their creativity.

Walt Ivey wanted to remind Commission members that everyone received a copy of the template of the SWPP at a past Commission meeting, and that is what this is based from.

Laura Martin asked if there was an opportunity to add attachments to sections if it's something outside that box? Bill Toomey replied yes.

Walt Ivey said once all is entered, attachments etc., goal is to PDF the information and a final report created.

Tim Ball said sounds like a great tool - applauds DHHR for all the work done on this so far.

Mr. Boyer said it may be worth getting feedback on generated reports. Laura Martin added it would be a great opportunity to have a "sand box version" that systems could play with to see what needs provided.

Review of the Work Groups Structure

Walt Ivey reviewed each work group and its current list of participants and designated chairs. Commission had no revisions/edits to make. All work groups will stay the same.

Review of the 2016 Recommendations

Walt Ivey suggested that the Commission, as a group, review the 2016 recommendations to see if there are any other recommendations to add, fine tune, etc. Group needs to make the decision if recommendation is viable to keep or not for 2017.

Recommendation 1.1

Surveys were sent to public water systems in May 2017. Bill Toomey said the survey was conducted because Bureau was curious on how many systems were actively looking at performing an evaluation exercise or updating plans annually. Forty-seven (47) responded out of 126 systems. Ninety-five percent (95%) of those that responded indicated they were planning to have some sort of plan review exercise during the year. The Bureau would like to send a survey during the winter to see if the percentage would change.

Tim Ball suggested to provide some incentive for the systems to complete the survey – issue a certificate of appreciation or acknowledgement that survey was completed.

Evan Hansen said the question is to keep the word “require” or change to “incentivize”, maybe it’s for the workgroup to decide.

Recommendation 1.2

Status: Quarterly reports in database.

Quarterly reports are in the database. Walt Ivey added that the reports come from DEP and goes to the database. Bill Toomey worked out arrangement with DEP to exchange information quarterly into our GIS application to receive updates from them in particularly AST data system. Indicates when updated last – but doesn’t setup to pin point a change from a previous quarter. Would have to compare to see if any changes.

Laura Martin commented that this recommendation should remain in the report because a quarterly update is better than no update at all – it is very hard for systems to compare data manually.

Walt Ivey asked how is this distributed to water systems? Bill Toomey replied they can access a secure website to download/view information under a GIS application. Walt Ivey asked if an email goes out to the systems to indicate it has been updated. Bill Toomey replied – it does not.

Laura Martin suggested adding a notification to look for new data – what has been updated. Maybe DEP system could flag certain entries and note that this entry is different form the last generated report. Bill Toomey will check with DEP.

Amy Swann added in terms of liability it puts the burden back on the water systems on the knowledge of the tank’s contents.

Evan Hansen added there should be away to put a date on each tank record when updated.

Recommendation 1.3

Work is in process on this recommendation. A contract is in place with Horsley Witten. Anticipate reporting back to the Commission on this in March/April 2018.

Recommendation 1.4

This has been provided to the Legislature in previous reports. It is unknown if it has been considered. Walt Ivey proposed to keep this recommendation in the report for this year. There still maintains a need the State should know and the legislation know so it can consider funding.

Recommendation 2.1

No funding has been made available. Evan Hansen asked if we recall if these databases are the ones that have been created. Bill Toomey replied not sure – but thinks they are. Walt Ivey read the narrative provided for this recommendation. Walt Ivey suggested this is what the Bureau is currently doing. Funding would put more bells and whistles on it.

Walt Ivey suggested leaving this recommendation.

Recommendation 2.2

Laura Martin suggested removing the word “past” and just use current legislative report.

Tim Ball said feels like 2.2 is the most important recommendation to make because everything else is moot - but being ignored by the Legislature.

Laura Martin commented to keep in mind since the time this Commission was put in place the

entire administration changed – may have different priorities.

Recommendation 2.3

Walt Ivey commented this recommendation is outside of the Bureau's realm. Don't believe there has been a change in the reporting system. Evan Hansen commented this recommendation as well as 5.2 is critically important. As far as he knows, the system is still broken. Because we don't have full information/participation – how do you go about fixing it.

Walt Ivey added that the Bureau is trying to develop a database of spills reported and what actions were taken associated with that. Tim Ball agrees 5.2 makes mention of additional training in scripts. There's a "strong garbage in - garbage out" component in that system. Evan Hansen says worth discussing the possibility of contracting with an outside organization to review it to look at the whole system to improve it. Evan Hansen said this is not a legislative issue – it's just getting right agencies to buy into it. Walt Ivey said maybe incorporating this in one of our existing recommendations or add this as a recommendation.

Walt Ivey asked if 2.3 is incorporated in 5.2. Tim Ball said he thinks it is. 2.3 is an audit that helps provide justification or evidence in support of 5.2. Evan Hansen agrees – said if we think of 2.3 more broadly as an audit, there is probably other types of information that would be useful to know. Evan Hansen suggested to broaden 2.3 to call it an audit and brainstorm a few more examples of information that would be good to know – as an example did the downstream agencies get the info in time and what action did they take.

Recommendation 3.1

Amy Swann mentioned regarding 3.1, we have new leadership at both WDA and IJDC maybe Bob Decrease could notify them about this at one of the meetings.

Amy Swann asked what the volunteering method is for staggering the SWPP. Bill Toomey said we are looking at June of next year to start. Initial start is to select approximately 25 water utilities and ask them to pursue updating their plan voluntarily.

Amy Swann asked if the funding of 2.1 is a big number? Walt Ivey replied the Legislature appropriated for the Safe Drinking Water Program \$2,172,181.00 - program includes a couple of things. PWSS match is federal funds but requires state match – state match for 2018 is \$363,749.00. \$69,339 that goes to MIS which is part of DHHR they have the information system in the agency. Source water funding is looking to be \$1,734,635.

Amy Swann asked if there was a dollar amount in regard to grants given out this year. Walt Ivey added that the Bureau is currently working on expression of interest (EOI) proposals. Bill Toomey explained funding is being used for development of EOI proposals - looking at making a determination on a number of systems if they fall into the surface water influence ground water category. Will have an EOI that would support these water systems if they fall under this definition to assist them with the development of their SWPP.

Recommendation 3.4

Amy Swann asked if we heard what IJDC got this year? Walt Ivey replied thought about 20 million.

Amy Swann said looks like these recommendations are done.

Amy Swann asked in regard to the statutory change in 3.2, what is the liability if someone changed their SWPP voluntarily should something happen. Walt Ivey thinks change would be in the positive. Would be done sooner – no liability. Evan Hansen asked if it is the intention to start

clock over. Walt Ivey said yes after submission, start clock over.

Laura Martin added in regards to 3.3 or 3.4, recommend as we are addressing IJDC funding for SWPP if more money is appropriated to all water services statewide.

Recommendation 4
Work in progress.

Recommendation 5.1.A
No update at this point – has made similar recommendations from 2014, 2015 and 2016.

Recommendation 5.1.B
Code section has not been updated or modified.

Laura Martin suggested to add a new recommendation that would require the notification of the downstream utilities of NOV's that aboveground storage tanks owners have received that would have a potential impact on the water source. That could be a NOV for non-compliance with inspection requirements, secondary containment requirements or NOV for exceeds of MPDS permits.

Tim Ball added, following up on your recommendation, transfer of info to PWS should be simultaneous with the issue of NOV. Laura Martin said if NOV has a potential to impact the water source. Rick Roberts asked would that essentially be DEP. Laura Martin said you can look yourself but you are not notified of it. This is generated by DEP.

Recommendation 5.2
No changes to hotline over the last several years per Walt Ivey. BPH has made an effort to forward automatically when those come in. Laura Martin added it was technically DEPs but managed through Homeland Security - would it be best to approach DEP with recommendations? We can jointing go to Homeland Security and request changes be done on the procedures, and the questions on the form itself and checklist of all info that needs to be gathered. This is an ongoing problem.

Recommendation 5.3
Per David Acord lots of discussion in past about the federal requirements, etc. – can't get clear answer. No change on this recommendation.

Walt Ivey suggested we will reach out again. At last meeting decided Terry Polen will reach out to Homeland Security and Rebecca McPhail will check with her group to see if anyone available for presentation on the subject.

Recommendation 5.4
Has been no movement. This recommendation has been proposed every year. Walt Ivey suggested to leave it in.

Recommendation 5.5
Bureau if working on this. Bureau if currently providing a little funding to RAIN in particular to the Monongalia watershed area and the potential to step out a little bit from that area.

RAIN is its own entity per Bill Toomey – they provide platform. There are other organizations as well that could be used.

David Acord asked should we leave this in as far as the recommendation for RAIN or another

similar system? Walt Ivey suggested to leave it in - we need to capture it or another similar system to RAIN. Bureau will continue to work on it. Walt Ivey added that it will require maintenance of the system after it gets started.

Review of recommendations concluded – no other discussion. Walt Ivey opened the floor for Public Comments.

Public Comments

Angie Rosser with West Virginia Coalition provided the following comments: good ideas around the recommendations, certainly want to see adequate funding; DHHR should include the funding for these recommendations into their package that is sent to the Legislature each year – would give it a lot of legitimacy; and glad to hear emphasis on spill hot line.

Angie Rosser provided an update on the community engagement project that the Rivers Coalition has been working on. (*Handout provided*)

No other public comments received.

David Acord motioned to adjourn meeting. Tim Ball seconded motion. Commission meeting was adjourned at 11:52AM.

November 20, 2017

West Virginia Public Water System Supply Study Commission Meeting
November 20, 2017
10:00AM – 12:00PM
Office of the Cabinet Secretary – 1 Davis Square CR 93

Attendees

Commission Members Present:

Walt Ivey (proxy – participated as Chair in Dr. Rahul Gupta's absence); David Acord, Public Service Commission; Amy Swann, WV Rural Water Association; Evan Hansen, Downstream Strategies; Laura Martin, WV-American Water Company; and Dr. Terry Polen, WV Department of Environmental Protection

Participated via conference call:

Tim Ball, Morgantown Utility Board; Ed Watson, Canaan Valley Institute; and Rebecca McPhail, WV Manufacturers Association

Commission Members Absent:

Rick Roberts, E.L. Robinson Engineering Company; Pam Nixon; Dr. Michael McCawley, WVU School of Public Health; and Jimmy Gianato, WV Division of Homeland Security and Emergency Management

Community Members Present:

Barb Taylor, Bureau for Public Health (BPH); Patrick Murphy, BPH; and Bill Toomey, BPH

Welcome & Meeting Overview

Walt Ivey welcomed everyone to the meeting. All Commission members introduced themselves.

November 7, 2017 meeting minutes were presented for approval. Walt Ivey noted an edit to page 2 – change PSW ID# to PWS ID#. Tim Ball noted correction and moved for approval of minutes. David Acord seconded the motion. Vote was taken and all were in favor. **November 7, 2017 meeting minutes were approved with noted correction.**

Suggestion for New Recommendation

Evan Hansen was on the agenda to share his recommendation regarding the Aboveground Storage Tank (AST) Act. (*Handout provided*)

Evan Hansen's recommendation was for the Commission to advance the recommendation that the Legislature refrain from reducing the number of tanks regulated by the AST Act, unless it demonstrates with sound science that currently regulated tanks pose no threat to drinking water. Additionally, all tanks currently required to register under the AST Act should continue to be required to register, to provide important information to downstream public water systems in source water protection.

Evan Hansen stated the Act was amended twice and both times it significantly reduced the number of regulated tanks. Continuing to reduce the number of regulated tanks may threaten human health and the environment unless it can be demonstrated with sound science that the current regulated tanks pose no threat to drinking water. Even for the unregulated tanks, information provided via the registration process is important for downstream public water systems to use in source water protection activities.

Walt Ivey asked Evan Hansen what work group does this belong in? Walt Ivey said the way he sees it is the recommendation would go to a workgroup, they would decide on the recommendation, then bring it to the full Commission for voting.

Dr. Terry Polen agreed. If we take the recommendation, it could be discussed at the dual conference call/meeting that Dr. Polen and Dr. McCawley are going to put together. Dr. Polen wanted to invite his crew to discuss Level 1 and Level 2 tanks that have been inspected. The recommendation should be moved to Work Group 2 or 4 to work on it there, and have it come out to the Commission at that point.

Tim Ball agreed with Dr. Polen's suggestion. Tim Ball stated Evan Hansen's proposal is similar to recommendation 2.2. Tim Ball feels topic needs assigned to Work Group 2.

Evan Hansen asked if Work Group 2 was meeting after this meeting. Dr. Polen said plan was to set up a dual meeting with Work Groups 2 and 4 and his tank crew. These are the folks that have been involved in this process.

Dr. Polen had numbers to share on inspection totals as of November 1, 2017:

- Compliance monitoring inspections about = 3,600
- Vast majority of those inspections are Level 1s = 3,079
- Level 2 tank inspections = 51
- Registered and labelled tanks = 428
- For all tanks levels 317 follow-ups of compliance and monitoring inspections were completed
- Compliance assistance work = 31
- Complaints (and responses) = 3
- Also, inspections of violations (if a violation issued site has to be revisited) = 358 follow-ups and 74 record reviews

Walt Ivey suggested this dual meeting take place on November 27th which has been noticed already with the Secretary of State's office. Dr. Polen will check on that date. Walt Ivey reminded everyone that time is of the essence – the final report is due December 15th.

Walt Ivey also mentioned results of the doodle poll showed December 8th would be the day for the Commission to meet for final approval of the report.

Evan Hansen has no problem with the recommendation going to Work Group 2 – only concern is the time - would the work group meet in time to discuss and vote on the recommendation.

Dr. Polen has no issue with the recommendation – wants to get those folks involved in the process to talk about it individually. Only concern he has is he wants to make sure that they don't have a problem with demonstrating sound science – just don't know how much was put into the analysis going into the legislation for the modification the last time. That's one of his questions.

Evan Hansen wanted to clarify that this recommendation doesn't have to do with inspections.

Dr. Polen realizes that - those people involved in the inspections are also involved in the rule changes.

Walt Ivey believes it's a benefit if we can get those people involved to talk about it as well.

Review of the 2016 Recommendations

Walt Ivey referred to the 2016 matrix that was created at the last meeting. Blanks have been filled in. Walt Ivey opened the floor to the Commission for any changes/suggestions that need made to the matrix.

Amy Swann asked if on 3.4 should it note that \$20 million was appropriated or the \$40. Walt Ivey said no – \$20 was appropriated. Walt Ivey said he followed up with Wayne - looked like \$40 was appropriated but it was for bond payments. Amy Swann suggested to acknowledge the Legislature on their appropriation of the \$20 million. Dr. Polen likes the idea.

Amy Swann suggested to add: The Commission commends the Legislature for appropriating \$20 million in the most recent year but continues the recommendation of \$40 million.

Walt Ivey said to add that briefly to the matrix, but add more into the narrative. Amy Swann said on matrix just note \$20 million appropriated this fiscal year.

Laura Martin added that during the last meeting it was mentioned that this matrix be added to the report as an appendix, Commission might want to consider under 5.2 and 2.3 some comment about these improvements are still sought. Walt Ivey said do you want to say – working on process without additional funding? Laura Martin suggested to add still recommend improvements to the reporting process.

Walt Ivey said the matrix will be edited and presented to the Commission at the next meeting.

Work Group Updates

Walt Ivey suggested going through the work groups to provide an update on any changes made from their last meeting.

Work Group 1

Walt Ivey said Work Group 1 hasn't defined any changes to the recommendations but added more to their narratives.

Added *"BPH is surveying the PWS's to determine if they are going to voluntary participate in an annual exercise. This initial survey (based on 49 responses) indicated that approximately 95% will hold an annual plan review exercise with the protection team members."* to the narrative of Recommendation 1.1.

Added *"It would also be appropriate to notify downstream water systems of AST changes through multiple methods, such as emails and written communications."* to the narrative of Recommendation 1.2.

Evan Hansen asked if this is the recommendation referencing the new database on aboveground storage tanks which provides the information to the public water systems. Walt Ivey said thinks it's more than that – it's the one that if any changes are made to the tanks that that info be provided to the downstream water systems as soon as possible.

Evan Hansen said the narrative needs to recognize that the Bureau has created this database and it is up and operational to provide info to the public water systems. Evan Hansen feels this is not reflected; this is something good to recognize.

Added *"Since the last report, the BPH has worked to develop a contract with Horsley Witten for the source water protection evaluation. This study should be complete by Spring 2018."* to the narrative of Recommendation 1.3.

Added *"The cost for the alternative water sources was developed in 2016. The cost has not been adjusted."* to the narrative of Recommendation 1.4.

Laura Martin commented that she doesn't know if it's necessary to have it in both the recommendation and narrative – redundant. Suggested to keep as a narrative, since Appendix C is part of the report that could be reviewed by the Legislature and then narrative provides that caveat this was developed in 2016 and updated since then. Walt Ivey agreed.

Work Group 2

Dr. Polen stated nothing to report - as mentioned before will be getting together – possibly 27th or 30th with Work Group 4.

Work Group 3

Amy Swann, Chair reported:

Recommendation 3.1 will remain as is.

Recommendation 3.2 noted that BPH is making request for about 25 systems to file plans early – it was decided to ultimately keep the recommendation as is because it would be better if the Legislature fixed it.

Recommendation 3.3 deals with the ranking process within BPH and IJDC. The work group believes this recommendation is being dealt with in house with BPH and Walt Ivey having Bob Decrease to approach the IJDC.

Laura Martin asked if the work group could advance a recommendation or a statutory change that

would include private land utilities. Laura Martin proposed to add the language “.....unless the project being sponsored seeks to enhance source water protection for a water utility in which case all utilities and sponsors shall be treated with equal prioritization including for-profit entities.” to WV Code 31-15A-9 and WV Code 31-15A-10.

Walt Ivey asked if this belongs in 3.3 or a new recommendation. Amy Swann thought it would be a separate recommendation.

Recommendation 3.4 is already being dealt with – no change.

Work Group 4

Chair of the Work Group was not in attendance, but Dr. Polen is a member of the group. Dr. Polen mentioned the group will be meeting with Work Group 2 on part of the Chemical Safety Board (CSB) report on both this issue and others that had to do with toxicological impacts. Dr. Polen recommends that an epidemiological study be performed on the chemicals that raise to the level of concern.

Work Group 5

David Acord, Chair reported:

Recommendation 5.1.A. will be forwarded for consideration again this year to the full Commission.

Recommendation 5.1.B will be forwarded for consideration again this year to the full Commission.

Laura Martin approached Work Group 5 with suggested language for a new Recommendation 5.1.C. She proposed Recommendation 5.1.C. to read *“The Commission advances a further recommendation that WV Codes §22-11-6 and §22-30-10 be modified to require direct notification to downstream PWSs of Notices of Violations (NOV) with the potential to impact water quality of a source of drinking supply. This would include violations related to the Water Pollution Control Act for discharges to waters of the state and the Aboveground Storage Tank Act.”*

In §22-30-10 the proposed change includes the addition of *“(c) Any owner or operator of a regulated aboveground storage tank who is issued a NOV citing deficiencies related to the provisions of §22-30 and associated rulemaking shall provide notice directly to the downstream public water system within 3 days. The notice shall include a copy of the violation citation and description of any corrective action measures planned or taken to address the observed condition.”*

In §22-11-6a the proposed change includes *“(a) Any person affected by rules establishing water quality standards and effluent limitations who is issued a NOV related to the discharge or disposition of any pollutant or combination of pollutants into waters of the state shall provide notice directly to the downstream public water system within 3 days. The notice shall include a copy of the violation citation and description of any corrective action measures planned or taken to address the observed condition.”*

Work Group 5 will consider/discuss the proposed change in 5.1.C at their next work group meeting.

Dr. Polen had a comment regarding the “within 3 days of receipt”. He said the entity in violation may not have a notice within that time period to send out, and within the limitations itself is a term of the law.

Evan Hansen suggested a rewrite of Recommendation 5.2. He wanted to provide clarification to

it – substantial change was made in the first paragraph: *“The Commission advances the recommendation that the state contract with an outside organization to audit the effectiveness of, and to provide recommendations for, the WV Spill Response Hotline. This audit should consider the importance of reporting spills promptly and accurately to PWSs and the BPH to protect human health and the environment.”*

Work Group 5 will consider/discuss the proposed change in 5.2 at their next work group meeting.

Recommendation 5.3 will be forwarded for consideration again this year to the full Commission.

Recommendation 5.4 will be forwarded for consideration again this year to the full Commission.

Walt Ivey suggested to adjust the language in the narrative of Recommendation 5.5 to read *“RAIN is in place and being used currently in the north central part of the state. The recommendation focuses on the important that RAIN or a similar water quality system be evaluated for other areas of the state. RAIN appears interested in possible expansion if funding is available. In early 2012, WV joined RAIN with ten active monitoring sites along the Upper Monongahela with the help of funding grants provided by the federal EPA and the BPH. BPH is in the process of providing additional grant funding to RAIN aimed at providing technical support to help in the coordination and development of the current system and possible expansion of the Early Warning Spill Detection System (EWDS). The EWDS continuously monitors water quality on-line, in real time, to ensure the protection of public health for its member water suppliers. Also, RAIN will help conduct outreach and education related to the EWDS.”*

David Acord, Chair said Work Group 5 will meet after the Commission meeting today to finalize their recommendations and have them available for the Commission at the next full meeting.

Walt Ivey noted that November 27, 2017 will be a full Commission meeting. The work groups that are ready to present their recommendations to the Commission can do so at that time. Additionally, per the doodle poll, December 8th is available for a full Commission meeting. Walt Ivey suggested the Commission use the December 8th meeting to finalize/approve the report prior to its submission the following week.

Public Comments

No public comments received.

Amy Swann motioned to adjourn meeting. Terry Polen seconded motion. Commission meeting was adjourned at 10:56AM.

November 27, 2017

West Virginia Public Water System Supply Study Commission Meeting
November 27, 2017
10:00AM – 12:00PM
Office of the Cabinet Secretary – 1 Davis Square CR 93

Attendees

Commission Members Present:

Walt Ivey (proxy – participated as Chair in Dr. Rahul Gupta’s absence); David Acord, Public Service Commission; Amy Swann, WV Rural Water Association; Evan Hansen, Downstream

Strategies; Laura Martin, WV-American Water Company; Rick Roberts, E.L. Robinson Engineering Company; and Rebecca McPhail, WV Manufacturers Association

Participated via conference call:

Tim Ball, Morgantown Utility Board; Ed Watson, Canaan Valley Institute; Dr. Michael McCawley, WVU School of Public Health; and Dr. Terry Polen, WV Department of Environmental Protection

Commission Members Absent:

Pam Nixon and Jimmy Gianato, WV Division of Homeland Security and Emergency Management

Community Members Present:

Patrick Murphy, Bureau for Public Health (BPH) and Bill Toomey, BPH

Welcome & Meeting Overview

Walt Ivey welcomed everyone to the meeting. All Commission members introduced themselves.

November 20, 2017 meeting minutes were presented for approval. David Acord motioned to approve the November 20, 2017 minutes as presented. Amy Swann seconded motion. Vote was taken and all were in favor. **November 20, 2017 meeting minutes were approved as presented.**

Update on Above Ground Storage Tanks - DEP

Joe Sizemore, Assistant Chief Inspector, Division of Water Waste Management, - WV Department of Environmental Protection gave a presentation on aboveground storage tanks.

- Currently 4,600 Level 1 tanks – regulated; 850 Level 2 tanks; and 10,000 Registered and Labeled tanks
- Last change in code effected brine tanks associated with oil and gas industry moved those to the registered and labeled (R&L) status – not really regulated anymore, but have to register; about 25,000 of those.
- Main focus are Level 1 tanks specifically.
- Inspection numbers on track to meet the compliance monitoring strategy goal of the 3-year inspection of all Level 1 tanks as outlined in code. (To date 3,600 initial compliance monitoring inspections. 3,000 level 1 tanks have been inspected).

Mr. Sizemore also mentioned the reorganization within DEP – the change in the Division of Water and Waste Management and Division of Land Restoration. The Corrective Action Program (currently under Division of Land Restoration) will be located in the Division of Water and Waste Management for leaking aboveground storage tanks and leaking underground storage tanks.

Walt Ivey, Chair, opened the floor for discussion/questions from Commission members on Mr. Sizemore's presentation.

Evan Hansen asked what was the difference between registered tanks and R&L tanks? Mr. Sizemore replied, by definition, regulated storage tanks are a level 1 or 2 which have regulatory requirements attached to those tanks. R&L tanks meet the definition of an aboveground storage tank but doesn't meet the definition of a level 1 or 2 – they don't hold something that's listed on the list, not above 50,000 gallons in size, and not in zone of critical concern. Last change to code, HB2811 carved out section of tanks associated with oil and gas exploration and production (brine

tanks). These tanks don't meet definition of the statutory of aboveground storage tanks, but still have to register and label as one. Evan Hansen asked the last category from HB2811 was it 25,000 or so of R&L tanks? Joe Sizemore replied yes - 24,705 was the last number. Evan Hansen asked if that was in addition to the 10,000 that were registered and labelled - so there are around 35,000 tanks or so not regulated? Joe Sizemore replied that was correct.

Walt Ivey, Chair, asked if there is a minimum size tank that is registered. Joe Sizemore replied that 1,320 gallons is the threshold to meet the above ground storage tank definition.

Evan Hansen asked what is being found in the inspections in terms of compliance in general. Joe Sizemore replied the two most common violations of the rule include the 14-day walk around inspections from the owner of the secondary containment structure of a level 1 and the required 30-day basic walk around of the aboveground storage tank. He believes these are being done, but not documented properly – documentation lacking. These are the common violations of the rule.

No other questions/comments received regarding Joe Sizemore's presentation on aboveground storage tanks.

Work Group Updates

Work Group 1

Walt Ivey provided the update for Work Group 1. Work Group 1 developed four recommendations. The recommendations have been formally voted/accepted within Work Group 1 and ready for submission to the full Commission.

Walt read the recommendations:

Recommendation 1.1

The Commission advances the recommendation to require either an annual evaluated and documented exercise of the SWPPs or a documented annual review, and update if necessary, of the SWPPs, with the utility reporting this information to the BPH.

Rick Roberts made a motion to vote on Recommendation 1.1 as read. Amy Swann seconded motion. Vote was taken and all were in favor. **Recommendation 1.1 is adopted as read and will be included in the 2017 Legislative Report.**

Recommendation 1.2

The Commission advances the recommendation that DEP and/or DHHR notify downstream water utilities if there is a change in substance and/or a substantive change within an aboveground storage tank as outlined in W.Va. Code §22-30-9 (b) 1-6. Such notification is to be made as soon as possible with as much detail as possible.

Laura Martin made a motion to vote on Recommendation 1.2 as read. Rick Roberts seconded motion. Vote was taken and all were in favor. **Recommendation 1.2 is adopted as read and will be included in the 2017 Legislative Report.**

Recommendation 1.3

The Commission advances the recommendation that the state contract with an outside organization to review and evaluate the effectiveness of SWPPs and practices.

Amy Swann made a motion to vote on Recommendation 1.3 as read. Tim Ball seconded motion. Vote was taken and all were in favor. **Recommendation 1.3 is adopted as read and will be included in the 2017 Legislative Report.**

Recommendation 1.4

The Commission advances the recommendation that the Legislature review the proposed alternative water sources (Appendix C) so that it will be aware of the scope of needs and funding necessary as it considers further guidance.

Rick Roberts made a motion to vote on Recommendation 1.4 as read. Evan Hansen seconded motion. Vote was taken and all were in favor. **Recommendation 1.4 is adopted as read and will be included in the 2017 Legislative Report.**

Work Group 2

Nothing to report. Dr. Polen, Chair, noted that Work Group 2 and Work Group 4 will meet on December 1, 2017 at 2:00PM to discuss their recommendations.

Work Group 3

Amy Swann provided the update for Work Group 3. Work Group 3 developed four recommendations. The recommendations have been formally voted/accepted within Work Group 3 and ready for submission to the full Commission.

Amy Swann read the recommendations:

Recommendation 3.1

The Commission advances the recommendation that the Legislature should make a \$2,000,000 continuing appropriation to the DHHR, BPH to furtherance of its source water protection efforts. This funding shall also be used to provide grant monies to systems as they begin their statutorily required three year updates and to help fund the RAIN or other type of system. In addition, the BPH should commence an investigation of the RAIN or other type system to determine if such a statewide network could be implemented.

David Acord made a motion to vote on Recommendation 3.1 as read. Ed Watson seconded motion. Vote was taken and all were in favor. **Recommendation 3.1 is adopted as read and will be included in the 2017 Legislative Report.**

Recommendation 3.2

The Commission advances the recommendation that the West Virginia Legislature amend West Virginia Code 16-1-9c to include a new subsection designated as subsection (i) to read as follows:

(i) The Secretary is authorized to propose legislative rules for promulgation pursuant to article three, chapter twenty-nine-A to implement the provisions of this section that may include a schedule for the submission of Source Water Protection Plans by public water utilities pursuant to subsection (f) that staggers the schedule for the submission of Source Water Protection Plans, except that for the purpose of staggering the dates of submission of updated Source Water Protection Plans, the Secretary may designate a schedule of submission greater than three years from the initial submission required by a legislative rule promulgated pursuant to this subsection.

Rick Roberts made a motion to vote on Recommendation 3.2 as read. Laura Martin seconded motion. Vote was taken and all were in favor. **Recommendation 3.2 is adopted as read and will be included in the 2017 Legislative Report.**

Recommendation 3.3

The Commission advances the recommendation that the West Virginia Infrastructure and Jobs Development Council (IJDC) and BPH, Drinking Water Treatment Revolving Fund amend their

preliminary project ranking and/or scoring structures to add emphasis for source water protection projects.

Evan Hansen asked if one of the entities has already incorporated ranking/scoring. Amy Swann replied yes, BPH has a scoring it does on projects. Evan Hansen suggested to add language to recommendation to reflect that. Amy Swann suggested to add an additional sentence which notes that BPH, within its Drinking Water Treatment Revolving Fund (DWTRF) program, has added a source water protection ranking.

Amend to include sentence:

“The BPH noted that it has added source water protection scoring to its ranking priority in the DWTRF program.”

Tim Ball made a motion to vote on Recommendation 3.3 as amended. Rick Roberts seconded motion. Vote was taken and all were in favor. **Recommendation 3.3 is adopted as amended and will be included in the 2017 Legislative Report.**

Recommendation 3.4

The Commission advances the recommendation that the Legislature resume the appropriation of \$40 million per year from the video lottery proceeds to the IJDC to allow the Council to play an active role in source water protection.

Evan Hansen asked if the recommendation’s narrative is related to spill response or pollution prevention? Amy Swann replied it’s for all projects – water, waste water, source water, etc. Evan Hansen proposed to add language to the last sentence such as: *“Lack of implementation means systems will not have the tools to prevent pollution or further react if a spill occurs that threatens its water supply.”* Amy Swann asked what is his definition of pollution? Evan Hansen suggested to omit “prevent pollution” and use “protect source water”.

The last sentence of the narrative to be amended to read *“Lack of implementation means systems will not have the tools to protect source water or to further react if a spill occurs that threatens its water supply.”*

Dr. McCawley made a motion to vote on Recommendation 3.4 as amended. Evan Hansen seconded motion. Vote was taken and all were in favor. **Recommendation 3.4 is adopted as amended and will be included in the 2017 Legislative Report.**

Work Group 4

Nothing to report. Dr. McCawley, Chair, noted that Work Group 2 and Work Group 4 will meet on December 1, 2017 at 2:00PM to discuss their recommendations.

Work Group 5

David Acord provided the update for Work Group 5. Work Group 5 developed seven recommendations. The recommendations have been formally voted/accepted within Work Group 5 and ready for submission to the full Commission.

David Acord read the recommendations:

Recommendation 5.1.A

Advance the recommendation that the Legislature should clarify that the utility doesn’t have an implied duty to complete gaps in information on Safety Data Sheets (SDSs) that are provided/submitted. Senate Bill 373 (2014) previously required SDSs to be submitted with the Spill Prevention Response Plan, but changes made in Senate Bill 423 (2015) removed this

requirement. It is our recommendation that the legislation be amended to require the SDS information be provided with the Spill Prevention and Response Plans. If there is missing information, the entity submitting the SDS should have the burden of providing additional information. Furthermore, a current web link shall be provided by DEP to ensure that SDS information is available at a central repository accessible to PWSs.

Amy Swann made a motion to vote on Recommendation 5.1.A. as read. Rick Roberts seconded motion. Vote was taken. Ten (10) members were in favor and one (1) member (Rebecca McPhail) opposed. **Recommendation 5.1.A. is adopted as read and will be included in the 2017 Legislative Report.**

Recommendation 5.1.B.

Advance the recommendation that WV Code §22-30-10(a) be modified to ensure that downstream PWSs are provided with the type and quantity of fluid stored in the regulated aboveground storage tanks at the facility and the SDS associated with the fluids in storage.

Rick Roberts made a motion to vote on Recommendation 5.1.B. as read. Laura Martin seconded motion. Vote was taken and all were in favor. **Recommendation 5.1.B. is adopted as read and will be included in the 2017 Legislative Report.**

Recommendation 5.1.C.

Advance a recommendation that WV Codes §22-11-6 and §22-30-10 be modified to require direct notification to downstream PWSs of Notices of Violation (NOVs) and subsequent actions with the potential to impact water quality of a source of drinking supply. This would include violations related to the Water Pollution Control Act for discharges to waters of the state and the Aboveground Storage Tank Act.

§22-30-10. Notice to local governments and water companies.

(a) The owner or operator of a regulated aboveground storage tank shall provide notice directly to the public water system and to state, county and municipal emergency response organizations of the type and quantity of fluid stored in the regulated aboveground storage tanks at the facility and the location of the safety data sheets (SDS) associated with the fluids in storage. Subject to the protections afforded in section fourteen of this article, the information required in this subsection shall be delivered to the specific public water system and to state, county and municipal emergency response organizations that are designated by the secretary to receive required notice.

(b) In lieu of the information required in subsection (a) of this section, the tank owner or operator may provide the inventory forms and applicable documents required by sections 311 and 312 of the Emergency Planning and Community Right-to-Know Act, subject to the protection of trade secrets and site security information allowed by section fourteen of this article.

(c) Any owner or operator of a regulated aboveground storage tank who is issued a Notice of Violation (NOV) and subsequent actions citing deficiencies related to the provisions of §22-30 and associated rulemaking shall provide notice directly to the downstream public water system within three (3) days of receipt. The notice shall include a copy of the violation citation and description of any corrective action measures planned or taken to address the observed condition.

(New section under Water Pollution Control Act after 22-11-6. Requirement to comply with standards of water quality and effluent limitations)

§22-11-6a. Notice to downstream water systems

(a) Any person affected by a National Pollutant Discharge Elimination System (NPDES) permit who is issued a Notice of Violation (NOV) and subsequent actions related to the discharge or disposition of any pollutant or combination of pollutants into waters of the state shall provide notice directly to the downstream public water system within three (3) days of receipt. The notice shall include a copy of the violation citation and description of any corrective action measures planned or taken to address the observed condition.

Laura Martin recommended any new language proposed be underlined for clarity. That would include all of sub section c and 22-11-6a.

Evan Hansen recommended to include a narrative to 5.1.C. such as “DEP should communicate this responsibility to persons who are issued NOVs and subsequent actions.”

Laura Martin made a motion to vote on Recommendation 5.1.C. as read with the addition of the suggested narrative as discussed. Dr. Polen seconded motion. Vote was taken. Nine (9) members were in favor and two (2) members opposed (Rebecca McPhail and Dr. Polen). **Recommendation 5.1.C. is adopted as amended and will be included in the 2017 Legislative Report.**

Recommendation 5.2

Advance the recommendation that the state contract with an outside organization to audit the effectiveness of, and to provide recommendations for, the Spill Reporting Hotline. This audit should consider the importance of reporting spills promptly and accurately to PWSs and the BPH in order to protect human health and the environment.

We recommend that, upon reporting to the Spill Reporting Hotline, all spills must, as soon as possible, be reported to all potentially-impacted PWSs and to the BPH. We further recommend that such notification be coordinated, where possible, with emergency response systems (e.g., county 911 systems) and should make use of existing GIS and databases (such as those operated by the DHSEM, county 911 systems and the DEP), if possible.

We recommend that steps be taken to capture accurate spill locations using latitude/longitude, where possible, which can be generated using GPS receivers or other tools. The material(s) released and the stream(s) potentially impacted must also be accurately captured. Additional training/scripts for those taking the calls is recommended to obtain accurate information for each event.

Furthermore, correction notices will be issued, as necessary, and confirmation of the response and of the resolution shall be distributed to potentially-impacted PWSs and to the BPH.

Evan Hansen made a motion to vote on Recommendation 5.2 as read. Tim Ball seconded motion. Vote was taken and all were in favor. **Recommendation 5.2 is adopted as read and will be included in the 2017 Legislative Report.**

Recommendation 5.3

Advance a recommendation that DHSEM and Local Emergency Planning Committees (LEPC) provide available information to the PWSs, that they are not statutorily prohibited from providing to the public, to assist PWSs in identifying mobile threats.

Rick Roberts made a motion to vote on Recommendation 5.3 as read. Laura Martin seconded motion. Vote was taken and all were in favor. **Recommendation 5.3 is adopted as read and will be included in the 2017 Legislative Report.**

Recommendation 5.4

Advance the recommendation that the Legislature should consider legislation, should it be introduced, to establish income tax credits for landowners for source water protection.

Amy Swann made a motion to vote on Recommendation 5.4 as read. Evan Hansen seconded motion. Vote was taken and all were in favor. **Recommendation 5.4 is adopted as read and will be included in the 2017 Legislative Report.**

Recommendation 5.5

Advance the recommendation that the BPH evaluate, and potentially implement, the River Alert Information Network (RAIN) or another similar system, to establish a statewide network in West Virginia in coordination with water systems throughout the state,

Rick Roberts made a motion to vote on Recommendation 5.5 as read. Rebecca McPhail seconded motion. Vote was taken and all were in favor. **Recommendation 5.5 is adopted as read and will be included in the 2017 Legislative Report.**

Walt Ivey, Chair, asked for any additional comments/questions from the Commission members regarding the recommendations in place. Walt Ivey asked Commission members to review the matrix and email him with any edits. Matrix to be included in the report.

Rick Roberts suggested adding Recommendation 5.1.C. to the matrix. David Acord suggested to list as a “new recommendation”. Walt Ivey, Chair, will make this edit.

Walt Ivey, Chair explained that the next steps would be to compile all the information and prepare the final report draft which would be available for the Commission to review at the next full Commission meeting on December 8, 2017.

Public Comments

No public comments received.

David Acord motioned to adjourn meeting. Rick Roberts seconded motion. Commission meeting was adjourned at 11:28AM.

APPENDIX B
Public Water Systems as Defined by SB 423 (12/15/17)

System ID	System Name	County	Planning and Development Regions (1-11)	DEP Watershed Group (1-5)	Type System	Population
WV3300508	HAMMOND PSD	BROOKE	11	1	SW	2,186
WV3300512	FOLLANSBEE HOOVERSON HEIGHTS	BROOKE	11	1	SW	4970
WV3300516	WEIRTON AREA WATER BOARD	BROOKE	11	1	SW	22,694
WV3301504	CHESTER	HANCOCK	11	1	SW	3,119
WV3301811	RIPLEY CITY OF	JACKSON	5	1	SW	5,078
WV3302603	CAMERON WATER	MARSHALL	10	1	SW	1,052
WV3303516	WHEELING WATER	OHIO	10	1	SW	29,899
WV3304307	HUGHES RIVER WATER	RITCHIE	5	1	SW	4,278
WV3304405	SPENCER WATER DEPT	ROANE	5	1	SW	4,521
WV3304802	MIDDLEBOURNE WATER WORKS	TYLER	5	1	SW	1,267
WV3304803	SISTERSVILLE MUNICIPAL WATER	TYLER	5	1	SW	1,892
WV3305205	PINE GROVE WATER	WETZEL	10	1	SW	593
WV3305402	CLAYWOOD PARK PSD	WOOD	5	1	SW	8,141
WV3300101	BELINGTON TOWN OF	BARBOUR	7	2	SW	2,111
WV3300104	PHILIPPI CITY OF	BARBOUR	7	2	SW	3,469
WV3300901	WEST UNION TOWN OF	DODDRIDGE	6	2	SW	1,895
WV3301705	CLARKSBURG WATER BOARD	HARRISON	6	2	SW	20,272
WV3301714	LUMBERPORT TOWN OF	HARRISON	6	2	SW	1,646
WV3301721	SHINNSTON CITY OF	HARRISON	6	2	SW	4,910
WV3302104	WVAW - WESTON	LEWIS	7	2	SW	13,026
WV3302502	FAIRMONT CITY OF	MARION	6	2	SW	29,179
WV3302503	FAIRVIEW TOWN OF	MARION	6	2	GU	806
WV3302515	MONONGAH TOWN OF	MARION	6	2	SW	3,216
WV3303111	MORGANTOWN UTILITY BOARD	MONONGALIA	6	2	SW	57,134
WV3303908	KINGWOOD WATER BOARD	PRESTON	6	2	SW	3,112
WV3303912	PRESTON COUNTY PSD 1	PRESTON	6	2	SW	3,554
WV3303914	ROWLESBURG WATER WORKS	PRESTON	6	2	SW	767
WV3303917	TERRA ALTA WATER WORKS	PRESTON	6	2	GU	1,750
WV3304204	HARMAN TOWN OF	RANDOLPH	7	2	GU	221
WV3304202	BEVERLY TOWN OF	RANDOLPH	7	2	SW	2,841
WV3304203	ELKINS CITY OF	RANDOLPH	7	2	SW	9,473
WV3304209	MILL CREEK WATER DEPT	RANDOLPH	7	2	SW	936
WV3304605	TAYLOR COUNTY PSD	TAYLOR	6	2	SW	1,322

System ID	System Name	County	Planning and Development Regions (1-11)	DEP Watershed Group (1-5)	Type System	Population
WV3304701	DAVIS WATER WORKS	TUCKER	7	2	SW	894
WV3304704	HAMRICK PSD	TUCKER	7	2	SW	1,645
WV3304707	PARSONS CITY OF	TUCKER	7	2	SW	1,533
WV3304709	THOMAS CITY OF	TUCKER	7	2	SW	702
WV3304711	TIMBERLINE FOUR SEASON RESORT MANAGEMENT	TUCKER	7	2	GU	581
WV3304902	BUCKHANNON WATER BOARD	UPSHUR	7	2	SW	8,916
WV3300202	BERKELEY CO P S W D-BUNKER HILL	BERKELEY	9	3	GU	27,531
WV3300212	MARTINSBURG CITY OF	BERKELEY	9	3	GU	15,652
WV3300218	BERKELEY COUNTY PSWD-POTOMAC RIVER	BERKELEY	9	3	SW	27,335
WV3301204	PETERSBURG TOWN OF	GRANT	8	3	SW	2,841
WV3301205	MOUNTAIN TOP PSD	GRANT	8	3	SW	2,072
WV3301405	ROMNEY WATER DEPT	HAMPSHIRE	8	3	SW	1,950
WV3301412	CENTRAL HAMPSHIRE PSD GREEN SPRING	HAMPSHIRE	8	3	GU	1,046
WV3301601	MOOREFIELD MUNICIPAL WATER	HARDY	8	3	SW	2,328
WV3301613	HARDY COUNTY PSD BAKER	HARDY	8	3	SW	182
WV3301979	Deerfield Village Subdivision	JEFFERSON	9	3	GU	118
WV3301905	CHARLES TOWN UTILITIES	JEFFERSON	9	3	SW	14,488
WV3301912	CORPORATION OF HARPERS FERRY	JEFFERSON	9	3	SW	2,122
WV3301933	CORPORATION OF SHEPHERDSTOWN	JEFFERSON	9	3	SW	4,300
WV3302915	KEYSER CITY OF	MINERAL	8	3	SW	5,202
WV3302921	PIEDMONT MUNICIPAL WTR WKS	MINERAL	8	3	SW	847
WV3302928	FRANKFORT PSD	MINERAL	8	3	SW	5,626
WV3303301	BERKELEY SPRINGS CITY OF	MORGAN	9	3	SW	2,702
WV3303308	PAW PAW WATER WORKS	MORGAN	9	3	SW	522
WV3303602	FRANKLIN MUNICIPALITY OF	PENDLETON	8	3	SW	1,402
WV3303611	PENDLETON CO PSD-UPPER TRACT	PENDLETON	8	3	GU	695
WV3303613	PENDLETON CO PSD(BRANDYWINE)	PENDLETON	8	3	SW	692
WV3300315	BOONE RALEIGH P S D	BOONE	3	4	SW	1,190
WV3300402	FLATWOODS CANOE RUN PSD	BRAXTON	7	4	SW	4,076
WV3300404	SUGAR CREEK PSD	BRAXTON	7	4	SW	1,312
WV3300406	WVAW- GASSAWAY	BRAXTON	7	4	SW	2,049

System ID	System Name	County	Planning and Development Regions (1-11)	DEP Watershed Group (1-5)	Type System	Population
WV3300408	BURNSVILLE PUBLIC UTILITY	BRAXTON	7	4	SW	1,050
WV3300701	GRANTSVILLE MUNICIPAL	CALHOUN	5	4	SW	571
WV3300801	CLAY WATER DEPT	CLAY	3	4	SW	1,341
WV3300806	CLAY-ROANE PSD (PROCIOSUS DISTRICT)	CLAY	3	4	SW	2,024
WV3301004	ARMSTRONG PSD	FAYETTE	4	4	SW	2,208
WV3301024	MOUNT HOPE WATER	FAYETTE	4	4	SW	1,431
WV3301037	KANAWHA FALLS PSD	FAYETTE	4	4	SW	2,514
WV3301046	WVAWC NEW RIVER REGIONAL WTR TRTMT PLT	FAYETTE	4	4	SW	25,585
WV3301104	GLENVILLE UTILITY	GILMER	7	4	SW	2,266
WV3301307	LEWISBURG	GREENBRIER	4	4	SW	10,050
WV3301315	ALDERSON WATER	GREENBRIER	4	4	SW	2,458
WV3302009	CEDAR GROVE COMMUNITY OF	KANAWHA	3	4	SW	960
WV3302016	WVAWC-KANAWHA VALLEY DIST	KANAWHA	3	4	SW	200,679
WV3302031	ST ALBANS WATER	KANAWHA	3	4	SW	12,726
WV3302205	LINCOLN PSD	LINCOLN	2	4	SW	3,890
WV3302801	ATHENS TOWN OF	MERCER	1	4	SW	4,802
WV3302804	BLUEWELL PSD	MERCER	1	4	SW	6,216
WV3302813	GREEN VALLEY GLENWOOD PSD BULLTAIL	MERCER	1	4	SW	1,869
WV3302835	WVAWC BLUEFIELD DISTRICT	MERCER	1	4	SW	12,174
WV3302849	GREEN VALLEY GLENWOOD PSD GLENWOOD	MERCER	1	4	SW	5,775
WV3302852	POCAHONTAS WATER SYSTEM	MERCER	1	4	SW	1,933
WV3303206	RED SULPHUR PSD	MONROE	1	4	SW	5,352
WV3303401	RICHWOOD WATER DEPT	NICHOLAS	4	4	SW	2,389
WV3303402	CRAIGSVILLE PSD	NICHOLAS	4	4	SW	4,696
WV3303403	NETTIE LEIVASY PSD	NICHOLAS	4	4	SW	3,239
WV3303404	SUMMERSVILLE MUNICIPAL WATER	NICHOLAS	4	4	SW	5,746
WV3303405	WILDERNESS PSD	NICHOLAS	4	4	SW	4,475
WV3303802	CASS SCENIC RAILROAD	POCAHONTAS	4	4	SW	534
WV3303803	MARLINTON TOWN OF	POCAHONTAS	4	4	SW	1,436
WV3303808	CHEAT MOUNTAIN WATER SYSTEM	POCAHONTAS	4	4	SW	1,867
WV3303812	POCAHONTAS COUNTY PSD	POCAHONTAS	4	4	GU	515
WV3304005	HURRICANE CITY OF	PUTNAM	3	4	SW	8,248
WV3304011	PUTNAM P S D	PUTNAM	3	4	SW	21,719

System ID	System Name	County	Planning and Development Regions (1-11)	DEP Watershed Group (1-5)	Type System	Population
WV3304104	BECKLEY WATER COMPANY	RALEIGH	1	4	SW	49,058
WV3304407	WALTON PSD	ROANE	5	4	SW	2,384
WV3304507	BIG BEND PSD	SUMMERS	1	4	SW	1,338
WV3304513	WVAWC BLUESTONE PLANT	SUMMERS	1	4	SW	26,499
WV3305103	COWEN PSD	WEBSTER	4	4	SW	3,189
WV3305104	WVAW - WEBSTER SPRINGS	WEBSTER	4	4	SW	1,962
WV3300608	WVAWC - HUNTINGTON DIST	CABELL	2	5	SW	84,254
WV3300609	MILTON WATER	CABELL	2	5	SW	4,883
WV3302203	WEST HAMLIN CITY OF	LINCOLN	2	5	SW	2,285
WV3302331	LOGAN WATER BOARD CITY OF	LOGAN	2	5	SW	3,862
WV3302336	MAN WATER WORKS	LOGAN	2	5	SW	1,008
WV3302347	BUFFALO CREEK PSD	LOGAN	2	5	SW	2,770
WV3302357	LOGAN CO PSD- GREENVILLE SYSTEM	LOGAN	2	5	SW	4,652
WV3302364	LOGAN COUNTY PSD - NORTHERN REGIONAL	LOGAN	2	5	SW	16,949
WV3302434	MCDOWELL COUNTY PSD BARTLEY	MCDOWELL	1	5	GU	1,632
WV3302435	MCDOWELL COUNTY PSD BERWIND	MCDOWELL	1	5	GU	863
WV3303002	GILBERT WATER WORKS	MINGO	2	5	SW	1,634
WV3303003	KERMIT WATER WORKS	MINGO	2	5	SW	1,424
WV3303005	MATEWAN WATER WORKS	MINGO	2	5	SW	2,237
WV3303009	WILLIAMSON UTILITY BOARD	MINGO	2	5	SW	3,390
WV3303029	MINGO COUNTY PSD - NAUGATUCK	MINGO	2	5	SW	6,324
WV3305004	FORT GAY WATER WORKS	WAYNE	2	5	SW	2,287
WV3305007	WAYNE WATER TOWN OF	WAYNE	2	5	SW	5,684
WV3305009	KENOVA MUNICIPAL WATER	WAYNE	2	5	SW	9,094
WV3305516	OCEANA COMMUNITY OF	WYOMING	1	5	SW	2,672
WV3305517	PINEVILLE MUNICIPAL	WYOMING	1	5	SW	2,945
WV3305407	PARKERSBURG UTILITY BOARD	WOOD	5	1	SWIG	34,251

APPENDIX C
Public Water Systems' Evaluation of Alternative Sources of Water

PWSID #	COUNTY	SYSTEM NAME	INTAKE	VIABLE ALTERNATIVE	ESTIMATED COST (Based on 2016 Pricing)*
3300101	BARBOUR	TOWN OF BELINGTON	TYGART VALLEY RIVER	1) INTAKE MILL CREEK REWORKED	\$1,718,000
3300408	BRAXTON	BURNSVILLE PUBLIC UTILITY BOARD	LITTLE KANAWHA RIVER	1) INTAKE SALT LICK CREEK	\$1,136,125
3300608	CABELL	WVAW HUNTINGTON WATER SYSTEM	IN001 24TH ST PRIMARY OHIO RIVER	1) INTAKE GUYANDOTTE RIVER: INDUSTRIAL INTAKE	\$9,300,000
3300801	CLAY	CLAY WATER DEPARTMENT	ELK RIVER	1) INTAKE BUFFALO CREEK	\$1,400,000
3301037	FAYETTE	KANAWHA FALLS PSD	KANAWHA RIVER	1) INTAKE LOOP CREEK IN DEEPWATER, WV--NEED TO VERIFY QUANTITY ADEQUATE	\$1,544,000
3301204	GRANT	CITY OF PETERSBURG	SOUTH BRANCH POTOMAC RIVER	1) NEW INTAKE SOUTH BRANCH POTOMAC RIVER	\$217,500
3301205	GRANT	MOUNTAIN TOP PSD	MILL RUN RESERVOIR (QUARRY)	1) INTAKE STONY RIVER	\$792,425
3301315	GREENBRIER	ALDERSON WATER	GREENBRIER RIVER	1) INTAKE MUDDY CREEK	\$1,129,000
3301405	HAMPSHIRE	CITY OF ROMNEY	SOUTH BRANCH POTOMAC RIVER	1) INTAKE MILL CREEK	\$1,005,575
3301601	HARDY	CITY OF MOOREFIELD	IN001 OLD PLANT SOUTH FORK OF SOUTH BRANCH POTOMAC RIVER; IN002 NEW PLANT SFSBPR	1) UPGRADE EXISTING INTAKE ON SOUTH BRANCH POTOMAC RIVER-TOWN HAD OLD BID OF \$750,000	\$1,087,500
3301905	JEFFERSON	CHARLESTOWN UTILITY BOARD	SHENANDOAH RIVER	1) INTAKE MILLVILLE QUARRY	\$1,175,000
3301933	JEFFERSON	CORPORATION OF SHEPHERDSTOWN	POTOMAC RIVER	1) INTAKE TOWN RUN	\$1,002,000
3302016	KANAWHA	WVAW KANAWHA VALLEY SYSTEM	ELK RIVER	1) INTAKE ON KANAWHA RIVER AT CHARLESTON	\$56,000,000
3302852	MERCER	POCAHONTAS WATER SYSTEM	ABBS VALLEY CREEK	1) INTAKE PINNACLE ROCK LAKE	\$2,016,300
3302915	MINERAL	CITY OF KEYSER	NEW CREEK	1) INTAKE NORTH BRANCH POTOMAC RIVER	\$1,289,775
3302921	MINERAL	CITY OF PIEDMONT	VERSO INTAKE PAPER MILL PRIMARY NORTH BRANCH POTOMAC RIVER	1) INTAKE WESTERNPORT TAP, STILL IN FUTURE, LINE IN PLACE NEEDS TAPPED	\$72,800
3303002	MINGO	GILBERT WATER WORKS	GUYANDOTTE RIVER-NEW INTAKE	1) INTAKE GILBERT CREEK	\$368,625
3303111	MONONGALIA	MORGANTOWN UTILITY BOARD	MONONGAHELA RIVER	1) INTAKE CHEAT LAKE	\$19,000,000
3303301	MORGAN	CITY OF BERKELEY SPRINGS	SPRING INTAKE	1) INTAKE POTOMAC RIVER	\$1,170,625

PWSID #	COUNTY	SYSTEM NAME	INTAKE	VIABLE ALTERNATIVE	ESTIMATED COST (Based on 2016 Pricing)*
3303401	NICHOLAS	RICHWOOD WATER DEPT.	NORTH FORK CHERRY RIVER--DAM AT RUDOLF FALLS	1) INTAKE SUMMIT LAKE	\$5,517,000
3303404	NICHOLAS	SUMMERSVILLE MUNICIPAL WATER	GAULEY RIVER/SUMMERSVILLE DAM	1) INTAKE MUDDLETY CREEK (NEEDS CAPACITY STUDIED TO VERIFY QUANTITY)	\$6,741,000
3303405	NICHOLAS	WILDERNESS PSD	ANGLINS CREEK & MEADOW RIVER PRIMARY, ACTIVE	1) INTAKE ANGLINS CREEK OUT OF POSSIBLE INFLUENCE OF MEADOW RIVER	\$844,379
3303602	PENDLETON	TOWN OF FRANKLIN	DRY RUN SPRING	1) UPGRADE INTAKE ON THORN CREEK	\$725,000
3303802	POCAHONTAS	CASS SCENIC RAILROAD	LEATHERBARK RUN	1) INTAKE GREENBRIER	\$518,000
3303803	POCAHONTAS	TOWN OF MARLINTON	KNAPP CREEK	1) INTAKE GREENBRIER RIVER	\$1,174,000
3303812	POCAHONTAS	POCAHONTAS PSD	SPRINGS SP 001, SP002 AND SP 003	1) INTAKE EAST FORK GREENBRIER RIVER	\$1,500,000
3303914	PRESTON	ROWLESBURG WATER WORKS	CHEAT RIVER	1) INTAKE FILL HOLLOW-REHAB DAM & REPLACE LINE, SYSTEM EVALUATING-NO COST PROVIDED	NOT PROVIDED
3303917	PRESTON	TERRA ALTA WATER WORKS	HOPEMONT #1, #2, #3	1) INTAKE TERRA ALTA LAKE-NO OTHER DETAILS OR COSTS	
3304202	RANDOLPH	TOWN OF BEVERLY	TYGART VALLEY RIVER	1) INTAKE BEAVER CREEK	\$1,387,000
3304203	RANDOLPH	ELKINS MUNICIPAL WATER	TYGART VALLEY RIVER RESERVOIR	1) INTAKE TYGART VALLEY RIVER	\$4,700,000
3304211	RANDOLPH	HUTTONSVILLE PSD	ELWATER FORK RESERVOIR	1) INTAKE TYGART VALLEY RIVER	\$2,291,000
3304513	SUMMERS	WVAW BLUESTONE WATER SYSTEM	NEW RIVER (BLUESTONE LAKE)	1) INTAKE LITTLE BLUESTONE OR NEW RIVER	\$16,700,000
3304701	TUCKER	DAVIS WATER WORKS	WEIMER RUN IMPOUNDMENT	1) INTAKE DEVIL'S RUN	\$395,000
3304709	TUCKER	CITY OF THOMAS	SPRING FED RESERVOIR	1) INTAKE PENDLETON CREEK (NEED TO VERIFY SUPPLY)	\$820,100
3304902	UPSHUR	BUCKHANNON WATER BOARD	BUCKHANNON RIVER	1) INTAKE STONE COAL LAKE	\$12,490,000
3305103	WEBSTER	COWEN PSD	GAULEY RIVER	1) INTAKE WILLIAMS RIVER	\$2,310,000
3305517	WYOMING	MUNICIPAL WATER WORKS PINEVILLE	GUYANDOTTE	1) RELOCATE PINNACLE CREEK INTAKE	\$46,375
3305407	WOOD	PARKERSBURG UTILITY BOARD	WOOD	1) CONVERT RANNEY WELL	\$2,500,000
				TOTAL INTAKES	\$160,366,104
3300609	CABELL	MILTON WATER	MUD RIVER	1) INTERCONNECTION WVAW	\$17,714
3300806	CLAY	CLAY ROANE PSD	ELK RIVER	1) INTERCONNECTION TOWN OF CLAY	\$200,000

PWSID #	COUNTY	SYSTEM NAME	INTAKE	VIABLE ALTERNATIVE	ESTIMATED COST (Based on 2016 Pricing)*
3301004	FAYETTE	ARMSTRONG PSD	KANAWHA RIVER	1) INTERCONNECTION KANAWHA FALLS	\$1,744,000
3301104	GILMER	CITY OF GLENVILLE	LITTLE KANAWHA	1) INTERCONNECTION WVAW WESTON	\$631,124
3301412	HAMPSHIRE	CENTRAL HAMPSHIRE PSD	SP001-GREEN SPRING; SP002-SPRINGFIELD WD; SP003 RAVEN ROCK	1) INTERCONNECTION FRANKFORT PSD	\$536,258
3301504	HANCOCK	CHESTER MUNICIPAL WATER	INFILTRATION GALLERY OHIO RIVER	1) INTERCONNECTION W/NEWELL COMPANY (GW)	\$439,890
3301714	HARRISON	TOWN OF LUMBERPORT	MANMADE RESERVOIR ON JONES RUN	1) INTERCONNECTION CITY OF SHINNSTON	\$83,500
3301721	HARRISON	CITY OF SHINNSTON	TYGART VALLEY RIVER	1) INTERCONNECTION CLARKSBURG NEEDS UPGRADES	\$2,669,976
3301811	JACKSON	CITY OF RIPLEY	MILL CREEK @ O'BRIEN DAM	1) INTERCONNECTION WITH RAVENSWOOD VIA NORTHERN JACKSON PSD	\$69,520
3302009	KANAWHA	COMMUNITY OF CEDAR GROVE	KANAWHA RIVER	1) INTERCONNECTION WVAW KANAWHA VALLEY	\$85,000
3302031	KANAWHA	CITY OF SAINT ALBANS	COAL RIVER	1) INTERCONNECTION WVAW KANAWHA VALLEY	\$2,300,000
3302104	LEWIS	WVAW WESTON WATER SYSTEM	WEST FORK RIVER	1) INTERCONNECTION WITH WVAW WEBSTER SPRINGS	\$21,200,000
3302203	LINCOLN	CITY OF WEST HAMLIN	GUYANDOTTE RIVER	1) INTERCONNECTION WVAWC	\$347,800
3302205	LINCOLN	LINCOLN PSD	LOW DRAWOFF POINT COAL RIVER	1) INTERCONNECT WVAWC	\$510,144
3302336	LOGAN	MAN WATER WORKS	GUYANDOTTE RIVER	1) INTERCONNECTION WITH BUFFALO CREEK PSD	\$263,538
3302347	LOGAN	BUFFALO CREEK PSD	ONEY FORK INTAKE	1) INTERCONNECTION BUFFALO CREEK PSD	\$282,288
3302357	LOGAN	LOGAN CO. PSD GREENVILLE	GUYANDOTTE RIVER (UPPER INTAKE)	1) INTERCONNECTION BUFFALO CREEK PSD	\$710,303
3302801	MERCER	TOWN OF ATHENS	ATHENS LAKE (AKA LAUREL CREEK)	1) INTERCONNECTION WVAW BLUESTONE	\$2,632,589
3302835	MERCER	WVAW BLUEFIELD WATER SYSTEM	3 RESERVOIRS: ADA, HORTON AND KEE	1) INTERCONNECTION WITH WVAW BLUESTONE	\$22,600,000
3303003	MINGO	KERMIT WATER WORKS	LOW DRAWOFF POINT TUG FORK RIVER-PRIMARY	1) INTERCONNECTION--A BROKEN RIVER CONNECTION THAT WHEN REPAIRED ESTABLISHES SERVICE TO EAST KERMIT AND PROVIDES AN INTERCONNECTION WITH MINGO COUNTY PSD	\$452,790
3303611	PENDLETON	PENDLETON CO. PSD BRANDYWINE	BIG SPRING	1) INTERCONNECTION PETERSBURG	\$881,277

PWSID #	COUNTY	SYSTEM NAME	INTAKE	VIABLE ALTERNATIVE	ESTIMATED COST (Based on 2016 Pricing)*
3304011	PUTNAM	PUTNAM PSD	POPLAR FORK RESERVOIR & LARCH FORK RESERVOIR	1) INTERCONNECTION CITY OF HURRICANE	\$8,400,000
3304209	RANDOLPH	MILL CREEK WATER DEPARTMENT	MILL CREEK	1) INTERCONNECTION HUTTONSVILLE PSD	\$253,500
3304307	RITCHIE	HUGHES RIVER WATER BOARD	HUGHES RIVER	1) INTERCONNECTION CLAYWOOD PARK PSD	\$4,045,300
3304704	TUCKER	HAMRICK PSD	DRY FORK	1) INTERCONNECTION CITY OF PARSONS	\$410,500
3304707	TUCKER	CITY OF PARSONS	SHAVERS FORK	1) INTERCONNECTION HAMRICK PSD--CURRENT PLANS ARE TO INTERCONNECT BOTH SO EACH COULD SUPPLY THE OTHER IF NEEDED	\$586,500
3304802	TYLER	MIDDLEBOURNE MUNICIPAL WATER WORKS	#2 INTAKE MIDDLE ISLAND CREEK	1) CURRENTLY INTERCONNECTED TO TYLER CO. PSD - INTERCONNECTION NEEDS 7500' OF 6" LINE UPGRADED AND A PRESSURE REDUCING VALVE TO FULLY SUPPLY MIDDLEBOURNE	\$818,860
3305004	WAYNE	FORT GAY WATER WORKS	TUG FORK RIVER	1) INTERCONNECTION LOUISA WATER IN KY	\$279,892
3305007	WAYNE	TOWN OF WAYNE	LOW DRAWOFF POINT TWELVEPOLE CREEK	1) INTERCONNECTION (LAVALLETTA PSD--PURCHASES FROM KENOVA-- NEAR WOLF CREEK; INTERCONNECT TO LAVALLETTA NEAR CHERRY BRANCH WOULD USE WATER FROM WVAW HUNTINGTON)	\$509,529
3305009	WAYNE	KENOVA MUNICIPAL WATER	BIG SANDY RIVER	1) INTERCONNECTION WVAW HUNTINGTON	\$567,938
3305104	WEBSTER	WVAW WEBSTER SPRINGS	ELK RIVER	1) INTERCONNECTION WITH WVAW WESTON	\$21,200,000
3305402	WOOD	CLAYWOOD PARK PSD	LITTLE KANAWHA RIVER	1) INTERCONNECTION PARKERSBURG	\$440,000
				TOTAL INTERCONNECTIONS	\$96,169,730
3300402	BRAXTON	FLATWOODS CANOE RUN	ELK RIVER	1) TREATED WATER STORAGE 607K GAL. TANK	\$801,875
3300516	BROOKE	WEIRTON AREA WATER BOARD	OHIO RIVER	1) TREATED WATER STORAGE- 1,025K GAL. STANDPIPE TANK	\$1,021,375
3301024	FAYETTE	MOUNT HOPE WATER	MINE INTAKE TO RAW WATER PUMP	1) USE EXISTING TANKS AT BOY SCOUT CAMP AND PUMP STATION	\$1,538,000
3301705	HARRISON	CLARKSBURG WATER BOARD	WEST FORK RIVER	1) 31 TREATED WATER STORAGE-MULTIPLE TANKS APPROXIMATELY 4,000K GAL.	\$4,206,075

PWSID #	COUNTY	SYSTEM NAME	INTAKE	VIABLE ALTERNATIVE	ESTIMATED COST (Based on 2016 Pricing)*
3302331	LOGAN	CITY OF LOGAN WATER DEPARTMENT	GUYANDOTTE RIVER	1) TREATED WATER STORAGE - THREE 816K GAL. TANKS	\$2,781,750
3302364	LOGAN	LOGAN COUNTY PSD NORTHERN REGIONAL	GUYANDOTTE RIVER	1) TREATED WATER STORAGE 1,260K GAL. TANK	\$1,200,125
3302435	MCDOWELL	MCDOWELL CO. PSD BERWIND	BERWIND WELL	1) TREATED WATER STORAGE 195K GAL. TANK	\$403,625
3302804	MERCER	BLUEWELL PSD	SHUPE RESERVOIR	1) TREATED WATER STORAGE 105K GAL. TANK	\$406,625
3302849	MERCER	GREEN VALLEY GLENWOOD PSD GLENWOOD	GLENWOOD RESERVOIR	1) TREATED WATER STORAGE 1,260K GAL. TANK	\$1,200,125
3302928	MINERAL	FRANKFORT PSD	IN001 PATTERSON CREEK	1) TREATED WATER STORAGE: 4 EXISTING TANKS NEED DEMOLISHED AND REPLACED WHILE INCREASING VOLUME	\$1,812,000
3303005	MINGO	MATEWAN WATER WORKS	TUG FORK RIVER	1) TREATED WATER STORAGE 607K GAL. TANK	\$801,875
3303009	MINGO	WILLIAMSON UTILITY BOARD	TUG FORK RIVER	1) TREATED WATER STORAGE 1,260K GAL. TANK	\$1,200,215
3303029	MINGO	MINGO COUNTY PSD NAUGATUCK	TUG FORK RIVER	1) TREATED WATER STORAGE 2,000K GAL. ELEVATED TANK	\$3,722,900
3303908	PRESTON	KINGWOOD WATER WORKS	CHEAT RIVER	1) TREATED WATER STORAGE 2,490K GAL. TANK	\$2,400,250
3304104	RALEIGH	BECKLEY WATER COMPANY	GLADE RESERVOIR; SWEENEYSBURG MINE	1) TREATED WATER STORAGE W/SWEENEYSBURG PRODUCTION	\$8,909,160
3304407	ROANE	WALTON PSD	SILCOTT FORK RESERVOIR	1) TREATED WATER STORAGE 50K GAL. TANK	\$240,850
3304605	TAYLOR	TAYLOR COUNTY PSD	TYGART DAM TYGART LAKE (TYGART VALLEY RIVER)	1) TREATED WATER STORAGE	\$695,000
3304803	TYLER	SISTERSVILLE MUNICIPAL WATER	OHIO RIVER	1) TREATED WATER STORAGE REHABILITATE TANK TAKEN OUT OF SERVICE	\$300,000
				TOTAL TREATED WATER STORAGE	\$33,641,825
3300404	BRAXTON	SUGAR CREEK PSD	ELK RIVER	1) RAW WATER STORAGE 297K GAL. TANK	\$713,375
3300512	BROOKE	FOLLANSBEE HOOVERSON HTS.	OHIO RIVER	1) RAW WATER STORAGE 2,026K GAL. TANK	\$1,726,700
3300901	DODDRIDGE	TOWN OF WEST UNION	MIDDLE ISLAND CREEK (MIC)	1) RAW WATER STORAGE 1,000K GAL. TANK	\$993,625
3301307	GREENBRIER	CITY OF LEWISBURG	GREENBRIER RIVER	1) RAW WATER STORAGE 2,000K GAL. TANK	\$4,552,000
3301613	HARDY	HARDY COUNTY PSD BAKER	IN001 PARKER HOLLOW RESERVOIR	1) RAW WATER STORAGE 300K GAL. TANK	\$650,000
3302434	MCDOWELL	MCDOWELL CO. PSD BARTLEY	BARTLEY SOURCE	1) RAW WATER STORAGE 491K GAL. TANK	\$713,375

PWSID #	COUNTY	SYSTEM NAME	INTAKE	VIABLE ALTERNATIVE	ESTIMATED COST (Based on 2016 Pricing)*
3302515	MARION	TOWN OF MONONGAH	TYGART VALLEY RIVER	1) RAW WATER STORAGE 666K GAL. TANK	\$909,375
3303206	MONROE	RED SULPHUR PSD	HANCOCK SPRING; COBURN SPRING; RICH CREEK INTAKE	1) RAW WATER STORAGE 816K GAL. TANK	\$927,250
3303308	MORGAN	PAW PAW WATER WORKS	POTOMAC RIVER	1) RAW WATER STORAGE 297K GAL. TANK	\$564,125
3303402	NICHOLAS	CRAIGSVILLE PSD	GAULEY RIVER	1) RAW WATER STORAGE 3,000K GAL. TANK	\$3,936,000
3303403	NICHOLAS	NETTIE LEIVASY PSD	PANTHER CREEK	1) RAW WATER STORAGE 1,000K GAL TANK	\$2,935,000
3304005	PUTNAM	CITY OF HURRICANE	HURRICANE RESERVOIR	1) RAW WATER STORAGE 1.000K GAL. TANK	\$1,500,000
3304204	RANDOLPH	TOWN OF HARMAN	HARMAN WELL	1) RAW WATER STORAGE 105K GAL. TANK	\$403,625
3304507	SUMMERS	BIG BEND PSD	GREENBRIER	1) RAW WATER STORAGE 209K GAL. TANK	\$506,875
3304711	TUCKER	TIMBERLINE FOUR SEASONS RESORT	WELL #5	1) RAW WATER STORAGE 210K GAL. TANK	\$506,875
3305205	WETZEL	PINE GROVE WATER	NORTH FORK FISHING CREEK	1) RAW WATER STORAGE-CURRENTLY 177K ONLY 70% VIABLE DUE TO PUMP ISSUES, ADD 139K GAL. TANK AND UPGRADE PUMPS TO FULLY UTILIZE STORAGE.	\$478,750
3305516	WYOMING	COMMUNITY OF OCEANA	LAUREL FORK	1) RAW WATER STORAGE 2,026K GAL. TANK	\$1,726,700
				TOTAL RAW WATER STORAGE	\$23,743,650
3300315	BOONE	BOONE RALEIGH PSD	BIG COAL RIVER	1) WELLS DRILLED INTO WATER FILLED ABANDONED MINES	\$500,000
3300406	BRAXTON	WVAW GASSAWAY	ELK RIVER	1) DEVELOP WELLS (PREFERRED); NOTE \$14,800 ANNUAL O & M	\$1,000,000
3300508	BROOKE	HAMMOND PSD	BUFFALO CREEK	1) GROUNDWATER SUPPLY WELLS OR SPRINGS	\$134,000
3302503	MARION	FAIRVIEW WATER SYSTEM	WELLS #1, #2, #3 AND #4	2) MINE POOLS	\$700,000
3302603	MARSHALL	CITY OF CAMERON	EARTHEN DAM	1) WELLS TO REPLACE SURFACE SUPPLY-- MURRAY ENERGY IS LONG WALL MINING THE AREA AND THIS IS THEIR PROPOSED BACKUP.	\$888,250
3303516	OHIO	CITY OF WHEELING	OHIO RIVER	1) TWO ADDITIONAL WATER WELLS PLANNED	NO COST PROVIDED
				TOTAL GROUNDWATER (WELLS)	\$3,222,250
3301912	JEFFERSON	CORPORATION OF HARPERS FERRY	POTOMAC RIVER; ELK RUN	1) PORTABLE WATER TREATMENT TRAILER	

PWSID #	COUNTY	SYSTEM NAME	INTAKE	VIABLE ALTERNATIVE	ESTIMATED COST (Based on 2016 Pricing)*
3301979	JEFFERSON	JEFFERSON UTILITIES DEERFIELD VILLAGE	WELL #1 -SOUTH PAW LANE; WELL #2-DEERFIELD VILLAGE DRIVE; WELL #3 PATHFINDER COURT	1) WATER TRUCK TO HAUL WATER IN AN EMERGENCY	
3302813	MERCER	GREEN VALLEY GLENWOOD PSD BULLTAIL	JAMES BAILEY RESERVOIR	ALTERNATIVE SOURCE ANALYSIS NOT COMPLETED	
3303616	PENDLETON	PENDLETON CO. PSD UPPER TRACT	SOUTH FORK OF SOUTH BRANCH POTOMAC RIVER	1) OLD SUGAR GROVE NAVAL FACILITY HAS A WATER PLANT ON THEIR PROPERTY THAT COULD BE USED IN AN EMERGENCY.	\$108,750
				TOTAL MISCELLANEOUS	\$108,750
3300104	BARBOUR	PHILIPPI PUBLIC WATER SYSTEM	TYGART VALLEY RIVER	1) PLAN TO CONSTRUCT RESERVOIR ON LITTLE LAUREL CREEK	\$5,864,000
3300701	CALHOUN	GRANTSVILLE WATER DEPARTMENT	LITTLE KANAWHA RIVER	1) IMPOUNDMENT BULL RIVER	\$300,000
3301046	FAYETTE	WVAW NEW RIVER	NEW RIVER	1) RAW WATER STORAGE- 20,000K GAL. (5 DAY SUPPLY) RESERVOIR	\$22,600,000
3302502	MARION	CITY OF FAIRMONT	TYGART VALLEY RIVER	1) 11,400K GAL. RESERVOIR	\$3,170,375
3303808	POCAHONTAS	CHEAT MOUNTAIN WATER SYSTEM	SHAVERS FORK LAKE	1) RAW WATER STORAGE USING SILVER CREEK RESERVOIR-CURRENTLY USED FOR SNOWMAKING	\$1,194,000
3303912	PRESTON	PRESTON COUNTY PSD #1		1) FAIRFAX POND IS COUNTED AS RAW WATER STORAGE ALSO	
3304405	ROANE	CITY OF SPENCER	CHARLES FORK LAKE	1) ALTERNATE SOURCE- CONSTRUCT RESERVOIR MILETREE LAKE-A FORMER INTAKE THERE BUT STRUCTURE TOO DILAPIDATED TO USE	\$431,409
				TOTAL RESERVOIRS (IMPOUNDMENTS)	\$33,559,784
				GRAND TOTAL	\$350,812,093

APPENDIX D

Public Water System Supply Study Commission Work Group Membership

Work Group 1

(A review and assessment of the effectiveness and quality of information contained in updated Source Water Protection Plans required for certain public water systems by the provisions of sections nine-c, article one, chapter sixteen of this code)

Rahul Gupta, MD, MPH, MBA, FACP - **Chair**
Commissioner and State Health Officer
Bureau for Public Health

Michael McCawley, PhD
Assistant Professor
WVU School of Public Health

Walt Ivey (*-serving as proxy for Dr. Gupta*)
Office of Environmental Health Services
Bureau for Public Health

Laura Martin
West Virginia American Water Company

Tim Ball
Morgantown Utility Board

Ed Watson
Canaan Valley Institute

Evan Hansen
West Virginia Rivers Coalition

Amy Swann, Executive Director
Rural Water Association

Work Group 2

(A review and assessment of the effectiveness of the legislation enacted during the 2014 Regular Session of the West Virginia Legislature, as it pertains to assisting public water systems in identifying and reacting or responding to the identified potential sources of significant contamination and increasing public awareness and public participation in the emergency planning and response process)

Dr. Terry Polen - **Chair**
WV Department of Environmental Protection

Evan Hansen
West Virginia Rivers Coalition

Rahul Gupta, MD, MPH, MBA, FACP
Commissioner and State Health Officer
Bureau for Public Health

Pam Nixon
Citizen Member

Walt Ivey (*-serving as proxy for Dr. Gupta*)
Office of Environmental Health Services
Bureau for Public Health

Amy Swann, Executive Director
WV Rural Water Association

Tim Ball
Morgantown Utility Board

Work Group 3

(The extent of available financing and funding alternatives which are available to existing public water systems to pursue projects which are designed to create alternate sources of supply or increased stability of supply in the event of a spill, release or contamination event which impairs the water system's primary source of supply)

Amy Swann, Executive Director - **Chair**
WV Rural Water Association

Rick Roberts
E. L. Robinson Engineering Company

David L. Acord, II (Designee for Mike Albert)
WV Public Service Commission

Ed Watson
Canaan Valley Institute

Laura Martin
West Virginia American Water Company

Work Group 4

(A review and consideration of the recommendations of the U.S. Chemical Safety and Hazard and Investigation Board after its investigation of the Bayer Crop Science incident of 2008)

Michael McCawley, PhD - **Chair**
Assistant Professor
WVU School of Public Health

Rebecca McPhail, President
West Virginia Manufacturers Association

Pam Nixon
Citizen Member

Ed Watson
Canaan Valley Institute

Dr. Terry Polen (designee)
WV Department of Environmental Protection

Work Group 5

(Any recommendations or suggestions the study commission may offer to improve the infrastructure of existing public water systems, to provide safe and reliable sources of supplies and to pursue other measures designed to protect the integrity of public water services)

David L. Acord, II - **Chair**
WV Public Service Commission

Amy Swann, Executive Director
WV Rural Water Association

Tim Ball
Morgantown Utility Board

Rahul Gupta, MD, MPH, MBA, FACP
Commissioner and State Health Officer
Bureau for Public Health

Laura Martin
West Virginia American Water Company

Walt Ivey *(serving as proxy for Dr. Gupta)*
Office of Environmental Health Services
Bureau for Public Health

Rick Roberts
E. L. Robinson Engineering Company

Evan Hansen
West Virginia Rivers Coalition

APPENDIX E
Department of Environmental Protection
Aboveground Storage Tank Program Status Report

As of December 1, 2017

Total Registered Tanks:	40,877
Total Regulated Tanks:	5,355
Total Level 1 Tanks:	4,536
Total Level 2 Tanks:	819

January 1 - November 28, 2017

Aboveground Storage Tank Inspections (All types):	1905
Aboveground Storage Tank Compliance Monitoring Inspections:	1562
CMI Follow-up Inspections & IOVs:	296
Compliance Assistance Inspections:	0
Complaint Responses:	21
Record Reviews:	3
Spill Responses:	23

Fiscal Information – Fiscal Year 2017

Aboveground Storage Tank Fund (3004)

• Beginning Cash Balance	\$ 525,795.89
• Total Revenues	\$ 1,219,671.43
• Total Expenses	\$ 478,744.77
• Ending Balance	\$ 1,266,722.55

Leaking Aboveground Storage Tank Fund (3016)

• Beginning Cash Balance	\$ 784,246.06
• Total Revenues	\$ 246,565.93
• Total Expenses	\$ 286,211.09
• Ending Balance	\$ 744,600.90

APPENDIX F
Public Water System Supply Study Commission Recommendations Matrix

PWSSSC Recommendations		
Number	Description	Status/Comment
1.1	Require an annual evaluated exercise of the SWPP.	Survey to PWSs in May 2017.
1.2	DEP and/or DHHR notify downstream water utilities if change in AST.	Quarterly reports to database. Recommending other notifications as well.
1.3	Contract with outside organization to review and evaluate SWPPs.	In the process of completing the review.
1.4	Legislature review of the proposed alternative water sources. Funding needs.	Provided to the Legislature in previous reports. Unknown if considered.
2.1	Additional funding to BPH and DEP for electronic databases.	Working on process as able. Still recommend improvements to reporting process.
2.2	Use current and past Commission reports for future legislation.	Reports have been submitted to Legislature.
2.3	Spill reporting hotline collect information if spills were from AST and when systems were notified.	Working on process as capable. Still recommend improvements to reporting process.
2.4	Any future reduction in tanks regulated by the Aboveground Storage Tank Act be based on sound science demonstrating no threat to drinking water.	New to 2017 report.
3.1	Legislature appropriate \$2.0 million for BPH source water protection efforts.	Legislature has provided additional funding through SFY 2018.
3.2	Amend West Virginia Code 16-1-9c to stagger SWPP submissions.	Working on a voluntary method with PWSs.
3.3	IJDC and BPH amend project ranking to add emphasis for source water protection projects.	BPH has amended project rankings. Will review with IJDC.
3.4	Legislature resume appropriation of \$40 million to IJDC.	\$20 million appropriated at last state budget.
4	Emergency Planning Community Right to Know Act (EPCRA) Tier II information, as appropriate, should be required to be made available to water utilities within 30 days of receipt of the request of the information from a water utility.	New to 2017 report.
5.1.A	Not up to utility to complete gaps in SDS. Entities submitting SDSs to have burden of submitting missing information.	No updates at this time.
5.1.B	Amend West Virginia Code 22-30-10(a) to inform PWS of type and quantity of fluids stored upstream.	No updates at this time.

PWSSSC Recommendations		
Number	Description	Status/Comment
5.1.C	Notify downstream PWSs of NPDES NOVs issued.	New to 2017 report.
5.2	Regarding reporting spills to the hotline. Report spills as soon as possible, provide accurate coordinates, timing of the spill, contains of the spill. Notice to PWS as soon as possible.	BPH is forwarding to PWSs by email. Still recommend improvements to reporting process.
5.3	DHSEM and LEPC provide information to PWS as allowed.	No updates at this time.
5.4	Legislation to provide tax credits for source water protection.	No updates at this time.
5.5	BPH evaluate and potentially implement RAIN or another similar network.	Providing funding to implement RAIN in areas of the state.