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

Jimmy Gianato, Chairman

West Virginia Division of Homeland Security and Emergency Management

December 15, 2014

Table of Contents

Executive Summary

On January 9, 2014, West Virginia Department of Environmental Protection (DEP) Air Quality Inspectors were called to investigate an odor complaint in Charleston, WV. A hole was discovered in a tank, owned by Freedom Industries, and material was observed leaking from the tank both on the site and into the Elk River above the West Virginia American Water intake. The material was identified as 4-Methylcyclohexane Methanol, more commonly referred to as MCHM. Reports on the quantity of MCHM that leaked from the site have varied from an initial report of 2500-5000 gallons to the current estimate of 10,000 gallons. After consultation with health officials, West Virginia American Water decided not to close the intakes at the water treatment plant. Ultimately the company ordered a "Do Not Use" order affecting approximately 300,000 people in nine (9) counties. This order impacted Kanawha, Cabell, Boone, Putnam, Lincoln, Logan, Clay, Roane, and Jackson counties and began an emergency response that included numerous partners from all levels of government. Governor Earl Ray Tomblin declared a State of Emergency and requested an emergency declaration under the Robert T. Stafford Act to gain logistic and commodity support from the Federal Emergency Management Agency. The impact of the spill was far reaching and highlighted some very strong capabilities that have been developed to protect and support our citizens during disasters as well as weaknesses and gaps in our response capabilities and laws.

On March 8, 2014 The WV Legislature passed Senate Bill No. 373 which established the Public Water System Supply Study Commission. The Commission consists of twelve (12) members, four (4) members appointed by the Governor, one by the President of the Senate, one by the Speaker of the House of Delegates and five (5) representing State and Local Agencies. The Commission members were officially named on September 4, 2014 and the Governor appointed Jimmy Gianato as Chairman of the Commission. The first meeting of the Commission commenced on September 22, 2014.

Senate Bill 373 (SB 373) specified that the Commission was created for the purpose of studying and reporting back to the Legislature on the following subject matters.

(1) A review and assessment of the effectiveness and the quality of information contained in updated source water protection plans required for certain public water systems by the provisions of W. Va. Code § 16-1-9c.

Status: Although plans have not been filed yet, a recommendation was made to include a requirement of regular documented and evaluated exercises of the source water protection plans to achieve the purpose and objectives of the plans.

(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 public water systems 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.

Status: Since the legislation has been in effect a relatively short period of time, the Commission was unable to assess the overall effectiveness of the legislation. However, numerous workgroups have been meeting and working to expand public awareness and participation with local and state agencies. It was recommended that state agencies evaluate and, if feasible, propose an appropriate interface to access and coordinate information maintained on various state agency databases. The state agencies would report back to the Commission prior to the December 15, 2015 Commission report due date with their findings and proposal.

(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.

Status: The Commission recognizes that there is limited to no financing available to help public utilities create source water protection plans. The Commission recommends appropriations beginning in 2015 and continuing for 3 years (until fiscal year 2017) totaling $12.2 million dollars for the development of the source water protection plans. The Commission intends to continue studying ways to make the plans more economically feasible including regional, county and watershed plans. This could potentially reduce the average cost of those plans. This funding proposal does not address the anticipated funds needed to implement the construction that may be required by the plans.

(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.

Status: The Commission is still studying and working with citizen groups and intends to have information to report in the 2015 final report.

(5) Lastly, 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 service.

Status: The Commission looked at a broad variety of topics that could potentially impact the tasks they were charged with. The Commission recommends that the Legislature clarify that a Public Water System (PWS) does not have an implied duty to complete information gaps on a MSDS sheet. Instead, DEP is encouraged to require tank owners/operators to provide all necessary information with their Emergency Response Plans required under SB 373. The Commission recommends that all occurrences of spills must be promptly relayed to any potentially impacted Public Water Systems (PWS) and to the WV Department of Health and Human Resources (DHHR), Bureau for Public Health. Additionally all spills must be reported with reference to standardized global positioning satellite (GPS) coordinate systems. In addition, PWSs should be informed about potential threats imposed by the transportation of contaminants by road, rail and water.

The Commission proposes that the Legislature amend WV Code §22-30-25 by adding an additional exemption for all tanks used to supply public drinking water including, but not limited to, tanks that store chemicals used in the treatment of water. Furthermore, the Legislature should clarify that PWSs are not subject to the fees necessary by WV Code § 22-30-12 (Aboveground Storage Tank Administrative Fund) and 22-30-13 (Protect Our Water Fund). The Commission is suggesting legislation to enact The West Virginia Water Protection Incentive Act, which promotes voluntary land management actions to protect our waters by providing income tax credits.

There are several items that Senate Bill 373 did not provide for as it created the commission. It did not establish the mechanism under which the Commission operates. It doesn't specify if it is a commission of the Legislature or the executive branch or independent. There are no provisions for the duration of the Commission, when it would sunset and other authorities generally required for conducting business. The Commission was not provided a budget to operate under and given no authority to expend funds to pay for the costs associated with its operation. It is therefore recommended that the Legislature review the legislation to correct these issues and provide the necessary budget either independently or within an appropriate state agency.

There are various requirements throughout Senate Bill 373 requiring facilities that have had releases or spills to make notification to various federal and state regulatory agencies. It is recommended that a review of these requirements be conducted to ensure that there are adequate provisions for the timely notification of releases or spills and that the proper procedures are in place to respond to these emergencies. If public

notification is required, the necessary procedures should be put in place working with local authorities to notify the public.

Senate Bill 373, in several locations requires information sharing between the various entities involved in developing the necessary plans to address the completing of the source water protection plans (SWPP). In addition, SB 373 contemplated sharing the information with the public. In trying to implement the bill however, agencies have struggled with how to manage this critical issue. If the PWSs do not have information about potential contaminants, their ability to develop source water protection plans will be significantly impaired. Data being submitted in some cases is already available to state agencies, local emergency planning committees and fire departments but may contain confidential and proprietary data which is exempt from disclosure by federal laws and regulations. Although §22-30-8 and §22-30-14 address the exemption from FOIA for some of the data, it does not address the concern of releasing it to water utilities. Certain information is protected under Homeland Security exemptions and is not releasable. This can cause issues for agencies as they comply with the laws they must operate under. SB 373 has a general provision that a designee of a PWS is to maintain the information in a confidential manner. There are no provisions in the statute that specifies how this information is to be protected and safeguarded. It is recommended that this section be reviewed to ensure (i) that there are no potential conflict with other state and federal statutes or regulations; (ii) that adequate processes and procedures are established to ensure confidentiality is maintained; and (iii) that substantial penalties are provided to motivate others that are provided the information to comply and protect it in the same fashion that state and local agencies must. This would help facilitate the sharing of certain information to assist in the plan development. The State Emergency Response Commission (SERC) is currently looking to obtain bids for a system that will allow for information sharing of this data with appropriate permissions for users in a geographic information system (GIS) format that can be utilized to share the information and assist in the development of the necessary plans. The SERC has been inhibited by a lack of funding for the purchase and maintenance of such a system by a very low cap on Tier II fees. The removal of this cap will assist in the deployment of a system that can be used by all entities to accomplish this goal.

In a relatively short time, the Commission has dedicated itself to studying and assessing, not only the issues charged in SB 373, but all-encompassing issues related to source water protection plans and public water utilities.

Members of the Commission

Jimmy Gianato, Chairman
Representing WV Division of Homeland Security and Emergency Management

Tim Ball, Morgantown Utility Board
Representing the Municipal League

Dr. Rahul Gupta, Kanawha-Charleston Health Department
Appointed by the President of the Senate

Delegate Nancy Guthrie, House of Delegates
Appointed by the Speaker of the House of Delegates

Richard Hitt (Designee)
Representing WV Public Service Commission

Michael McCawley, West Virginia University
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

Dr. Terry Polen (Designee)
Representing the 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
Representing the Rural Water Association

Dr. Letitia Tierney
Representing Bureau for Public Health WVDHHR

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

History of SB 373

Early on the morning of January 9, 2014, West Virginia Department of Environmental Protection Air Quality Inspectors were called to investigate an odor complaint along U.S. 119 in the Mink Shoals area of Charleston, WV, which is about two miles northeast of downtown Charleston. By 11:00 AM, inspectors were able to trace the source of the odor to the Freedom Industries site at 1015 Barlow Drive in Charleston. While on site, the inspectors noticed there was liquid in the containment area of one of the tanks on site and directed representatives of Freedom Industries to notify the West Virginia Department of Environmental Protection Spill Hotline. At approximately 12:05 PM, the DEP spill hotline—which is managed by the Division of Homeland Security and Emergency Management—received the call from a Freedom Industries employee reporting that a hole had been discovered in a tank and material was observed leaking from the tank. The caller advised that the dike was containing the material at the time. The material was identified as 4-Methylcyclohexane Methanol, more commonly referred to as MCHM. Reports on the quantity of MCHM that leaked from the site have varied from an initial report of 2500-5000 gallons to the current estimate of 10,000 gallons. [1]

The Freedom Industries site was located approximately one and one half miles upstream from the intake of the West Virginia American Water Kanawha Valley Water Treatment Plant. After consultation with health officials, West Virginia American Water decided not to close the intakes at the water treatment plant. In his testimony before a congressional committee, West Virginia American Water President Jeff McIntyre stated:

> After considering the existing circumstances and potential options, we and the West Virginia Bureau for Public Health determined that the best course of action was to keep the water treatment plant running and institute the "Do Not Use" for several critical reasons:
>
> 1. In addition to loss of water for drinking, cooking and bathing, a shutdown would have quickly resulted in the loss of basic sanitation capabilities for approximately 300,000 people;
>
> 2. A shutdown would also have quickly resulted in a loss of fire protection (*e.g.*, no water pressure to fire hydrants and sprinkler systems) in the 9 counties we serve;
>
> 3. We had no way, at that time, to determine or estimate the duration of the chemical spill or resulting plume that would affect the water treatment plant; and

[1] Testimony of Director James J. Gianato before the COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE U.S. HOUSE OF REPRESENTATIVES, CHARLESTON, WV on FEBRUARY 10, 2014

> 4. Shutting down the plant, losing the system, then re-starting it would have been a prolonged, difficult process, keeping customers out of water for any use for a substantially longer period of time than the actual period that the "Do Not Use" order was in place. Restarting after system loss would have required us to use chlorinated water to disinfect pipes that had been depressurized and exposed to air, flush that chlorinated water, and refill and re-pressurize this highly complex system with approximately 1,900 miles of mains, more than 100 water storage tanks, and 179 pressure zones. [2]

At approximately 4:50 PM on January 9, the West Virginia Department of Health and Human Resources-Bureau of Threat Preparedness advised the Division of Homeland Security and Emergency Management that there would be a conference call at 5:00 PM to discuss an imminent announcement by West Virginia American Water that they were going to issue a "'Do Not Use" order due to chemical contamination of their water treatment facility and system. This order impacted Kanawha, Cabell, Boone, Putnam, Lincoln, Logan, Clay, Roane, and Jackson counties and began an emergency response that included numerous partners from all levels of government. Governor Earl Ray Tomblin declared a State of Emergency and requested an emergency declaration under the Robert T. Stafford Act to gain logistic and commodity support from the Federal Emergency Management Agency. Over the next several weeks, these agencies completed one of the largest water logistics missions in state history. The response also triggered numerous other emergency plans including hospitals, health care facilities and educational institutions. The response impacted over 100,000 West Virginia American Water Customers. These customers included hotels, restaurants, dairies, farming and agriculture facilities, as well as many other industries dependent on potable water.

On January 21, 2014, Freedom Industries reported to authorities that a second chemical, a mixture of polyglycol ethers (PPH), was part of the January 9th chemical release. This disclosure, many days into the event, prompted DEP to order Freedom to disclose all chemicals that leaked into the river.

The impact of the spill was far reaching and highlighted some very strong capabilities that have been developed to protect and support our citizens during disasters as well as weaknesses and gaps in our response capabilities and laws.

The response to this event highlighted the outstanding work of West Virginia's emergency responders and the West Virginia National Guard in protecting our citizens. The teamwork and dedication of these individuals was exemplarity and should not go unnoticed. Even though these responders did an excellent job of dealing with the event

[2] Testimony of Jeffrey L. McIntyre, President, West Virginia American Water before the COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE U.S. HOUSE OF REPRESENTATIVES, CHARLESTON, WV on FEBRUARY 10, 2014

once it occurred, it showed a better job could be done in identifying, planning and collaborating to protect the citizens of West Virginia. An important gap was current information on the location of storage facilities with potential contaminants and their relationship to water treatment facilities. Although some data existed, it was largely out of date.

One key issue that must be considered as we move forward is the large number and classification of chemicals that may impact our water systems. MCHM was not considered a toxic substance under current guidelines.

"An unusual issue with MCHM and PPH is their relative lack of toxicity. The problems that the release caused are very real, and there is no doubt that the 'do not use' order was the right thing to do; but there is relatively little data on the chemicals. And, the data that does exist, while incomplete, shows a low rate of toxicity for all routes of exposure. In a world where deadly chemicals such as methyl isocyanate, dioxins, and others grab all the headlines, little thought is given to those less toxic, but ubiquitous, chemicals that can wreak havoc with our lives like these chemicals have. Neither of these chemicals is even considered to be hazardous materials by any state or federal laws."[3]

The lack of toxicity of certain chemicals and the interaction with other chemicals creates some concern for what requirements should be addressed in regard to notification of spills and the timing of such notifications.

In mid-February, Governor Tomblin hired an independent consultant to review safe levels of the chemicals leaked and develop a protocol for home testing. Historical documents concerning the these reports and other water crisis documents are available at http://www.dhsem.wv.gov/Pages/WV-American-Water-Emergency.aspx

Key items were identified as the event unfolded and have been discussed at length in after action reviews, public meetings, independent studies and debate at the West Virginia Legislature. The result of this was the passage of Senate Bill 373 and the creation of this Commission.

[3] Testimony of Mike Dorsey, WV DEP before the COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE U.S. HOUSE OF REPRESENTATIVES, CHARLESTON, WV on FEBRUARY 10, 2014

Recommendations

The Commission is charged in the legislation with making recommendations related to five (5) specific tasks. In order to achieve this goal, since its appointment, the Commission has met on five (5) occasions. Due to the short time frame to complete its initial report, the Commission formed working groups to look at the tasks outlined in Senate Bill 373. The following is a breakdown of those tasks and the initial recommendations of the Commission. Although the Commission has only been meeting for a short period of time, it has done a tremendous amount of work toward its goals. It has not only reviewed the items required, but has identified other key issues that need to be considered. The information developed by the workgroups is attached as Appendices A-F. The composition of the work groups is listed in Appendix G.

Work Group 1

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

Recommendation of Work Group 1

At this time, there has not been any updated source water protection plans to review. The recommendation is made to include a requirement of annual evaluated and documented exercises of the source water protection plans. An annual exercise of the source water protection plan would allow the public water system to review, refine and update the actions and goals identified in the plan. An exercise allows the opportunity for partners outside of the public water system to become more aware of the source water protection plan and the water system. Exercises can benefit all parties in implementing plans, identifying deficiencies and/or weaknesses which can subsequently be addressed. Exercises should be conducted in a format prescribed by the Division of Homeland Security and Emergency Management that follows Homeland Security exercise guidelines.

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 public water systems 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

Recommendation of Work Group 2

Since the legislation has been in effect a relatively short period of time, the Commission was unable to assess the overall effectiveness of the legislation, however numerous workgroups have been meeting and working to expand public awareness and participation with local and state agencies. It is recommended that State agencies coordinate to review and evaluate the feasibility of a comprehensive database or interface of inventories for use by PWSs and report back to the Commission before the December 15, 2015 report.

Work Group 3

(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

Since the charge for this workgroup involves funding for projects, several of the funding agencies were invited to present a description of the types of funding their agency could provide and whether or not their programs currently have sufficient dollars which can be used for these types of projects.

Discussion was held concerning the mechanisms for funding and the types of eligible projects. Normally these types of projects funded by these programs have a severe rate impact on communities and their customers since these are not projects that will add additional customers to help repay loans. It was agreed and decided that any loan dollars would have to be repaid by the existing customers.

The workgroup turned to the fact that before proposed projects can even be discussed, the source water protection plans have to be completed. There is currently no available funding stream to pay for the plans. If grant funds are not available, significant rate increases for customers are possible. Based on information compiled by this work group, source water protection plans could range between $100,000 and $600,000 based on the size of the system (See Appendix C). Some systems (ground water under the direct influence of surface water or GUDI) are considering other methods to develop the required plans. An example of this is a project being undertaken in McDowell County along with Region 1 Planning and Development Council where the estimates range at approximately $50,000. It was also noted that under the Bureau for Public Health's (BPH) proposed legislative rules, some systems will file their plans beginning on July 1, 2015. It was also noted that previously, voluntary source water protection plans were paid for by funding from the United States Environmental Protection Agency. Those plans did not have the technical evaluations required by Senate Bill 373. Those engineering evaluations are a contributing factor to the increased cost estimates of these plans.

The BPH is working to develop a template these utilities can use to create their source water protection plans. The idea to group plan due dates by watershed should encourage utilities in those areas to work together to share ideas and potentially costs. Right now, groundwater systems are not required to submit a plan unless they are under the influence of surface water. The BPH is under contract with the United States Geological Service to make those designations. The study is general and not system specific.

Recommendation of Work Group 3

It is recommended by this work group that funding be made available based on the following schedule and that source water protection plans be phased in over a three (3) year period. The Commission, as well as the State agencies involved, is looking for more efficient ways to develop the source water protection plans in order to make the plans better and less costly.

- In fiscal year 2015, there will be 74 utilities with plans costing approximately $100,000 each for a total of $7.4 M needed in appropriations. There is $1.0 M currently on hand from 2014 Legislative Appropriations to WVDHHR which brings the total to 6.4 M dollars.

- In fiscal year 2016, there will be 48 utilities – 10 GUDI systems = 38 utilities with plans costing approximately $100,000 each for a total of $3.8 M dollars in appropriations.

- In fiscal year 2017 there will be 20 SWIG (Source Water Influenced Groundwater) utilities with plans costing approximately $100,000 each with a total of $2.0 M in appropriations.

- These funding requests are not inclusive of construction projects as a result of the source water protection plans. Unexpended funds may be carried forward from fiscal year to year with any funds remaining in fiscal year 2017 to be applied to maintenance and ongoing updates of source water protection plans.

Detailed notes and information obtained by this workgroup are attached as Appendices A-D.

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

This work group, chaired by Dr. Rahul Gupta, has met and is working with other citizen groups and will have information available in the summer of 2015.

Work Group 5

(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 service

This work group looked at a broad variety of topics that could potentially impact the tasks they were charged with. This ranged from incomplete Material Safety Data Sheets (MSDS) to proposed legislation for tax incentives for water protection.

Discussion was held that it should not be the utilities' responsibility to complete information gaps in MSDS sheets. DEP receives emergency plans from the owner/operator of the tanks, upon review, if there is missing information, the person submitting the plan would be asked to provide information. The Secretary of DEP would have the power to require modification.

A considerable discussion was held concerning the responsibility related to the accuracy of the Material Safety Data Sheets (MSDS) used by utilities. Discussion concerning the incompleteness, lack of information concerning interaction with other chemicals, and toxicology were considered. It was the consensus that this responsibility would not be placed on the owner/operator of the water system. An item of concern is whether the utility has an implied duty to complete information gaps and to the extent there are information gaps, who should fill it on the MSDS. It was felt that the Secretary of DEP should have the authority to reject filings from facilities with incomplete data. In addition discussions were held concerning the use of a nationally recognized group to review the toxicology information on sheets where information is either missing or inadequate. It was felt that the manufacturer has the ultimate responsibility on providing complete information on products they have produced.

Detailed notes and information obtained by this workgroup are attached as Appendix E.

Recommendations of Work Group 5

Recommendation 1

The Legislature should clarify that the utility doesn't have implied duty to complete gaps in information on MSDSs that are submitted. In reviewing emergency plans required of tank owners/operators, required in SB 373, if there is missing information, the entity submitting the MSDS should have the burden of providing additional information. DEP is encouraged to work with a national toxicology group to assist with this issue.

Recommendation 2

The group recommends that all spills must immediately, upon discovery, be relayed to any potentially impacted Public Water Systems (PWS) and to the Bureau for Public Health (BPH). We further recommend that such notification be made via an automated system which is interfaced with existing spill notification systems (spill reporting hotlines), with emergency response systems (county 911 systems) and with existing geographic information system (GIS) and databases (such as those operated by the Division of Homeland Security and Emergency Management, county 911 systems and the WV DEP). By efficiently utilizing existing GIS data, the spill location may be cross referenced with a data base of PWS information and the water systems which may potentially be impacted can be quickly determined and automatically notified.

The automated reporting system should, at a minimum, provide information on the precise location of the spill, the date and time of occurrence, the material(s) released and the stream(s) potentially impacted. Systems to meet this requirement do not currently exist and could be quite expensive to develop and implement. Automated notifications during an emergency event could potentially not be received and could lead to further delays in response. In addition many reports received related to spills are incomplete and in many cases inaccurate based on initial reporting.

The group makes the recommendation that all spills must be reported with reference to standardized GPS coordinate systems. We further, recommend that the system used be based upon the widely used and well-understood Latitude/Longitude system with location data obtained from a GPS receiver.

Recommendation 3

The work group discussed mobile threats which were not specifically addressed in SB 373. Mobile threats pose as great or greater threat to public water systems as fixed facilities. Due to the dynamic nature of chemicals moved in transportation, this presents a difficult challenge to having complete source water protection plans. Local Emergency Planning Committees (LEPCs) and local emergency responders are an invaluable resource to public water systems and should be included in the development of source water protection plans. LEPCs have information such as commodity flow studies, hazard analysis, transportation routes and other key information that is vital to public water system plan development.

Recommendation 4

The Legislature amend WV Code §22-30-25 by adding an additional exemption for all tanks used to supply public drinking water including, but not limited to, tanks that store chemicals used in the treatment of water. Furthermore, the Legislature should clarify that PWSs are not subject to the fees necessary by WV Code § 22-30-12 (Aboveground Storage Tank Administrative Fund) and 22-30-13 (Protect Our Water Fund).

Recommendation 5

The Legislature consider draft legislation for income tax credits for landowners for source water protection entitled West Virginia Water Protection Incentive Act.

This section may be cited as the "West Virginia Water Protection Incentive Act".

The “West Virginia Water Protection Incentive Act” promotes voluntary land management actions to protect our waters. The land owners make all land use decisions. The Act promotes compliance with the Chesapeake Bay nutrient reduction requirements at the lowest possible cost to the State

The credits taken in any year may not be greater than the income tax due from the taxpayer (no refunds). However, the Act authorizes carry-forward of unused tax credits for use in subsequent years. The donation of fee simple title or conservation easement may be received by a political subdivision or a private entity that is a qualified recipient under the Federal tax code. Any conservation easement must be perpetual to qualify for tax credit.

Similar programs have succeeded in many states, including Maryland (Md. Code § 10-723) and Virginia (Va. Code Ann. § 58.1-510-513).

Additional Recommendations

Statutory Guidance

There are several items that Senate Bill 373 did not provide for as it created the Commission. It did not establish the mechanism for which the Commission operates. It doesn't specify if the Commission is part of the legislative or executive branch or if it is independent. There is no provision for the duration of the Commission, when it would sunset and other authorities generally required for conducting business. The Commission was not provided a budget to operate under, nor the authorities required to expend funds to pay for the costs of the Commission. It is therefore recommended that the Legislature review the statute to correct these issues and provide the necessary budget either independently or within an appropriate state agency.

Notification and Public Information

There are various requirements throughout SB 373 that require facilities that have had releases or spills to make notification to various federal and state regulatory agencies. It is recommended that a review of these requirements be conducted to ensure that there are adequate procedures for the timely notification of releases or spills and that they are in place to respond to these emergencies. If public notification is required, the necessary procedures should be put in place working with local authorities to notify the public.

Information Sharing

Senate Bill 373, in several locations, requires information sharing between the various entities involved in developing the necessary plans to address the completing of the source water protection plans (SWPP). In addition, SB 373 contemplated sharing the information with the public. In trying to implement the bill however, agencies have struggled with how to manage this critical issue. If the PWSs do not have information about potential contaminants, their ability to develop source water protection plans will be significantly impaired. Data being submitted in some cases is already available to state agencies, local emergency planning committees and fire departments, but may contain confidential and proprietary data which is exempt from disclosure by federal laws and regulations. Although §22-30-8 and §22-30-14 address the exemption from FOIA for some of the data, it does not address the concern of releasing it to water utilities. Certain information is protected under Homeland Security exemptions and is not releasable. This can cause issues for agencies as they comply with the laws they

must operate under. SB 373 has a general provision that a designee of a PWS is to maintain the information in a confidential manner. There are no provisions in the statute that specifies how this information is to be protected and safeguarded. It is recommended that this section be reviewed to ensure (i) that there are no potential conflict with other state and federal statutes or regulations; (ii) that adequate processes and procedures are established to ensure confidentiality is maintained; and (iii) that substantial penalties are provided to motivate others that are provided the information to comply and protect it in the same fashion that state and local agencies must. This would help facilitate the sharing of certain information to assist in the plan development. The State Emergency Response Commission (SERC) is currently looking to obtain bids for a system that will allow for information sharing of this data with appropriate permissions for users in a geographic information system (GIS) format that can be utilized to share the information and assist in the development of the necessary plans. The SERC has been inhibited by a lack of funding for the purchase and maintenance of such a system by a very low cap on Tier II fees. The removal of this cap will assist in the deployment of a system that can be used by all entities to accomplish this goal.

The Commission appreciates the opportunity afforded to it to present its recommendations to the Legislature and stands ready to continue to work to enhance the water quality for the citizens of West Virginia.

Acronyms

ARC	Appalachian Regional Commission
BPH	Bureau for Public Health
DEP	Department of Environmental Protection
DHHR	Department of Health and Human Resources
DWTRF	Drinking Water Treatment Revolving Fund
FOIA	Freedom of Information Act
GIS	Geographic Information Systems
GPS	Global Positioning Satellites
GUDI	Groundwater under the direct influence of surface water
IJDC	Infrastructure and Jobs Development Council
LEPC	Local Emergency Planning Committee
MCHM	4- Methylcyclohexane Methanol
MSDS	Material Safety Data Sheet
PPH	Polyglycol Ethers
PSC	Public Service Commission
PSD	Public Service District
PWS	Public Water Systems
SB 373	Senate Bill 373
SERC	State Emergency Response Commission
SRF	State Revolving Loan Fund
SWIG	Source Water Influenced Groundwater
SWPP	Source water protection plans

Appendix A

Public Water System Supply Study Commission

November 13, 3014 Meeting-Governor's Conference Room-10:30 am

Workgroup (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.

The second workgroup meeting was held in the Governor's Conference Room and was attended by Amy Swann, Chairman, Walter Ivey P.E., Bureau for Public Health, Jonathan Fowler, P.E., Public Service Commission, Rick Roberts, P. E., E.L. Robinson and Delegate Nancy Guthrie. The meeting began at 10:30 AM.

The meeting opened with a review of the Bureau for Public Health's listing of utilities who are required to file a Source Water Protection Plan (Plan) under SB 373. The listing is broken down by watershed and showed the suggested due date for each utility's Plan. The group discussed the various splits by water shed. Rick Roberts noted that some of the ground water influenced utilities have begun to proceed with their source water protection plans.

The group then proceeded to discuss the issues of complexity of individual plans and how that can drive costs. Rick Roberts noted that the number of pressure zones will be a factor as well along with the resulting hydraulic analysis to determine feasibility of inter connections with other systems. Moving water in certain places can be a challenge.

Jonathan stated that this is the first legislation that makes a utility take a comprehensive look at itself. A question was posed about the number of utilities that already have a second intake besides Morgantown. Wilderness Public Service District, Wheeling and Harpers Ferry were among those noted by members of the group. Rick Roberts indicated that he thought there were probably 5 or 6 in total. Jonathan disclosed that there is a current Infrastructure and Jobs Development Council (IJDC) application from a utility seeking an upgrade of its old plant rather than connecting to West Virginia American. It will be discussed at the next IJDC meeting.

The meeting then moved to a discussion of the Source Water Protection Plan cost estimate provided by Rick Roberts. The estimate shows a cost for the average source water protection plan of $103,180. Amy asked about using $105,000 and Rick Roberts and Jonathan indicated that they believe that $100,000 per plan is the better number.

The group proceeded to discuss the various funding appropriations that would need to be made in, not just the current year, but the next two years. They are as follows:

1. 2015 – 74 utilities x $100,000 cost per plan = $7.4 Million - $1.0 Million on hand = $6.4 Million dollars.
2. 2016 – 48 utilities – 10 GUIDI systems = 38 utilities x $100,000 = $3.8 Million dollars.
3. 2017 – 20 SWIG (Source Water Influenced Groundwater) utilities x $100,000 = $2,000,000.

Walt brought up the importance of ensuring that any left over money must be rolled over to the succeeding fiscal year. The $1,000,000 that is subtracted from the 2015 fiscal year is comprised of existing GUIDI money of $500,000 and an estimated $500,000 remaining from the 2015 budget appropriation.

Delegate Guthrie asked how many new plans were needed since there were some systems that already had plans. Walt indicated that even for those utilities that have completed plans, SB 373 has significant new requirements that aren't part of the original plan. Jonathan agreed with Walt's assessment. Rick Roberts asked if there are some that are done or on the way to being done. Walt replied that he thinks the vast majority of utilities have something done. Rick indicated that provider systems will have to look at purchaser systems to assess all of the required items in SB 373. Walt added that BPH is still finding utilities to add to the list.

Delegate Guthrie then asked if some utilities already have some information how much has to be done to complete the plan? She agreed that larger systems will cost more to prepare. Rick Roberts indicated that GUIDI systems are $50,000 on average while larger systems can be upwards of $800,000. Rick Roberts indicated that he used his best professional judgment in developing the numbers. Delegate Guthrie then asked how many private utilities are there. According to the group the three largest are: West Virginia American Water, Beckley Water and Jefferson Utilities.

Walt indicated that SWIG systems will be notified by July 1, 2017. Delegate Guthrie asked if the Committee can make a recommendation about things that West Virginia American Water would be required to do. Walt indicated that he has talked to West Virginia American and that they are going above and beyond in completing their plan. Delegate Guthrie asked if the lab has been moved back from Huntington and Walt responded in the affirmative. She then asked if the monitoring system has been installed and Walt responded that West Virginia American Water is investigating that. Corona is working with West Virginia American Water. Delegate Guthrie then asked about a law requiring a second intake. The group discussed the risks now since the Freedom site is

tank free and will remain so and then moved to Delegate Guthrie's next issue about funds in utility rates for reserves, operation and maintenance and new technology. Jonathan indicated that Rick Hitt, who was absent, was the person to discuss those items with.

The group then voted to advance the recommendation that the full Commission recommend appropriations for funding of plans at the levels indicated below:

1. 2015 – 74 utilities x $100,000 cost per plan = $7.4 Million - $1.0 Million on hand = $6.4 Million dollars.
2. 2016 – 48 utilities – 10 GUIDI systems = 38 utilities x $100,000 = $3.8 Million dollars.
3. 2017 – 20 SWIG (Source Water Influenced Groundwater) utilities x $100,000 = $2,000,000.

The meeting adjourned at 11:45 AM.

Appendix B

Public Water System Supply Study Commission

October 3, 3014 Meeting

Workgroup (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.

The first workgroup meeting was held at the offices of the Public Service Commission and was attended by Public Water System Supply Study Commission Vice Chairman Ed Watson (by phone), Amy Swann, Chairman, Rick Hitt, Public Service Commission General Counsel, Walter Ivey, Bureau for Public Health and Rick Roberts, P. E. Bob DeCrease, P. E., Bureau for Public Health, Jonathan Fowler, P.E., Public Service Commission, David Acord, Public Service Commission, Jim Ellars, P.E., West Virginia Infrastructure and Jobs Development Council, Kelly Workman, Tony O'Leary and James Bush of the West Virginia Development Office also attended and participated in the meeting. The meeting began at 9:00 AM.

The meeting opened with a welcome by Chairman Swann and a description of the legislative charge for this workgroup. Since the charge for this workgroup involves funding for projects, several of the funding agencies were invited to present a description of the types of funding their agency has and whether or not their program currently has sufficient dollars that can be used for these types of projects.

Jim Ellars began by explaining the IJDC process including the definition of a project and the review of applications for funding. The normal funding stream is 80% of excess video lottery proceeds, capped at $40 M, however this year the cap is $20 M. 20% of the funding comes from earnings from investments and loan repayments. The Water Development Authority acts as the fiduciary counsel and accountant for the IJDC. Funding can be in the form of loans or grants and is split 80% for water and sewer projects and 20% for economic development projects. Out of that 80%, the State must provide the state match for the two State Revolving Loan Funds (SRFs). Funds are also split evenly by the three congressional districts with 80% available for loans and 20% for grants.

Funds from the Council are very tight now because of the delays in getting the Chesapeake Bay bonds to market and the funding of several very large water and sewer projects other than Chesapeake Bay. Currently, there is $40 M for projects which

includes this fiscal year's $20 allocation on July 1. There will be a $30 M increase when the Chesapeake Bay bonds close on October 16, 2014. In terms of planning for the upcoming year, IJDC is currently asking engineering firms for their estimates of projects that will be ready to proceed. The need exceeds currently available funding. IJDC operates on a readiness to proceed basis.

Kelly Workman of the West Virginia Development Office's Community Development Block Grant section began describing her funding criteria by noting that her ability to fund projects has various factors including population, housing stock and benefit for low to moderate income citizens. Six years ago, her funding held steady at $18 to $20 M, however for the last several years she has only had $13 M. For the Fiscal Year 2014, she has 62 applications, totaling approximately $70 M. Her agency tries to partner with Rural Utility Service and the two SRF programs to complete project funding. Currently the Development Office is managing 50 active projects across the state. The money available is extended as grants and usually priority is given to areas where utility rates are high and income is low to moderate. Readiness to proceed is also an important factor in her program along with the goals of the community. Her forecasts show that the upcoming years will remain tough in terms of available funding versus need.

Rick Roberts asked Kelly since the type of projects that are being proposed here will benefit the entire system, does the income level come from the entire system have to be used as the basis for eligibility as opposed to extensions of service where the income level eligibility comes from the area where service is being extended? Her answer was yes. He then asked Jim if the IJDC Median Household Income and 2010 Census Data policies would also apply. Jim answered in the affirmative noting that virtually every funding agency considered MHI and considered proposed rates. The types of projects being discussed could have a severe rate impact on communities and their customers since these are not projects that will add additional customers to help repay loans. Jim agreed and said that any loan dollars would have to be repaid by the existing customers.

The discussion turned to the fact that before proposed projects can even be discussed, the source water protection plans have to be completed. There is no currently available funding stream to pay for the plans. Jonathan Fowler stated that if grant funds are not available, significant rate increases for customers are coming. Source water protection plans can cost a minimum of $100,000 with some going over $600,000 for the larger systems. Walt Ivey indicated that some Regional Planning and Development Councils are performing the work and gave the example of Region 1 and McDowell County. Some systems (ground water under the direct influence of surface water or GUIDI) are under this scope of work with a quote of $50,000. He also noted that under the BPH's proposed legislative rules, some systems will file their plans beginning on July 1, 2015. Rick Roberts noted that in the past, voluntary source water protection plans were paid for by funding from the United States Environmental Protection Agency but those

plans did not have the technical evaluations required by Senate Bill 373. Those engineering evaluations are a big addition and will drive costs up.

Walt indicated that BPH is working to develop a template that all utilities can use to create their source water protection plans and that the idea to group plan due dates by watershed will encourage utilities in those areas to work together to share ideas and potentially costs. Right now, groundwater systems are not required to submit a plan unless they are under the influence of surface water. BPH is under contract with the United States Geological Service to make those designations. The study is general and not system specific. He gave an example of a ground water influenced system as the water systems along the Ohio River who get their water from Raney wells. The study should be completed in about six months. If a system is a SWIG (surface water influenced ground water) it will have to do a source water protection plan.

Rick Roberts noted that a funding stream to pay for the source water protection plans must be determined quickly, given the legislative deadlines for plan completion. It cannot be emphasized enough that for many of the small systems in the state, unless significant grant funding is found quickly, large rate increases to pay for these plans are a certainty. Kelly indicated that Tony is reviewing the bill for their office.

James Bush, also of the Development Office, then went on to discuss the Appalachian Regional Commission funding program. The program is a grant only program with no loans. There are 13 states that make up the Appalachian Regional Commission and West Virginia is the only state located entirely within the region. Appalachian Regional Commission funding is used for a wide range of projects, not just water and sewer. Education and community development are also critical needs. In West Virginia, the focus of this funding has been for water and sewer projects with 70-80% of the state allocation going for those. The state allocation used to be $6 to $7M annually but it has dropped to $3 to $4M annually. Distressed counties receive a higher priority for funding. There is a match requirement for all projects with ARC funding being the last dollars in.

Applications for ARC funding are first received at the state level and are reviewed in the Development Office. Recommendations are made to the Governor's Office and then the Governor's Office makes recommendations to the full Appalachian Regional Commission. James' office does not administer funds but has to find a basic agency like Rural Utility Service or Community Development Block Grant to do that. The basic agency doesn't have to have funding in the project, but the project has to qualify for the basic agency's funding criteria. ARC does not do study funding (which is what the source water protection plans are) but they may consider doing so if a distressed county applies. However, with the deadlines for the plans, ARC funding is not a realistic possibility.

Jonathan asked if anyone had enquired of the Army Corps of Engineers if they are available to partner with funding. Since no one indicated that they had, Jonathan volunteered to do that. The Water Development Authority is capable of funding, but they are out of money right now as well. Planning grant dollars at the BPH have also dried up. He sees the requirements of this bill as making the dollars required for the Chesapeake Bay cleanup looking like small change. He believes that $100s of millions of dollars would be required to construct interconnections. Rick Roberts noted that funding now looks very grim. Jonathan noted that there are no requirements within the bill as to timelines for actual implementation of the plans.

Rick Roberts asked about the two day storage requirement. Walt indicated that any utility with intermittent operation times, ie. the plant operates for 8 hours and then kicks off and then operates for another 8 hours, has to have two days of storage. Rick Hitt and Walt further indicated that all requirements of the bill for the minimum contents of a Plan have to be met. Even if a utility currently meets the two day storage requirement, all other studies required by the bill have to be evaluated. Jonathan asked Walt if there would be any more definitive criteria than what was in the proposed legislative rules and Walt indicated that since the bill was so specific, no other criteria would be forthcoming.

Bob Decrease then discussed his program, the Drinking Water Treatment Revolving Fund. This program is strictly for drinking water systems. His program doesn't fund dams or reservoirs. His fund received a $9M capitalization grant in the most recent fiscal year. 30% of that funding goes to pay for the BPH's administrative services with 70% going to construction. He agreed with Jim's earlier remark about the 20% state match for his program. Currently he receives $1.7 to $1.8 M from IJDC along with $6M in loan repayments. He has approximately $14.5M available to loan to water systems. He does have a principal forgiveness of 20% of the $9M or about $2M in grants per year.

The DWTRF has an application process involving a project priority list. Public Health impact, Safe Drinking Water Act compliance and affordability are all criteria used in placement on the project priority list. His projects are also on a readiness to proceed criteria. He tries to fund projects and get the money out of the door. He has a 97% utilization of funds rate which is extremely high compared to other states. Source water protection plans are not an eligible cost under his program. Rick Roberts asked if second generation money was subject to the same restrictions and Bob answered that it was.

Jim also noted that source water protections plans may meet the definition of a project under the Council's statutory authority, although the Council has typically used its funds for construction. The Council is interested in putting pipe into the ground. James indicated that, technically, ARC could fund source water protection plans but it has not done so in the past.

Rick Hitt indicated that WDA does have bonding authority and wondered if that is a possibility. Feasibility for going to market with small funding offerings is not really feasible. Jim indicated that a bond would have to be at least $10M to go. WDA bonds are AA or AAA rated according to Jim and the interest rate offered to systems could be better than the 5% currently being charged to project sponsors. Jonathan indicated that IRS regulations for tax exempt bonds have changed and that money has to be spent within three years. Also, all projects have to sign on with project completion schedules. It can't be done piecemeal. Rick Roberts asked Rick Hitt if the Public Service Commission can give expedited approval for loans for public service districts. Dave Acord indicated that Public Service Commission approval is required for a loan or a grant received by a public service district. If a rate increase is required, a 19-A rate application is required. Rick Hitt stated that the new 25% provision on rate collection at the beginning would also apply.

Kelly Workman noted that hazard mitigation plans are done by county. She asked "is there an advantage to grouping like that"? Rick Roberts indicated that, given the watershed grouping by BPH, it is very advisable to do all the utilities in an area together. Economies of scale would be applicable. Kelly indicated that an RFP for a larger group may generate a cost savings. Jonathan indicated that the Regional Councils could do an RFP for a water shed. Walt agreed that there should be a purchasing advantage by Regional Councils. A variety of engineering firms may be enticed by the larger projects that this approach would entail.

Jim Ellars stressed that under state law, a Plan would have to be considered a project before it could receive funding from the IJDC. Virtually all of the IJDC water and sewer funds go to proposed capital projects. Jim stated that he is currently working on the 3 year needs survey for the state. GIS data has line locations but not sizes. Treatment plant locations are not disclosed because of Homeland Security concerns. Jonathan asked if source water protection plan dollars can be included in his report. Jim indicated that he is looking at a November/ December, 2014 time frame for providing his report. Walt told Jim he believed that Jim should include data about treatment plants in addition to the served/unserved areas currently in the report. Many treatment plants have already reached or exceeded their useful lives. ARC stated that it could technically fund plans but they have limited money and it would probably be a low priority.

The meeting concluded with the following next steps as action items before the next meeting:

1. Jim Ellars will make contact with Water Development Authority and provide members of the group with the same program information as was discussed in today's meeting.

2. Kelly will provide the group with the summary of her program that she provides to the West Virginia Legislature.

3. Rick Roberts will make contact with Janna Lowery at Rural Utilities Service in Morgantown and ask her to provide her program information to the group.

4. Walt Ivey will provide the group with the list of the 124 systems affected by Senate Bill 373.

Future meetings will be held at the Public Service Commission's offices. Rick Roberts suggested that the next meeting of the work group be scheduled at the conclusion of the full Commission's meeting on October 27th.
The meeting concluded at 10:45 AM.

Appendix C

SOURCE WATER PROTECTION PLAN (SWPP) - COST ESTIMATE

Task	Project Manager	Project Specialist	Project Engineer	Technical 1	Technical 2	CADD	Admin
Project Initiation Meeting - preparation	8	8					4
Project Initiation Meeting - attendance	6	6					
Follow up Meeting 1 - preparation	4	4					2
Follow up Meeting 1 - attendance	6	6					
Follow up Meeting 2 - preparation	4	4					2
Follow up Meeting 2 - attendance	6	6					
Project Closure Meeting - preparation	8	8	4			4	4
Project Closure Meeting - attendance	6	6					
Assist Public Water System (PWS) with developing the local source water protection team	8			8			
Assist PWS with updating the Potential Sources of Significant Contamination (PSSC) inventory within the Zone of Critical Concern (ZCC)							
Provide documentation of field verification of computerized database searches and actual inspection of the ZCC	4	24			24		
Plot contaminant source locations on SWP area map(s) and key to table listing facility name, owner, type of contaminant, etc.		8				16	4
Assist the PWS with updating its management plan							
Determine the feasibility of developing management strategies for all of the PSSC within the ZCC, depending on the total number identified – prioritize the potential threat of each PSSC and address highest priority first and lower ranked PSSC in the future as time and resources allow.	4	16		16	8		2
Plan shall include a table listing the implementation schedule of the management method for each identified threat, along with the responsible individual for overseeing implementation and an estimated cost for the highest priority areas.		16		8			2
Assist with updating the source water monitoring plan - Update shall cover raw water sampling parameters and current water quality monitoring requirements	4	8			16		2
Assist in updating the contingency plan							
Examination and analysis of the PWS ability to isolate or divert contaminated waters from its surface water intake or groundwater supply, and the amount of raw water storage capacity	4		16				

Examination and analysis of the PWS existing ability to switch to an alternative water source or intake	4		16				
Examination and analysis of the PWS existing ability to close its water intake or groundwater supply, and the duration of time it can keep that water intake or groundwater supply closed without creating a public health emergency	2		16				
Provide operational information for each plant, including the average number of hours the plant operates each day, the max/min hours of operation in one day during the past year, average quantities of water treated per day and max/min quantities of water treated and produced in one day during the past year	8		16	8			4
Examination and analysis of the PWS existing available storage capacity	4		8				
Provide calculated level of unaccounted for water (if Total Received by Customers for year/Total Water treated for year is less than 85%, describe measures being taken to reduce the level of water loss)	4		8				
If PWS is served by a single-source intake, examine the following options:							
Constructing a secondary of backup intake	16		16				
Constructing additional raw water storage capacity to provide at least two days of system storage based on the plant's max level of production experienced within the past year	16		16				
Creating/constructing an interconnection with other plants (operated by the PWS or other PWS)	16		24			8	
Any other alternatives available to the PWS to provide safe water in the event of contamination	8		8				
For any of the options above deemed to be technically or economically feasible, submit an analysis of the comparative costs with risks/benefits of each option	24		24			16	
Assist the PWS with updating the following forms: Drinking Water Shortage – Short Term Loss of Source (Contingency Planning) and the Drinking Water Shortage – Spill Response Sheet (Contingency Planning)	4	16	16				
Describe current water treatment processes	4		4			6	
Examine the feasibility of implementing an early warning monitoring system	8	16	8				
Perform an analysis of the PWS ability to operate effectively during power outages	8		8				
Perform a an analysis of the PWS ability to meet future water supply needs by expanding a current source or developing a new one, including projections for growth over the next five years that would exceed current system capacity	4		8	4			
Assist in developing a communications plan							
Document the manner in which the PWS shall notify state and local health agencies and the public of the contamination event	4	4	8				
Work with the PWS to input the SWPP required information into the online digital BPH website.	4	16					
SUBTOTAL HOURS	210	172	224	44	48	50	26
Hourly Rates	$160.00	$140.00	$140.00	$120.00	$90.00	$70.00	$40.00
BASE COST	$33,600.00	$24,080.00	$31,360.00	$5,280.00	$4,320.00	$3,500.00	$1,040.00
BASE COST TOTAL	**$103,180.00**						

Appendix D

Source Water Protection Plan Utilities by Watershed Groups 2014

System ID	System Name	County	WSD	Plannning and Development Regions (1-11)	DEP Watershed Group (1-5)	Type System	Due Date	Population
WV3300508	HAMMOND PSD	BROOKE	UOS	11	1	SW	1-Jan-16	2,186
WV3300512	FOLLANSBEE HOOVERSON HEIGHTS	BROOKE	UON	11	1	SW	1-Jan-16	5,702
WV3300516	WEIRTON AREA WATER BOARD	BROOKE	UON	11	1	SW	1-Jan-16	22,694
WV3301504	CHESTER	HANCOCK	UON	11	1	SW	1-Jan-16	3,119
WV3301811	RIPLEY CITY OF	JACKSON	UOS	5	1	SW	1-Jan-16	5,078
WV3302603	CAMERON WATER	MARSHALL	UOS	10	1	SW	1-Jan-16	1,052
WV3303516	WHEELING WATER	OHIO	UOS	10	1	SW	1-Jan-16	22,222
WV3304307	HUGHES RIVER WATER	RITCHIE	LK	5	1	SW	1-Jan-16	4,278
WV3304405	SPENCER WATER DEPT	ROANE	LOK	5	1	SW	1-Jan-16	5,002
WV3304802	MIDDLEBOURNE WATER WORKS	TYLER	MON	5	1	SW	1-Jan-16	1,267
WV3304803	SISTERSVILLE MUNICIPAL WATER	TYLER	MON	5	1	SW	1-Jan-16	1,892
WV3305205	PINE GROVE WATER	WETZEL	MON	10	1	SW	1-Jan-16	593
WV3305402	CLAYWOOD PARK PSD	WOOD	LK	5	1	SW	1-Jan-16	7,695
WV3300101	BELINGTON TOWN OF	BARBOUR	TV	7	2	SW	1-Apr-16	2,153
WV3300104	PHILIPPI CITY OF	BARBOUR	TV	7	2	SW	1-Apr-16	3,281
WV3300901	WEST UNION TOWN OF	DODDRIDGE	MON	6	2	SW	1-Apr-16	1,895
WV3301705	CLARKSBURG WATER BOARD	HARRISON	WF	6	2	SW	1-Apr-16	18,310
WV3301714	LUMBERPORT TOWN OF	HARRISON	WF	6	2	SW	1-Apr-16	1,788
WV3301721	SHINNSTON CITY OF	HARRISON	TV	6	2	SW	1-Apr-16	4,903
WV3302104	WVAW - WESTON	LEWIS	WF	7	2	SW	1-Apr-16	11,436
WV3302502	FAIRMONT CITY OF	MARION	TV	6	2	SW	1-Apr-16	29,170
WV3302503	FAIRVIEW TOWN OF	MARION	UM	6	2	GU	1-Apr-16	834
WV3302515	MONONGAH TOWN OF	MARION	TV	6	2	SW	1-Apr-16	3,171
WV3303111	MORGANTOWN UTILITY BOARD	MONONGALIA	UM	6	2	SW	1-Apr-16	56,209
WV3303908	KINGWOOD WATER BOARD	PRESTON	C	6	2	SW	1-Apr-16	3,102
WV3303912	PRESTON COUNTY PSD 1	PRESTON	UM	6	2	SW	1-Apr-16	4,043
WV3303914	ROWLESBURG WATER WORKS	PRESTON	C	6	2	SW	1-Apr-16	707
WV3303917	TERRA ALTA WATER WORKS	PRESTON	C	6	2	GU	1-Apr-16	1,488
WV3304204	HARMAN TOWN OF	RANDOLPH	C	7	2	GU	1-Apr-16	188
WV3304202	BEVERLY TOWN OF	RANDOLPH	TV	7	2	SW	1-Apr-16	2,475
WV3304203	ELKINS CITY OF	RANDOLPH	TV	7	2	SW	1-Apr-16	8,270
WV3304209	MILL CREEK WATER DEPT	RANDOLPH	TV	7	2	SW	1-Apr-16	976
WV3304605	TAYLOR COUNTY PSD	TAYLOR	TV	6	2	SW	1-Apr-16	1,322
WV3304701	DAVIS WATER WORKS	TUCKER	C	7	2	SW	1-Apr-16	878
WV3304704	HAMRICK PSD	TUCKER	C	7	2	SW	1-Apr-16	1,643
WV3304707	PARSONS CITY OF	TUCKER	C	7	2	SW	1-Apr-16	1,512
WV3304709	THOMAS CITY OF	TUCKER	C	7	2	SW	1-Apr-16	672
WV3304711	TIMBERLINE FOUR SEASON RESORT MANAGEMENT	TUCKER	C	7	2	GU	1-Apr-16	591
WV3304902	BUCKHANNON WATER BOARD	UPSHUR	TV	7	2	SW	1-Apr-16	8,697
WV3300202	BERKELEY CO P S W D-BUNKER HILL	BERKELEY	PDD	9	3	GU	1-Jul-16	26,547
WV3300212	MARTINSBURG CITY OF	BERKELEY	PDD	9	3	GU	1-Jul-16	15,650

WV3300218	BERKELEY COUNTY PSWD-POTOMAC RIVER	BERKELEY	PDD	9	3	SW	1-Jul-16	22,396
WV3301204	PETERSBURG TOWN OF	GRANT	SBP	8	3	SW	1-Jul-16	2,841
WV3301205	MOUNTAIN TOP PSD	GRANT	NBP	8	3	SW	1-Jul-16	2,088
WV3301405	ROMNEY WATER DEPT	HAMPSHIRE	SBP	8	3	SW	1-Jul-16	1,948
WV3301412	CENTRAL HAMPSHIRE PSD GREEN SPRING	HAMPSHIRE	NPB	8	3	GU	1-Jul-16	1,172
WV3301601	MOOREFIELD MUNICIPAL WATER	HARDY	SBP	8	3	SW	1-Jul-16	2,689
WV3301613	HARDY COUNTY PSD BAKER	HARDY	CAC	8	3	SW	1-Jul-16	150
WV3301979	Deerfield Village Subdivision	JEFFERSON	PDD	9	3	GU	1-Jul-16	99
WV3301905	CHARLES TOWN UTILITIES	JEFFERSON	SJ	9	3	SW	1-Jul-16	14,488
WV3301912	CORPORATION OF HARPERS FERRY	JEFFERSON	PDD	9	3	SW	1-Jul-16	1,801
WV3301933	CORPORATION OF SHEPHERDSTOWN	JEFFERSON	PDD	9	3	SW	1-Jul-16	4,000
WV9919068	BURR INDUSTRIAL PARK	JEFFERSON	PDD	9	3	GU	1-Jul-16	2,370
WV3302915	KEYSER CITY OF	MINERAL	NBP	8	3	SW	1-Jul-16	5,202
WV3302921	PIEDMONT MUNICIPAL WTR WKS	MINERAL	NBP	8	3	SW	1-Jul-16	775
WV3302928	FRANKFORT PSD	MINERAL	NBP	8	3	SW	1-Jul-16	5,468
WV3303301	BERKELEY SPRINGS CITY OF	MORGAN	PDD	9	3	SW	1-Jul-16	3,629
WV3303308	PAW PAW WATER WORKS	MORGAN	CAC	9	3	SW	1-Jul-16	552
WV3303602	FRANKLIN MUNICIPALITY OF	PENDLETON	SBP	8	3	SW	1-Jul-16	1,732
WV3303611	PENDLETON CO PSD-UPPER TRACT	PENDLETON	SBP	8	3	GU	1-Jul-16	448
WV3303613	PENDLETON CO PSD(BRANDYWINE)	PENDLETON	SBP	8	3	SW	1-Jul-16	804
WV3300315	BOONE RALEIGH P S D	BOONE	C	3	4	SW	1-Oct-15	1,317
WV3300402	FLATWOODS CANOE RUN PSD	BRAXTON	E	7	4	SW	1-Oct-15	4,143
WV3300404	SUGAR CREEK PSD	BRAXTON	E	7	4	SW	1-Oct-15	1,191
WV3300406	WVAW- GASSAWAY	BRAXTON	E	7	4	SW	1-Oct-15	2,127
WV3300408	BURNSVILLE PUBLIC UTILITY	BRAXTON	LK	7	4	SW	1-Oct-15	789
WV3300701	GRANTSVILLE MUNICIPAL	CALHOUN	LK	5	4	SW	1-Oct-15	841
WV3300801	CLAY WATER DEPT	CLAY	E	3	4	SW	1-Oct-15	1,341
WV3300806	CLAY-ROANE PSD (PROCIOUS DISTRICT)	CLAY	E	3	4	SW	1-Oct-15	2,162
WV3301004	ARMSTRONG PSD	FAYETTE	UK	4	4	SW	1-Oct-15	2,318
WV3301024	MOUNT HOPE WATER	FAYETTE	LN	4	4	SW	1-Oct-15	1,955
WV3301029	WVAWC MONTGOMERY DISTRICT	FAYETTE	UK	4	4	SW	1-Oct-15	4,724
WV3301037	KANAWHA FALLS PSD	FAYETTE	UK	4	4	SW	1-Oct-15	2,379
WV3301046	WVAWC NEW RIVER REGIONAL WTR TRTMT PLT	FAYETTE	LN	4	4	SW	1-Oct-15	25,760
WV3301104	GLENVILLE UTILITY	GILMER	LK	7	4	SW	1-Oct-15	2,395
WV3301307	LEWISBURG	GREENBRIER	G	4	4	SW	1-Oct-15	10,050
WV3301315	ALDERSON WATER	GREENBRIER	G	4	4	SW	1-Oct-15	2,680
WV3302009	CEDAR GROVE COMMUNITY OF	KANAWHA	UK	3	4	SW	1-Oct-15	1,090
WV3302016	WVAWC-KANAWHA VALLEY DIST	KANAWHA	E	3	4	SW	1-Oct-15	198,521
WV3302031	ST ALBANS WATER	KANAWHA	C	3	4	SW	1-Oct-15	13,265
WV3302205	LINCOLN PSD	LINCOLN	C	2	4	SW	1-Oct-15	4,981
WV3302801	ATHENS TOWN OF	MERCER	UN	1	4	SW	1-Oct-15	4,802
WV3302804	BLUEWELL PSD	MERCER	UN	1	4	SW	1-Oct-15	6,135
WV3302813	GREEN VALLEY GLENWOOD PSD BULLTAIL	MERCER	UN	1	4	SW	1-Oct-15	1,869

WV3302835	WVAWC BLUEFIELD DISTRICT	MERCER	UN	1	4	SW	1-Oct-15	12,174
WV3302849	GREEN VALLEY GLENWOOD PSD GLENWOOD	MERCER	UN	1	4	SW	1-Oct-15	5,775
WV3302852	POCAHONTAS WATER SYSTEM	MERCER	UN	1	4	SW	1-Oct-15	1,933
WV3303206	RED SULPHUR PSD	MONROE	UN	1	4	SW	1-Oct-15	5,352
WV3303401	RICHWOOD WATER DEPT	NICHOLAS	GA	4	4	SW	1-Oct-15	2,940
WV3303402	CRAIGSVILLE PSD	NICHOLAS	GA	4	4	SW	1-Oct-15	4,723
WV3303403	NETTIE LEIVASY PSD	NICHOLAS	GA	4	4	SW	1-Oct-15	3,151
WV3303404	SUMMERSVILLE MUNICIPAL WATER	NICHOLAS	GA	4	4	SW	1-Oct-15	5,746
WV3303405	WILDERNESS PSD	NICHOLAS	GA	4	4	SW	1-Oct-15	4,475
WV3303802	CASS SCENIC RAILROAD	POCAHONTAS	G	4	4	SW	1-Oct-15	1,023
WV3303803	MARLINTON TOWN OF	POCAHONTAS	G	4	4	SW	1-Oct-15	1,400
WV3303808	CHEAT MOUNTAIN WATER SYSTEM	POCAHONTAS	C	4	4	SW	1-Oct-15	1,867
WV3303812	POCAHONTAS COUNTY PSD	POCAHONTAS	G	4	4	GU	1-Oct-15	557
WV3304005	HURRICANE CITY OF	PUTNAM	LOK	3	4	SW	1-Oct-15	8,266
WV3304011	PUTNAM P S D	PUTNAM	LOK	3	4	SW	1-Oct-15	21,719
WV3304104	BECKLEY WATER COMPANY	RALEIGH	LN	1	4	SW	1-Oct-15	49,058
WV3304407	WALTON PSD	ROANE	LK	5	4	SW	1-Oct-15	1,925
WV3304507	BIG BEND PSD	SUMMERS	G	1	4	SW	1-Oct-15	1,039
WV3304513	WVAWC BLUESTONE PLANT	SUMMERS	UN	1	4	SW	1-Oct-15	26,499
WV3305103	COWEN PSD	WEBSTER	GA	4	4	SW	1-Oct-15	2,518
WV3305104	WVAW - WEBSTER SPRINGS	WEBSTER	E	4	4	SW	1-Oct-15	1,692
WV3300608	WVAWC - HUNTINGTON DIST	CABELL	LO	2	5	SW	1-Jul-15	86,827
WV3300609	MILTON WATER	CABELL	LG	2	5	SW	1-Jul-15	4,883
WV3302203	WEST HAMLIN CITY OF	LINCOLN	LG	2	5	SW	1-Jul-15	2,964
WV3302331	LOGAN WATER BOARD CITY OF	LOGAN	UG	2	5	SW	1-Jul-15	4,505
WV3302336	MAN WATER WORKS	LOGAN	UG	2	5	SW	1-Jul-15	1,008
WV3302347	BUFFALO CREEK PSD	LOGAN	UG	2	5	SW	1-Jul-15	2,829
WV3302357	LOGAN CO PSD-GREENVILLE SYSTEM	LOGAN	UG	2	5	SW	1-Jul-15	3,960
WV3302364	LOGAN COUNTY PSD - NORTHERN REGIONAL	LOGAN	LG	2	5	SW	1-Jul-15	15,715
WV3302434	MCDOWELL COUNTY PSD BARTLEY	MCDOWELL	TF-Upper	1	5	GU	1-Jul-15	1,632
WV3302435	MCDOWELL COUNTY PSD BERWIND	MCDOWELL	TF-Upper	1	5	GU	1-Jul-15	863
WV3303002	GILBERT WATER WORKS	MINGO	UG	2	5	SW	1-Jul-15	1,145
WV3303003	KERMIT WATER WORKS	MINGO	TF-Lower	2	5	SW	1-Jul-15	1,424
WV3303005	MATEWAN WATER WORKS	MINGO	TF-Lower	2	5	SW	1-Jul-15	2,237
WV3303009	WILLIAMSON UTILITY BOARD	MINGO	TF-Lower	2	5	SW	1-Jul-15	4,213
WV3303029	MINGO COUNTY PSD - NAUGATUCK	MINGO	TF-Lower	2	5	SW	1-Jul-15	4,654
WV3305004	FORT GAY WATER WORKS	WAYNE	TF-Lower	2	5	SW	1-Jul-15	2,287
WV3305007	WAYNE WATER TOWN OF	WAYNE	TP	2	5	SW	1-Jul-15	5,684
WV3305009	KENOVA MUNICIPAL WATER	WAYNE	TP	2	5	SW	1-Jul-15	9,254
WV3305516	OCEANA COMMUNITY OF	WYOMING	UG	1	5	SW	1-Jul-15	4,410
WV3305517	PINEVILLE MUNICIPAL	WYOMING	UG	1	5	SW	1-Jul-15	2,945

Appendix E

Water Group #5 meeting - November 20, 2014
Meeting called to order in Charleston at PSC headquarters at 1:00 pm by meeting chair Richard Hitt

All voting members are present (Richard Hitt, PSC General Counsel, designee of the Chairman of the PSC, Chair, Amy Swann, Rural Water Association representative, Rick Roberts, professional engineer, Governor's appointee, Tim Ball, Municipal League representative, Morgantown Utility Board), non-voting member, Nancy Guthrie present, Dr. Gupta, Kanawha County Health Department, is absent, but his representative, John Law is here.

Interested public attendees included:
Brett Morgan, WV-American Water
Laura Jordan, WV-American Water
Walter Ivy, West Virginia Bureau for Public Health
Dave Acord
Jonathan Fowler

Handed out agenda packets, added item 5, at the request of the Water Commission and items 6, and 7 at the request of Delegate Guthrie. (Agenda is attached as Attachment A).

All members agreed to accept and approved the report from the last meeting as minutes of the last meeting.

1. Discussion of Agenda Item #1 - MSDS – whether the utility has an implied duty to complete information gaps and to the extent there are information gaps, who should fill it.

a. General Discussion

(Hitt) I believe at the last meeting, there were concerns that it shouldn't be the utilities' responsibility. One thought about where we can get the missing information. DEP gets emergency plans from the owner/operator of the tanks, upon review, if there is missing information, the person submitting the plan can be asked to provide information. Secretary of DEP would have the power to require modification.

(Ball) Two separate issues, one being implied duty. Water Commission should make a recommendation to the Legislature that clarification be made that implied duty does not exist. Second issue is who should fill in the gaps. Maybe an undoable goal. Mike McCawley, who is on another work group, mentioned national or international toxicological association having interest in pursuing this. If we were going to assign this

duty to a state agency, encourage them to seek help from Toxicological Association. (Hitt), Hesitant about making recommendation of a particular state agency for this task. (Ivy), DEP and entity that has chemical should fill in blanks. (Hitt), If information is missing, push back to the owner/operator for information. (Accord), Toxicological association could help. (Hitt), It would be up to Toxicological Association to volunteer. (Ivy), They would have to have a contract. (Guthrie), who would pay for costs, owner/operator or manufacturer. (Hitt), The Owner/operators have been directed to file emergency plan, not the manufacturer. Have to by statute, get the manufacturer involved or try to do it indirectly by having the owner/operator to contact the manufacturer for information. If going to require fee, have to do by an amendment to SB 373. (Fowler), Most of that testing is done by manufacturer. Testing is very expensive. (Hitt), Might be a chilling effect on manufacturer to even store chemicals in the state if there are fees. Valid point because liability or cost is very high. Need adequate information on emergency plans, when DEP is reviewing plans, if something is missing, direct them to contact the manufacturer if necessary.

(Ball), The problem we are dealing with is difficult because studies haven't been done, the information doesn't exist. What authority can West Virginia exert to require manufacturers to conduct studies? (Guthrie), You would want a third party to review what manufacturers are distributing. (Ball), That's the reason the toxicological association has interest. It is a nationwide problem, not just in West Virginia. (Hitt), This issue is legitimate and complicated. Beyond our ability to resolve today.

b. Recommendation

(Hitt), We need to clarify that the utility doesn't have implied duty to complete gaps in information that is submitted. In reviewing emergency plans required of tank owners/operators, required in SB 373, if there is missing information, the entity submitting MSDS should have the burden of providing additional information. DEP is encouraged to work with the national toxicology group. The issue as to how to deal with chemicals that have not been tested will come up in future. All voting members agreed to make this recommendation to the Water Commission.

2. Discussion of Agenda Item #2 – Spill notification – timely and accurate reporting of spills that threaten water sources.

a. General Discussion

(Hitt), Jonathan did a work up, tying spills and location using GPS. Tim has identified an issue that not everyone has GPS available to them. The group discussed possible modifications to Jonathan's draft. Jonathan suggested keeping the level that he put in his draft. GPS reporting not mandatory, but recommended. DEP or First Responder should report as soon as possible. Should have some sort of GPS. GPS is

important for a few reasons. With GPS reporting, can see if spill is close to watershed. Tim suggested that the best we could do is have the missing GPS information provided as soon as possible.

(Ball), Clarification as to whether we suggest that follow up reports be forwarded to water utility. Ultimate recommendation should be that full status reports from the onset of a spill to its resolution should be provided to water utility. DEP possesses the tools to provide coordinates. (Hitt), At the last meeting there was some discussion about further reports by responding agency, but no specific recommendation was made.

(Guthrie), During DEP's collection of inventory on the tanks themselves, will that information provide GPS coordinates? (Fowler), That's part of the tank registration, to provide its location. There is a confidentiality issue regarding location. Jonathan stated he was more concerned about a potential truck wreck that spilled chemical in a watershed, where it could be hard to track the location and which watershed could be affected. GPS would help in this situation.

(Ivy), Pointed out there is a requirement if there is a spill to make notification. There is a spill line number. Goes to Homeland Security. They answer call and send it out over the spill line system. Goes out by email to a list of folks. It would be beneficial for training to be conducted regarding spill line notification. May take awhile to get location. If had GPS coordinates, easier. Recommended that Homeland Security and DEP work together to get GPS system.

(Ball), Mentioned a related issue. SB 373 existing reference about notification to nearest downstream water utility should be expanded. Any potential downstream water facility should be notified.

(Hitt), Homeland Security needs to direct 911 centers to inform them of spills as soon as possible. All first responders should be trained to report spill to spill line. Homeland Security needs to transmit the information to others and provide GPS information if they have it.

(Swann), DEP Tagis system provides flow distance from a particular location to a public water supply. This tool can be used to calculate arrival time. Train others to use Tagis system. (http://tagis.dep.wv.gov)

b. Recommendation

(Hitt), Recommended that the group adopt Jonathan Fowler's report (Attachment B) as final work product of work group. In addition to reporting GPS coordinates, notice of spill should be provided to all public water systems in the watershed downstream from the spill. Homeland Security and DEP should work together and share information. Homeland Security also coordinate with 911, etc. about need to provide spill information

to Homeland Security as soon as possible including GPS. Homeland Security should also coordinate training to individuals responding to spills. The group agreed to make these recommendations to the Water Commission.

3. Discussion of agenda item #3 – Mobile threats – reporting to PWSs of potential threats to water sources by materials transported on highways, rail, and water.

a. General Discussion

(Hitt), Requesting specific information about specific shipments potentially implicates security issues. Instead, general information could be requested. (Acord), Homeland Security might have problem releasing information about specific routes and frequency. (Hitt), Instead of specifying routes, could information be provided about the watersheds potentially affected instead? Wouldn't be helpful if you just know what is shipped, need to know where. (Ball), Not trying to suggest that the State should require more information, just share what they already know. (Hitt), Should we stick with suggesting a general indication of routes or change to watersheds affected? Watersheds affected would be harder to do. (Ball), Pointed out that S.B. 373 is silent on mobile threats. However, without information concerning mobile threats, PWSs cannot file complete source water protection plans. (Jordan), This provides an opportunity to coordinate with local offices of emergency planning regarding transportation activities. (Fowler), W. Va. Code §16-1-9c(b)(12) requires a complete and comprehensive list of potential contaminants within the zone of critical concern by requesting and obtaining information from DEP, Health, Homeland Security, Emergency Management and other resources. Arguably, this includes contaminants that are stored in a particular location as well as transported.

(Ivy), It is still unknown which entities will provide information about contaminants. There is a problem with confidentiality. It is difficult to get Homeland Security to provide information unless there is a contract agreeing to maintain confidentiality because of federal requirement to maintain confidentiality. He is not sure that it is beneficial for utilities to enter into confidentiality agreements with Homeland Security and DEP. Not sure if the requirement to maintain confidentiality is federal or state statute. (Swann), Could he provide the federal statute cite that prevents sharing information regarding water intake locations. (Ivy), Health believes that it is precluded from sharing water intake information under state law – FOIA exemption. (Fowler), Pointed out that S.B. 373 discusses disclosure and non-disclosure of the location of contaminants. The Code seems to say that agencies are to provide information because they have contaminant information and utilities are obligated to maintain the confidentiality of the information. W. Va. Code §16-1-9c(b)(8). [Note: reviewing the minutes there seems to be simultaneous discussion regarding both location of contaminants and location of water intakes. That is confusing and different standards regarding confidentiality may apply.] (Ivy), The groups formed by utilities to help develop source water protections plans should include local emergency planning

committees and fire departments because they have Tier 2 information regarding an annual chemical inventory. (Ball), asked if local emergency offices have the same responsibility to maintain confidentiality. (Jordan), The information is only available to certain individuals at the county level. (Ivy), State law requires location not to be disclosed. [But, does he mean water intake locations or contaminant location, or both.] (Hitt), Not publicly disclosed could mean that release of information can be made if there is an adequate confidentiality agreement. However, some laws provide that particular information can't be released period. We need to look at how federal and state laws are written. (Ball), It created another issue – is other state and federal law frustrating purposes of S.B. 373 by not providing public water supplies with critical information regarding contaminants. (Guthrie), Pointed out that S.B. 373 would supersede other state law. But it was observed that federal law could preempt state law. Need to see if S.B. 373 contradicts federal law or other provisions of state code.

The group agreed that potential statutory barriers to disclosing adequate information about contaminants was an important issue that had to be further discussed and resolved. Perhaps, the Water Commission would want to discuss it at its upcoming workshop meeting on December 5th.

b. Recommendation

The working group agreed to recommend that the Water Commission adopt the following direction to entities involved in identifying the threat to public water supplies presented by road, water and rail transportation and informing the PWSs of these threats.

State agencies, county and municipal entities should coordinate information with Homeland Security. Homeland Security should notify PWSs of contaminants that are being transported by road, rail or water in the following manners:

(1) An identification and description of the substance or material that is being transported that has been reported to the state agency.
(2) The frequency of the transportation in general terms (for example: approximately twice a week or once a month or once a year).
(3) A general indication of the routes taken by providing road, rail or waterway designations.

The information should be provided as soon as possible, with updates when available, so that PWSs can develop as complete of a source water protection plan as possible.

4. Discussion of Agenda Item #4 – S.B. 373 fees charged to PWSs – Whether PWSs, and their customers, should pay fees for various funds created by S.B. 373

a. General Discussion

(Hitt), Various fees that are in S.B. 373, public water systems shouldn't pay. Who are we making recommendation to – agencies with rulemaking process or Legislature? (Swann), Legislature. Legislature needs to make the clarification. There are no clear exemption from fees. (Ball), Exempted water utilities from registration, water tanks. (Swann), Proposed rules have not addressed the point – may be minimal fees. How can you write a rule that says we don't have to pay? (Law), DHHR has written rules in the past, but a rule cannot supersede law. (Fowler), Suggested to put in an exemption in W. Va. Code §22-30-12. (Hitt), Let's recommend that.

b. Recommendation

All the working group members agreed to recommend to the Water Commission that the Legislature amend W. Va. Code §22-30-25 by adding an additional exemption for all tanks used to supply public drinking water including, but not limited to, tanks that store chemicals used in the treatment of water.

5. Discussion of Agenda Item #5 – Discussion of possible legislation providing the incentive of income tax credits to landowners who voluntarily convey property rights to qualified conservation organizations or political subdivisions of the state in order to protect water quality and public water supplies.

a. General Discussion

(Ball), Idea has been proposed by West Virginia Land Trust. A lot more information needs to be developed regarding this idea. The proposal has been presented to Tax Department. Tax Department may have reservations. (Ivy), He has heard about this in other places and the timber industry would be behind the idea. There is a lot of interest in this idea. This issue has not presented to Legislature in the past.

b. Recommendation

The working group agreed to recommend to the Water Commission that the draft legislation be recommended to the Legislature subject to additional study and possible amendments by the Tax Department.

6. Discussion of Agenda Item #6 – Discussion of possible legislation requiring public and private water systems serving more than 50,000 customers to have a) a secondary water intake system with a 30 day supply; b) an emergency monitoring system that can detect spills, and when needed, automatically shut down the primary system until the threat has passed; c) a legal requirement that primary water systems shall never operate below 85% of total capacity; and d) that water systems serving more than 50,000

customers shall have testing and research labs located within a 5 mile radius of their primary water system.

a. General Discussion

(Guthrie), These are all areas of public concern. Above ground storage tank have been dealt with, but now we need something on the books that require larger systems to have a second intake and monitoring. These are issues that were untouched by S.B. 373. This is a protection the public would like to have. (Roberts), Asked what the issue was with operating below 85% of total capacity. (Guthrie), Answered that there was not enough water in the WV-American Water system during spill to shut down. (Swann), Thought the 85% meant that you could never have more than 15% unaccounted for water loss. (Jordan), She thought the 85% point was vague, and because of that, WV-American was reluctant to form a response. (Guthrie), Asked if the tanks were at full capacity. (Jordan), Answered no. (Morgan), Answered that the tanks were not designed to be full. He did agree that the amount of the water in the tanks was one of the factors in whether the intake could be shut down. (Hitt), Stated that unaccounted for water and capacity are two different things. If you can't draw system down to less than 85% of capacity, that will be a standard that can't be met. (Roberts), The Health Department wants a certain turnover, fill up to the overflow and let it go down to keep it fresh. 85% does not provide much operating room. Limited on finished water storage by several things. Health Department to have certain amount, also require water to be turned over every five days. (Fowler), Pointed out that there are different size tanks and it's hard to determine a percentage. You can't store finished water forever. 85% across the system is not practicable. If the goal is increasing system reliability, another water source and additional storage are perhaps better ways to think about it. (Guthrie), If the 85% not achievable, then take it out.

(Ball), There are a several concerns with the issue. Some utilities for example, could perhaps add a secondary source of water, while some can't. (Guthrie), Pointed out that only one has more than 50,000 customers. (Swann), Once a standard is established, it will be applied to smaller utilities in the future. Said it would take regulatory authority away from the PSC and Bureau for Public Health if it is mandatory that these things be done. Things that look simple from the outside, are not simple when you understand everything required. There is not enough information to say any of these things are necessary now. The freedom tanks have been taken down and going up the Elk, the threats seem to be mobile threats. Not enough identified threats to require these things. The public may be willing to pay x amount to address a certainty, but there is no certainty. Amy disagrees with Item # 6 on its face. (Morgan), The issue does parallel S.B. 373 in that if it is technically and financially feasible, utility is to consider secondary source and storage. WV-American is studying that now. They will be filing a monitoring report by the end of the year as required by S.B. 373. (Swann), The water utilities are already required to look at these things under S.B. 373. (Jordan), Pointed out

that because of single tariff pricing, all customers throughout their systems pay for the project even if it does not benefit them if this is mandated. (Hitt), Obtained clarification that the 50,000 customer threshold would only apply to WV-American, Kanawha Valley plant. (Morgan), It would cost $150 million for second intake above Belle and $90 million for afive day supply at Coonskin. Above Belle is the only place to put another intake. DEP in process to change Kanawha River designation. But that doesn't mean water is fit for human consumption. (Jordan), They are trying to find an appropriate place for second intake. (Guthrie), What about secondary intake on Elk? Brett said they are looking at options, but best option is going to different source of supply and determining if it is financially feasible. (Roberts), Asked if pieces of the system could be connected to other systems. (Morgan), Replied that some connections exist but are limited. They are looking at plans to reinforce those, but there are not many other systems that can provide surplus water that would make a difference in Kanawha Valley.

b. Recommendation

(Hitt), Haven't resolved these issues. The voting members of the working group agreed that no recommendation could be made regarding Item #6. (Ball), S.B. 373 has addressed issues and we should give it time to further develop.

7. Discussion of Agenda Item #7 – Discussion of possible legislation (perhaps a reprise of HB 4601) that establishes a statewide interest bearing account from existing rates paid by customers. The account can be used by water/sewer systems to upgrade as new technology becomes available, or repair, and replace aging or faulty systems. There currently is no formula established within the PSC rate setting structure to apply a portion of a customer's monthly rate for this purpose. The result is a statewide substandard system of service that in many cases is 30 years old or older, inefficient and costs customers in leakage costs.

a. General Discussion

(Guthrie), One of our greatest failing is not caring for our water and sewer infrastructure. The PSC has the obligation to make an allowance in rates available for repairs, but that is not happening. No designated account for repairs, maintenance and new technology. So, we have systems that are collapsing because no upgrades have been made. (Hitt), This issue has surfaced at the Legislature during this year's interim committee meetings. The PSC does provide for repairs and replacement funds. Utilities have bonds that contain requirements for repair and replacement which the PSC honors. In addition, historical tests create the opportunity for the utility to receive additional funds for repairs and replacements. Utilities also have the opportunity to provide plans to the PSC justifying the need for additional money. The problem is that some entities, once they get the money in rates, can spend it on whatever. It doesn't always go to repairs. Can't ignore the rate impact and there needs to be a distinction made between

funds to meet emergencies and funds needed for major planned projects. The PSC has recently presented to Legislature information that illustrates the rate impact of creating a fund of money for emergencies. But there are many unresolved issues – such as, who will hold the money? Maybe Infrastructure and Jobs Development Council. Another issue is who can access it.

(Guthrie), Huge problem when repairs aren't made. Maybe the PSC shouldn't deal with it. None of the rates is going for repairs. (Hitt), Pointed out that it could be in rates now, it's up to the entity and an adequate presentation of its planning process. The smaller entities really struggle, bigger entities are generally well managed and forward looking. (Accord), Smaller entities want to keep their rates low, in doing so, preventive maintenance is the first thing to go.

(Swann), If the PSC's concern about small entities is genuine, there was a Legislative mandate in 1986 to help those systems. In the past seven years, the extent of that assistance has declined. Commission should consider increasing its assistance to small utilities. (Hitt), PSC does have assistance section and Dave Acord heads that up. (Ball), small utility's have attitude that rates should be low. A reimbursement fund helps perpetuate that thinking. (Swann), They could run a pump without maintenance and get it replaced for free from a fund or maintain the pump and increase rates. They could very well choose to let it go and not raise rates. (Guthrie), Feels customers don't mind paying for good service if the increase in rates is low. (Swann), She doesn't think this fund will accomplish that goal. (Guthrie), This issue is not going to have a resolution. (Hitt), I think there will be proposed legislation on this. (Ball), Suggested to let the Joint Judiciary do its job.

b. Recommendation

The working group decided to make no recommendation regarding this issue.

(Roberts), Brought up the 1320 gallon limit for a reportable tank. He asked if possible to consider raising the limit slightly. (Fowler), Suggested provision in rule. (Swann), Wastewater tank excluded. (Roberts), Mixing tanks excluded. (Swann), Reasonable recommendation to make when DEP issues rules, could that be included? (Roberts), Not sure best way to deal with it because he doesn't want to exempt something that should be covered. (Guthrie), Ask for waiver from DEP without going back to the rule because everyone is trying to exempt themselves. Working group decided to identify this as an issue to discuss at the water group workshop meeting on December 5th.

Meeting adjourned at 3:40 p.m.

Appendix F

A. This section may be cited as the "West Virginia Water Protection Incentive Act".

B. West Virginia's waters are an invaluable public resource, and protection of public drinking water supplies warrant creative conservation initiatives if public water supplies are to be protected and preserved for the enjoyment and benefit of present and future generations.

C. Paying deference to property rights while protecting drinking water sources is a laudable goal, and traditional land use planning and regulatory techniques have limited effectiveness in preserving large tracts of undeveloped land. By enacting the "West Virginia Water Protection Incentive Act", it is the intent of the Legislature to provide an income tax credit incentive for landowners to voluntarily convey lands or interests in land to qualified conservation organizations or political subdivisions of the state in order to protect public water supplies and the water quality of receiving streams. Such an incentive for the voluntary conveyance of lands or conservation easements will protect and preserve the quality of West Virginia's waters while paying appropriate deference to property rights and expending no state funds.

Section XXX (state income tax credit)

(1) A taxpayer who has qualified for and claimed on the taxpayer's federal income tax return a charitable deduction for a qualified conservation contribution that is a gift of land or an interest in land for water quality protection may elect to claim a credit against a tax imposed by this chapter for the applicable tax year in an amount equal to one hundred percent of the total amount of the federal tax deduction attributable to the gift.

(2) In the hands of the original donor or of any subsequent transferee, the credit allowed by this section that may be used to offset state income tax liability in any one taxable year is limited to an amount that, when combined with all other state income tax credits of the taxpayer, does not exceed the taxpayer's total state income tax liability for the taxable year. If the amount of the credit exceeds the taxpayer's tax liability under this chapter for the taxable year, or if it exceeds the maximum credit that may be used in any particular taxable year, the excess credit may be carried forward to succeeding taxable years until all the credit is claimed.

(3) Unused credit may be transferred, devised, or distributed, with or without consideration, by and to an individual, partnership, limited liability company, corporation, trust, or estate. To be effectual, such a transfer, devise, or distribution requires written notification to and approval by the Department of Revenue, subject to provisions and requirements enumerated in legislative rules to be promulgated by

the Department, with the unused credit maintaining all its original attributes in the hands of the recipient. With regard to the sale or exchange of a credit allowed under this section, general income tax principles apply for purposes of the state income tax.

(4) The fair market value of qualified donations made pursuant to this section must be substantiated by a qualified appraisal prepared by a qualified appraiser as those terms are defined under applicable federal law and regulations applicable to charitable contributions.

(5) For purposes of this section:

(a) 'Credit' is an amount allowable under this Article equal to the federal tax deduction that would otherwise be allowable under the United States Internal Revenue Code Section 170(h).

(b) 'Gift of land or an interest in land for water quality protection' means a charitable contribution of fee simple title to real property, or an interest real property, conveyed to a political subdivision of the state or a qualified conservation organization, as described in Internal Revenue Code Section 170(h)(3), for water quality protection and conservation purposes as defined in Internal Revenue Code Section 170(h)(4)(A).

(c) 'Qualified appraisal' is an appraisal that complies with the provisions of the Internal Revenue Code Section 170(f)(11) and ancillary regulations, and is conducted by a qualified appraiser.

(d) 'Qualified appraiser' is an appraiser qualified in accordance with the provisions of Internal Revenue Code Section 170(f)(11).

(e) 'Qualified conservation contribution' and a 'qualified real property interest' are defined as provided in Internal Revenue Code Section 170(h) and further limited to land or interests in land that may be used for water quality protection and conservation purposes as defined in Internal Revenue Code Section 170(h)(4)(A).

(6) The Department of Revenue shall report to the Governor, and the House and Senate Finance Committees the activity generated on taxable year 2016 and 2017 state income tax returns by the credit allowed by this item, including, but not limited to:

(a) Annual number and value of credits earned;

(b) Number of acres and value of land conveyed or protected;

(c) Type of holder of tile or easement (political subdivision, land trust, etc); and,

(d) Number and value of credits transferred.

(7) The Department of Revenue shall issue the rulings and promulgate regulations it determines necessary or appropriate to carry out the purpose of this section.

Section YYY (property tax)

Assessments of the fee interest in land that is subject to a perpetual conservation easement to protect source water pursuant to the West Virginia Water Protection Incentive Act (CITE) shall reflect the reduction in the fair market value of the land that results from the inability of the owner of the fee to use such property for uses terminated by the easement. To ensure that the owner of the fee is not taxed on the value of the interest of the holder of the easement, the fair market value of the land shall be based only upon the uses of the land that are permitted under the terms of the easement**.**

Appendix G

Work Group 1

A Review and assessment of the effectiveness and the 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.

Dr. Letitia Tierney (Chair)
Dr. Rahul Gupta
Nancy Guthrie
Tim Ball
Michael McCawley

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.

Amy Swann
Tim Ball
Walt Ivy for Dr. Letitia Tierney
Lisa McClung (Chair), now Dr. Terry Polen
Pam Nixon
Dr. Rahul Gupta

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.

Richard Hitt
Nancy Guthrie
Rick Roberts
Amy Swann (Chair)
Ed Watson

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.

Dr. Rahul Gupta (Chair)
Pam Nixon
Mike McCawley
Lisa McClung, now Dr. Terry Polen
Dr. Letitia Tierney
Ed Watson

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.

Amy Swann
Tim Ball
Rick Hitt (Chair)
Rick Roberts
Dr. Rahul Gupta
Nancy Guthrie