

# Water Supply Assessment, Preparedness, Prevention and Contingency Plan

July 2020

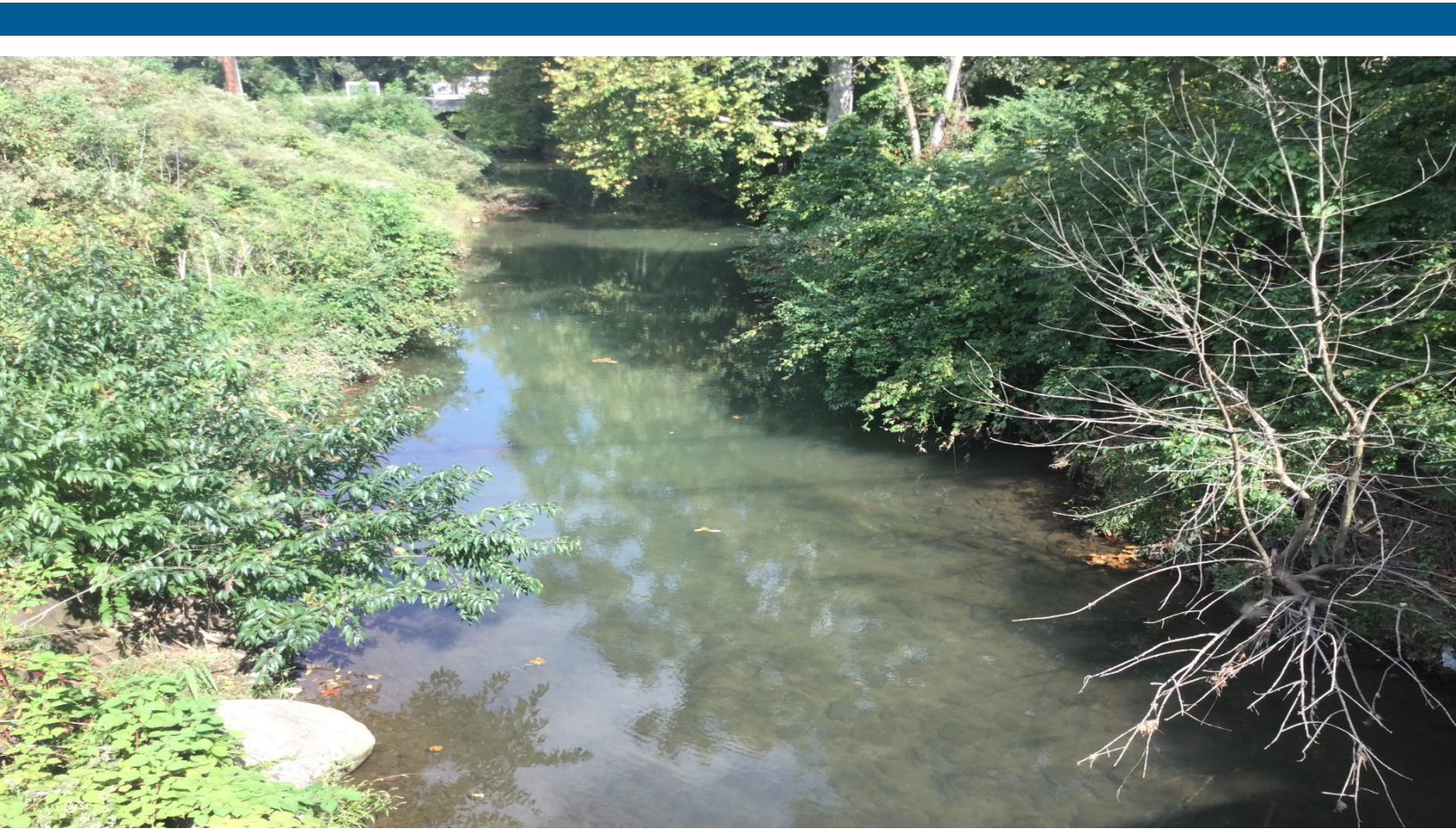
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**N|V|5**

Adelphia Gateway Project

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## 1.0 PROJECT DESCRIPTION

On January 11, 2018, Adelphia Gateway, LLC (Adelphia) filed with the Federal Energy Regulatory Commission (Commission or FERC), pursuant to section 7(c) of the Natural Gas Act and Part 157 of the Commission's regulations, an abbreviated application for Certificates of Public Convenience and Necessity authorizing the acquisition, construction, and operation of certain pipeline facilities and for related authorizations. Adelphia filed an amendment to its application on August 31, 2018 (Docket Nos. CP18-46-000 and CP18-46-001). In its application, as amended, Adelphia proposed to acquire, construct, own, and operate certain facilities, some of which were owned and operated in either oil-only service or in dual-phase oil or natural gas service, and in all cases, non-FERC jurisdictional service, by the Interstate Energy Company LLC. The facilities include: an approximately 84-mile, 18-inch-diameter mainline; an approximately 4.4-mile, 20-inch diameter mainline; and various appurtenant and auxiliary facilities (collectively, the Existing System).

The remainder of the facilities proposed for interstate service are two new compressor stations, the Tilghman and Parkway Laterals, meter and regulator facilities, and various appurtenant facilities along the Existing System (collectively with the Existing System, the Project).

On January 4, 2019, the Commission Staff released its Environmental Assessment (EA) for the Project. The EA concluded that the Project, with appropriate mitigating measures, would not constitute a major federal action significantly affecting the quality of the human environment. On December 20, 2019, the Commission issued an order granting the certificates that Adelphia requested in its certificate application, as amended (Order). Pursuant to Environmental Condition No. 6 of the Order, Adelphia submitted its Implementation Plan (IP), on February 18, 2020. Adelphia submitted to FERC supplemental filings to the IP on May 12, June 16, June 30 and July 2, 2020 .

## 2.0 SURFACE AND GROUNDWATER PROTECTION PLANS

Adelphia developed the following plans that assess the potential impacts to surface and groundwater due to Project-related activities and provide for the protection of these resources:

- its site-specific Erosion and Sediment Control Plans (ESCP);
- its overarching *Preparedness, Prevention and Contingency Plan* (PPC Plan);
- its *HDD Inadvertent Release Contingency Plan* (IRC Plan);
- its *Void Mitigation Plan for Karst Terrain and Underground Mining* (Karst Plan);
- its *Unanticipated Discovery of Contamination Plan*; and
- this *Water Supply Assessment, Preparedness, Prevention and Contingency Plan* (Water Supply Plan).

Adelphia site-specific ESCPs include drawings and a narrative that identify best management practices (BMP) that Adelphia will use to minimize the potential for accelerated erosion and sedimentation and to manage post-construction stormwater. The PPC Plan addresses spill prevention, countermeasures, and response in general. The IRC Plan outlines the preconstruction activities implemented to ensure sound geological features are included in the HDD profile, the measures to prevent and IR, and the plan to be implemented if an IR were to occur. The Karst Plan assesses potential impacts associated with Project activities and associated avoidance and mitigation measures to be used in areas of karst terrain or other voids (e.g., mines). The *Unanticipated Discovery of Contamination Plan* outlines measures that Adelphia would employ to

prevent the spread of contaminated media in the event an unanticipated discovery of contamination were to occur. This Water Supply Plan assesses existing water supplies in or along the Project, and identifies prevention and preparedness measures to be implemented to protect those supplies.

In addition to its own plans, Adelphia would implement measures in the FERC's *Wetland and Waterbody Construction and Mitigation Procedures* (FERC Procedures) to minimize impacts to water supplies in the Project area. These measures include, but are not limited to:

- providing mandatory environmental training for all employees prior to their start on the Project that includes descriptions of sensitive aquatic features in the Project area and measures to prevent/minimize impacts to them;
- employing at least one environmental inspector with knowledge of the wetland and waterbody conditions in the Project area for each construction spread;
- ensuring all employees handling fuels and other hazardous materials are properly trained;
- ensuring that each construction crew has on-hand sufficient tools and material to stop leaks; and
- ensuring that pumps operating within 100 feet of a waterbody or wetland boundary and all bulk storage of hazardous materials use appropriate secondary containment.

### 3.0 WATER SUPPLY PLAN PURPOSE

Private and public water supply sources are located along and/or downstream of proposed Project work areas. This plan describes the methodology used to identify those water supplies in relation to the Project and presents a summary of the existing environment in regards to these supplies. This plan provides an evaluation of the risks to the types of supplies and outlines the prevention, preparedness, and contingencies in regards to the potential impacts to those supplies.

This plan is intended to comply with a condition to the Pennsylvania Department of Environmental Protection's (DEP) Water Quality Certification, which was issued by the DEP for the Project on February 28, 2020. Specifically, Condition No. 4 of the Water Quality Certification asks that Adelphia, "...develop and implement a Water Supply Assessment, Preparedness, Prevention, Contingency Plan.." that will be "...subject to review and approval by DEP, to prevent impacts to Regulated waters of this Commonwealth..." This plan is also intended to meet the requirements of a project-specific *Spill Prevention and Response Procedures Plan*, as described in the FERC Procedures (FERC 2013).

### 4.0 EXISTING ENVIRONMENT

Adelphia used a variety of sources to identify the existing environment in regards to private and public water supplies near the Project areas. The methods of identification and summary of the results are provided in each of the following subsections.

Data sources included:

- Field-collected data
  - Wetland and waterbody field surveys of the Project area; and
  - Phase I Environmental Site Assessments (ESA) conducted for existing facilities acquired by Adelphia as part of its purchase of IEC. Groundwater wells are noted during the site inspection component of Phase I ESAs; and
- Online data
  - the National Hydrography Database data to help identify waterbodies;

- the U.S. Fish and Wildlife’s (USFWS) National Wetland Inventory data to help identify wetlands;
- the DEP’s eMapPA database to identify groundwater wells and surface water intakes;
- the Pennsylvania Department of Conservation and Natural Resources’ (PADCNR) Pennsylvania Groundwater Information System (PaGWIS) database to identify private water wells;
- Delaware Department of Natural Resources and Environmental Control’s (DNREC) Environmental Navigator database to identify water supply wells and springs, wellhead protection areas, recharge areas, and groundwater management zones; and
- **Interviews** – Adelpia representatives spoke with landowners directly affected by the Project’s workspaces in regards to the presence and location of any waters supply wells.

## 4.1 WETLANDS AND WATERBODIES

Adelpia conducted wetland and waterbody surveys for the entire Project area between 2017 and 2020. All associated field reports have been provided to the FERC and the DEP. Adelpia minimized the number of wetland and waterbody crossings to the extent practicable. The Project would cross four wetlands, all of which are palustrine emergent (PEM) wetlands. Three of the wetlands are located at proposed blowdown assembly valve (BAV) sites, and one is located along the Tilghman Lateral. The Project would also cross three waterbodies, all along the Tilghman Lateral. Table 4-1 summarizes wetlands and waterbodies crossed by the Project. There are no drinking water intakes or reservoirs for public and private water supplies within 5 stream miles of Marcus Hook Creek or Stoney Creek (PASDA 2020).<sup>1</sup>

Table 4-1. Wetlands and Waterbodies Crossed by the Adelpia Gateway Project

Project Component	Feature ID	Feature Type	Crossing Type
<i>Wetlands</i>			
Paoli Pike BAV	PP-W-01	PEM Wetland	ATWS
Perkiomen Creek BAV	PC-W-01	PEM Wetland	Access Road
East Perkiomen Creek BAV	EP-W-01	PEM Wetland	Aboveground Facility
Tilghman Lateral	TL-W-MP2.5	PEM Wetland	HDD
<i>Waterbodies</i>			
Tilghman Lateral	TL-W-MP2.4	Ephemeral Waterbody	HDD
	Marcus Hook Creek	Perennial Waterbody	HDD
	Stoney Creek	Intermittent Waterbody	Dry Open-cut
ATWS = additional temporary workspace			

The FERC Procedures state that all extra work areas should be located at least 50 feet from the edge of a wetland or waterbody (except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land (FERC 2013). Adelpia has requested FERC approval for modifications to the Procedures for 18 proposed additional temporary workspaces (ATWS) that come within 50 feet of a wetland or waterbody due to limited usable areas, HDD alignment requirements,

<sup>1</sup> This statement is intended to meet part of DEP’s Condition No. 4 of its February 28, 2020 Final Approval of State Water Quality Certification for the Project (i.e., ...”Applicant shall investigate for drinking water intakes or reservoirs for public and private water supplies within five ( 5) miles downstream (and upstream in tidal areas) of each crossing”).

or the need for additional workspace. Table 4-2 summarizes extra work spaces within 50 feet of a wetland or waterbody.

Table 4-2. Additional Temporary Workspaces within 50 Feet of a Wetland or Waterbody for the Adelpia Gateway Project

<b>Project Component</b>	<b>ATWS ID</b>	<b>Type of Feature within 50'</b>	<b>Justification</b>
Tilghman Lateral	ATWS-TL-03	Wetland	Limited usable areas available along Ridge road due to existing industrial facilities and residential areas.
	ATWS-TL-07	Waterbody	Limited usable areas available along Ridge due to existing industrial facilities and residential areas.
	ATWS- TL-14	Waterbody	Limited usable areas available due to existing industrial facilities.
	ATWS-TL-16	Waterbody	Limited usable areas available due to existing industrial facilities and residential areas.
	ATWS-TL-17	Waterbody	Limited usable areas available due to existing industrial facilities and residential areas.
	ATWS-TL-22	Waterbody	ATWS-TL-22 is required for HDD pull back activities and must be in alignment with the HDD path.
Quakertown Compressor Station	ATWS-QCS-01.1	Wetland, Waterbody	Workspace needed to support Project construction.
	ATWS-QCS-01.2	Wetland	Workspace needed to support Project construction.
	ATWS-QCS-01.3	Wetland	Workspace needed to support Project construction.
Chester Creek BAV	ATWS- 9.53-01	Wetland	Workspace to support modification of existing facility.
	ATWS- 9.53-02	Wetland	Workspace to support modification of existing facility.
Paoli Pike BAV	ATWS- 14.46-01	Wetland	Workspace to support modification of existing facility.
	ATWS- 14.46-02	Waterbody	Workspace to support modification of existing facility.
Schuylkill River BAV	ATWS- 28.04-01	Wetland	Workspace to support modification of existing facility.
	ATWS- 28.04-02	Wetland	Workspace on both sides of the valve needed to support modification of existing facility.
Perkiomen Creek BAV	ATWS- 33.97-02	Wetland	Workspace to support modification of existing facility.
East Perkiomen Creek	ATWS- 36.68-01	Wetland	Workspace to support modification of

Project Component	ATWS ID	Type of Feature within 50'	Justification
BAV			existing facility.
	ATWS- 36.68-02	Wetland	Workspace to support modification of existing facility.

## 4.2 WATER SUPPLY WELLS

Adelphia conducted landowner interviews, online research, field observations, and Phase I ESAs to identify water supply wells within 150 feet of the Project’s limits of disturbance (LOD). There are 24 known water supply wells within 150 feet of the LOD (PADCNR 2020). A search of the PADCNR’s PaGWIS database identified 24 wells, and a Phase I ESA for the Martins Creek Station identified 1 well. Based on the location and description of the well identified during the Phase I ESA, Adelphia believes that this well was also identified by PaGWIS; therefore, it was only counted once.

According to the PaGWIS database, water from these wells are used for *Industrial* (1), *Domestic* (1), *Stock* (1), and *Other* (16) purposes.<sup>2</sup> The remaining wells have a water use that is listed as either *Not Provided* (1) or *Unused* (4). Five wells are in the Project workspace; four of these would be crossed by the Marcus Hook Compressor Station Site and have a well use that is listed in the PaGWIS database as *Abandoned*. The remaining well in the Project workspace would be crossed by an ATWS along the Tilghman Lateral; water use for this well is listed as *Other*. The next closest wells are test and observation wells located 18 feet from ATWS along the Tilghman Lateral. There is one domestic-use well within 150 feet of the Project; it is located approximately 50 feet west of the proposed Quakertown Compressor Station Site.

No location-specific data are available for wells in Delaware. The Delaware Environmental Navigator database does not indicate the presence of any wellhead protection areas, recharge areas, groundwater management zones within 150 feet of the Project construction workspace in Delaware (DNREC 2020). No water supply wells, seeps, or springs were observed within 150 feet of the Project during Adelphia’s landowner interviews or field surveys. Appendix A contains a summary table of water supply wells within 150 feet of the Project’s LOD.

## 5.0 RISK ASSESSMENT

The Project would use existing infrastructure to the greatest extent practicable and would also require the construction and operation of two new compressor stations; one new 2.2-mile, 16-inch outer diameter pipeline lateral (the Parkway Lateral); one new 4.4-mile, 16-inch outer diameter pipeline lateral (the Tilghman Lateral); and supporting mainline valve (MLV), tap valve, and meter and regulator facilities (meter stations). Adelphia proposes to install the majority of the Tilghman Lateral belowground using nine HDDs. The remainder of the Tilghman Lateral and the entire Parkway Lateral would be installed using traditional lay methods (i.e., trenching). Trenching would be done to a depth adequate enough to provide a minimum of 4 feet of cover to the top of the pipe in all areas except the Stoney Creek crossing, where it will be a minimum of 5 feet of cover.

<sup>2</sup> ‘Other’ water use is defined in the PaGWIS database as an intended usage by the owner other than the following: air conditioning, agriculture, bottling, commercial, domestic, desalination, dewater, power (generation), fire (protection), geothermal, institution, irrigation, industrial, industrial (cooling), medicinal, mining, recreation, stock, unused.

Water supplies may be impacted by hazardous material spills during many of the Project activities including, trenched pipe installations, HDD installations, MLV modifications and installations, aboveground facility installations, and Project maintenance activities during operations. Project activities near the Martins Creek Station and a new MLV (MLV 2) would be conducted near karst areas/openings that may lead to groundwater sources. The two proposed laterals and associate meter stations are located in an area with known soil and groundwater contamination; excavation, HDD installations associated with these Project components could threaten water resources and supplies. Additional risks to private and public water supplies may result from the activities associated with the HDD method of pipeline installation, specifically, the use of drilling fluids during the drill process. Adelphia committed to using only municipal water for all hydrostatic testing activities and containerizing and hauling all used hydrostatic test water off-site for proper disposal. Therefore, no impacts to water supplies are expected to occur due to hydrostatic testing activities.

## 5.1 DESCRIPTION OF RISKS

### 5.1.1 Hazardous Material Spills and Encounters

The materials anticipated to be stored on site during Project construction include diesel fuel, lubricating oil, bentonite clay, and welding gasses (oxygen and acetylene). Of these materials, the material stored in the largest volume and with the highest potential adverse impact to water supplies is diesel fuel.

Encounters with karst terrain or openings during open trenching or grading activities offer a possible pathway for contaminants to migrate to groundwater resources. However, the threat to groundwater sources is limited to sedimentation from on-site run-off into the opening. A diesel fuel spill in the same location as an encountered karst area would be an unlikely event as there is no known or potential karst terrain or other underground voids (e.g., mines) near construction activities. Adelphia's Karst Plan provides additional information about potential karst terrain and subsurface voids near the Project.

There is the potential to encounter an unanticipated petroleum-based impacted soil during Project construction, which could be spread to water supplies during Project construction. The threat of such an encounter to surface or groundwater would depend on the location and extent of the impacted soil. Should unanticipated contamination be discovered during Project activities, Adelphia would implement measures in its *Unanticipated Discovery of Contamination Plan* to protect human health and worker safety and prevent the spread of contamination. Adelphia has provided its *Unanticipated Discovery of Contamination Plan* to both the FERC and the DEP.

### 5.1.2 Existing Contamination

The Project will cross areas of known groundwater and soil contamination along the Parkway and Tilghman Laterals. Based on online research and consultations with state and federal agencies, the Project would come within 1,500 feet of 10 DEP- or U.S. Environmental Protection Agency (EPA) - regulated sites.

Adelphia conducted soil and groundwater testing along the entire extent of the Laterals in 2019 and found elevated concentrations of metals in both media. High levels of metals in groundwater indicated that the groundwater has already been impacted by the metals present in nearby soils. According to field observations and laboratory analytical results from the study, it is apparent that historic fill is located along the majority of the proposed Laterals and is likely a primary source of elevated metals in the study area. Lead was identified to potentially be above the EPA's Resource Conservation and Recovery Act (RCRA) hazardous waste concentration level. To determine if the



Study Area would generate soil with lead levels over the RCRA hazardous waste concentrations, a composite sample was analyzed for lead using the required Toxicity Characteristic Leaching Procedure. The results indicated that the soil material was not a hazardous waste for lead (NV5, 2019).

Marcus Hook and Stoney Creek also contain high levels of contamination and are both listed as impaired by the DEP (impairment causes for Marcus Hook Creek are metals, siltation, and habitat alteration, and the causes for Stoney Creek are siltation and habitat alteration) (DEP 2018). Project activities in areas of known contamination along the Laterals are not expected to cause contaminants to spread to other water supplies, because the contamination already exists throughout the larger area.

In addition, Adelphia would assume all material excavated from the Lateral trenches along with all water encountered in the trench (groundwater or surface/rainwater that has entered the trench) to be potentially contaminated material under both Federal RCRA and DEP waste regulations. As such, Adelphia would use one of two methods to handle and dispose of the excavated material and trench water along the Parkway and Tilghman Laterals:

- 1) Isolate by staging all soil material on-site and containerizing all water in frac tanks. Samples of both soil and water will be submitted to a DEP-certified analytical laboratory for analysis.
  - a) If the material does not contain contaminants above regulatory thresholds, Adelphia would replace the solid material in the trench as backfill and discharge the water to the stormwater system. Adelphia would obtain the necessary National Pollutant Discharge Elimination System permits to discharge the water.
  - b) If the material does contain contaminants above regulatory thresholds, Adelphia would containerize the material for offsite disposal at a facility certified to accept such waste.
- 2) Containerize all material and ship offsite for disposal at a facility licensed to accept contaminated waste material.

Adelphia conducted Phase I ESAs at the proposed Marcus Hook Compressor Station, Quakertown Compressor Station, and Martins Creek Terminal in August 2017. The proposed Marcus Hook Compressor Station is sited within a 6.9-acre property that was developed for use by IEC as an oil pump and heat station. NV5 performed its Phase I ESA of the Marcus Hook Compressor Station Site and identified five Historical Recognized Environmental Conditions (HRECs) during this assessment (see Table 1-2). NV5 did not identify any Recognized Environmental Conditions (RECs) or controlled RECs (CRECs) at the Site. During NV5's assessment, the site contained oil piping that was part of IEC's oil pump and heat station, and contaminated soil was identified in the area of the piping. As part of Adelphia's purchase agreement with IEC, IEC removed existing oil piping and contaminated soils prior to Adelphia's purchase of the facility.

The Phase I ESA at the proposed Quakertown Compressor Station Site did not identify any RECs, CRECs, or HRECs. NV5's Phase I ESA at the Martins Creek Terminal Site identified one REC involving a leak/oil staining located along the northeast section of the site. Construction activities would not occur in this area. NV5 did not identify any other RECs, CRECs, or HRECs at the Martins Creek Site.

### 5.1.3 HDD Installations

HDD is a steerable trenchless method of installing underground pipe, conduit, or cable in a shallow arc along a prescribed bore path by using a surface-launched drilling rig, with minimal to no impact along the bore path. It is suitable for a variety of soil and bedrock conditions and primarily intended

for obstacle avoidance including, but not limited to, stream crossings, roads, and protected environmental features systems. Throughout the HDD process, a pressurized drilling fluid comprised primarily of water and bentonite clay is pumped into and circulates back out of the bore hole.

## 5.2 RISKS TO WATER SUPPLIES

### 5.2.1 Wetlands and Waterbodies

#### 5.2.1.1 Hazardous Material Spills

Given appropriate material handling practices and limited quantities of the hazardous materials on site at a given moment, hazardous materials spills occurring in Project areas pose a minimal threat to wetlands or waterbodies.

#### 5.2.1.2 HDD Installations

Adelphia would use HDD methods to install the majority of the Tilghman Lateral, including the crossing of three waterbodies and one wetland. HDD methods are often used to avoid impacts to these resources by crossing beneath them rather than through them. However, there is the potential for an incidental release (IR) of drilling fluid to occur during drilling activities. If an IR reaches a wetland or waterbody, it can adversely affect flora and fauna and create turbidity plumes that travel downstream.

### 5.2.2 Private and Public Water Supply Wells

#### 5.2.2.1 Hazardous Material Spills

Given appropriate material handling practices and limited quantities of the hazardous materials on site at given moment, hazardous materials spills occurring in Project areas pose a minimal threat to water supply wells.

#### 5.2.2.2 HDD Installations

HDD activities for pipelines usually occur at depths less than 100 feet, which could include the crossing of shallow aquifers. The primary potential impact to groundwater is the migration of drilling fluid away from the HDD drill path. Specifically, drilling fluid expended downhole will flow in the path of least resistance. While the path of least resistance is typically the bore hole itself, it may instead be an existing fracture, fissure, or formation opening in the soil or rock substrate. When this happens, circulation can be lost or reduced and drilling fluid could enter the groundwater table that could be used by groundwater wells.

## 6.0 PREVENTION, PREPAREDNESS, AND CONTINGENCIES

### 6.1 HAZARDOUS MATERIAL SPILLS AND ENCOUNTERS

Adelphia would require all people working on the Project to take part in an environmental training program that will include a discussion of hazardous material spills. Additional training on hazardous waste handling and shipping will be provided to employees that will be conducting those tasks.

With the exception of the modification for temporary work space within 50 feet of wetlands or waterbodies discussed above, Adelphia will comply with the FERC Procedures to prevent spills from occurring and provide a quick and effective response if they do occur. In ATWS areas within 50 feet of a wetland or waterbody, Adelphia will install double-row silt fence between construction activities and the wetland or waterbody and keep refueling activities from occurring to at least 100 feet from the edge of the resource.

Although exact locations of wells are not always provided by online data, Adelphia or its EIs would attempt to locate all wells within 150 feet of its LOD and identify them with signage and surround them with high-visibility plastic construction fencing prior to starting construction. In addition, Adelphia would place erosion control devices between the wells and the workspace to prevent the migration of Project-related materials (e.g., sediment, soil, fluid releases) from entering the wells. Adelphia would prohibit refueling and storage of hazardous substances within 400 feet of identified water wells. Adelphia would also offer pre-construction and post-construction evaluations of water quality and yield of drinking water wells within 150 feet of any construction to affected landowners. In the event of well damage during construction, Adelphia would provide a temporary water source to landowners for water supply wells and would mitigate damage by conducting restoration, repair or replacement of water supply, including installation of a new well, if applicable.

As discussed in its PPC Plan, should a release occur, Adelphia would assign an Emergency Response Coordinator (ERC) that is responsible for coordination of spill cleanup and notification of appropriate authorities activities in the event of an incident (spill, fire, or explosion). If the ERC determines that the site has had an incident that could threaten human health or the environment and if evacuation of local areas may be advisable, he/she will immediately notify the applicable local authorities (police, fire, etc.). If a release occurs that enters a water supply or that threatens the water supply of downstream users, the ERC would immediately notify the appropriate County and Pennsylvania Emergency Management Agencies and the DEP.

Should a leak or spill of petroleum products or hazardous materials occur, the release would be contained to the maximum extent as quickly as possible to minimize the effect of the spill. Work would be stopped in the immediate area and the affected equipment would be isolated. The spill would be contained by absorbent materials stored in on-site spill kits and other available equipment and materials, as necessary. On land, absorbent materials such as Oil-Dri, straw, or sawdust would be used to soak up any free or flowing product and limit its spread. Stormwater collection structures and other potential affected drainage areas would be either blocked or pumped, if appropriate, to prevent the release to surface water. Diversion dikes could also be created to minimize the area of the spill. If the release enters water, booms would be used to limit its spread along the surface, when appropriate.

Additional organizations may be called upon to assist in any way until the emergency is under control and public safety is assured. This includes use of outside assistance for special cranes or other equipment such as excavation equipment, dump trucks, road sweepers, vacuum trucks, etc. that can be used to help regain control of a situation.

Adelphia would try to recover and reuse retrieved material to the extent practical. Oil or other liquid materials collected from barriers or basins may be pumped into mobile tank trucks for transportation to on-site storage or proper disposal. Impacted soils, concrete, and asphalt would be promptly excavated (either by hand using shovels or heavy earth-moving equipment) and placed it into containers for subsequent disposal. Other contaminated solid materials, such as used absorbent materials and booms would also be removed and containerized as soon as possible after the spill has been contained. All material removed in the cleanup operation would be disposed of in accordance with federal and state hazardous waste regulations. Confirmatory sampling and laboratory analysis would be conducted in accordance with state and federal guidelines, as necessary.

## 6.2 HDD RELEASES

As detailed in its IRC Plan, Adelphia would send notifications via first-class mail to all affected landowners 30 days in advance of the start of drilling and again one week before drilling begins. The notifications would include a general description of the HDD process, map of the HDD route, description of activities to be performed, and expectations for noise associated with HDD.

In order to minimize the potential for incidental releases (IR) of HDD drilling fluid to the ground surface at HDD locations and to mitigate potential environmental impacts, Adelphia would implement its IRC Plan during HDD activities. Adelphia's IRC Plan provides the methods Adelphia and its contractors would use to eliminate and minimize HDD IRs, including the following:

- pre-work job briefings on each day drilling is to occur;
- EI inspections of the drill path both prior to and during drilling activities;
- monitoring drilling pressure during drilling;
- placement of silt fences and straw controls around HDD entry and exit pits;
- ensuring that containment materials are onsite and readily available; and
- staging a vacuum truck at a location from which it can be mobilized and relocated (as necessary) to quickly respond to an IR.

The immediate response actions in dealing with an inadvertent return of drilling fluids (primarily bentonite and water) from a horizontal direction drill include discontinuing drilling operations, identifying the area of the inadvertent return, and isolating the inadvertent return.

If an IR is discovered, Adelphia would ensure that within 24 hours, the IR is reported to any landowners affected by the return, the Chester County Water Authority, and every landowner with a water supply well located within 450 feet of the HDD alignment where the IR occurred. Adelphia would also provide a courtesy notification (via mail or telephone) to local municipalities and first responders (e.g., fire department, police department) that typically receive calls from landowners.

Adelphia will notify the DEP within 24 hours of receipt of any water supply complaints. This data will be used as a baseline for comparison to post-inadvertent return and/or post-construction sampling results to evaluate potential impacts and mitigation measures, if necessary.

## 7.0 REFERENCES

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**N | V | 5** Delivering Solutions  
Improving Lives

**Appendix A  
Groundwater Supply Wells within 150 Feet of Proposed Work Areas**

<b>Nearest Project Component</b>	<b>Well Use</b>	<b>Water Use*</b>	<b>Nearest Milepost</b>	<b>Distance – Direction from Nearest Work Area (feet)</b>
Marcus Hook Compressor Station	Abandoned	Other	0.0	0
Marcus Hook Compressor Station	Abandoned	Other	0.0	0
Marcus Hook Compressor Station	Abandoned	Other	0.0	0
Marcus Hook Compressor Station	Abandoned	Other	0.0	0
Tilghman Lateral	Unused	Industrial	TL - 1.4	108 – NW
Tilghman Lateral	Monitoring	Other	TL - 1.2	85 – NW
Tilghman Lateral TWS-TL-02	Not Provided	Other	TL - 2.7	137-NW
Tilghman Lateral TWS-TL-02	Not Provided	Other	TL - 2.8	0 - NA
Tilghman Lateral ATWS-TL-17	Not Provided	Other	TL - 2.8	115 – NE
Tilghman Lateral ATWS-TL-17	Not Provided	Other	TL - 2.8	120 – NE
Tilghman Lateral ATWS-TL-17	Not Provided	Other	TL - 2.8	103 – N
Tilghman Lateral ATWS-TL-17	Not Provided	Other	TL - 2.8	109-NW
Tilghman Lateral ATWS-TL-17	Not Provided	Other	TL - 2.8	72-NW
Tilghman Lateral ATWS-TL-17	Not Provided	Other	TL - 2.8	55-SW
Tilghman Lateral ATWS-TL-21	Test	Other	TL - 3.7	18 – SE
Tilghman Lateral ATWS-TL-21	Observation	Unused	TL - 3.8	58 – SE
Tilghman Lateral ATWS-TL-21	Test	Other	TL - 3.7	18 – SE
Tilghman Lateral ATWS-TL-21	Observation	Unused	TL - 3.7	18 – SE
Tilghman Lateral ATWS-TL-21	Observation	Unused	TL - 3.7	18 – SE
Tilghman Lateral ATWS-TL-21	Observation	Unused	TL - 3.7	18 – SE
Tilghman Lateral ATWS-TL-21	Test	Other	TL - 3.7	18 – SE
Quakertown Compressor Station	Withdrawal	Domestic	49.1	53 - W
Martins Creek Station	Not Provided	Not Provided	84.1	79 - S
Martins Creek Station	Withdrawal	Stock	84.1	143 - S

NA = Not applicable well is within work area.

\* Other is used to define an intended usage by the owner other than the following: air conditioning, agriculture, bottling, commercial, domestic, desalination, dewater, power (generation), fire (protection), geothermal, institution, irrigation, industrial, industrial (cooling), medicinal, mining, recreation, stock, unused.

Source: <https://www.dcnr.pa.gov/Conservation/Water/Groundwater/PAGroundwaterInformationSystem/Pages/default.aspx>.