GROUNDWATER PROTECTION PLAN FOR

(NAME OF FACILITY)

**Section A. GENERAL INFORMATION**

1. Name and Address of Facility
	1. Facility Name
	2. Facility Address
	3. County
	4. Latitude and longitude

e. Mailing Address of Facility, if different from Facility Address

1. Person Developing GPP
	1. Name
	2. Address (business address, not home address unless business operates out of the home)
	3. Telephone Number (business phone, not home phone unless business operates out of the home)

d. Email Address (Optional)

1. Person Responsible for Implementing GPP
	1. Name
	2. Address (business address)
	3. Telephone Number
	4. E-mail Address (Optional)
2. Brief Description of Facility Operation

**Section B. ACTIVITIES THAT HAVE THE POTENTIAL TO POLLUTE GROUNDWATER**

* + **list** all the activities that are conducted at your facility that require a GPP (grading, concrete/asphalt work, painting, stucco, storing fuel, fertilizer and other chemicals, etc.).

 List actual activities; do not quote the regulation.

**Say**: store diesel fuel in 1,000-gallon underground storage tank.

**Don’t say**: “Storing, treating, disposing, or related handling of hazardous waste…….in tanks, drums, or other containers, or in piles."

* + Include all activities at your site subject to the regulation, even if protective practices are already being implemented.

For example, if an aboveground storage tank (AST) has secondary containment, it still must be listed as an activity

* + Give complete details about aboveground and underground tanks, including
	1. Number of each type of tank
	2. Capacity of each tank
	3. Identification of contents of each tank

**Section C. PRACTICES SELECTED TO PROTECT GROUNDWATER FROM POLLUTION**

* For each activity listed in Section B, describe the practice (BMP) that will be used to protect groundwater. The BMPs must be described. Simply stating that BMPs will be used is unacceptable.
* Practices in SPCC or Storm Water Pollution Prevention Plans (SWPPP) may be used in the GPP provided, that they are equally protective of groundwater.
* Information about secondary containment for ASTs must include the kind of material (metal, concrete, asphalt) making up the floor and berms (sides) of the containment area.
* Tanks that are double-walled are considered secondarily contained.

**Section D. IMPLEMENTATION SCHEDULE**

* The GPP must be implemented upon approval.

Having a GPP on file in an office somewhere does notkeep a facility in compliance WV0115924. **The GPP must be retained and implemented at the site for which it was developed**.

* + Procedures for protecting groundwater when designing and adding new equipment and operations. Adequate design of these operations should be considered in the GPP when making changes in areas of karst, wetlands, faults, subsidence, areas determined by the Bureau for Public Health to be delineated wellhead protection areas, or other areas determined by the Director to be vulnerable based upon geologic or hydrogeologic information.
	+ The permittee must revise the GPP within 30 calendar days to address any newly delineated areas or other vulnerable areas upon notification by the Director or the Bureau for Public Health.

**Section E. EMPLOYEE TRAINING**

* You are developing a Groundwater Protection Plan; therefore, training must focus on groundwater protection.
* Training must include educating the employees about the importance of groundwater protection and include all aspects of the GPP. Briefly describe topics to be covered in training the employees about groundwater protection practices.
* State the frequency of training sessions—initial and refresher sessions. Be specific, “When needed” or “frequently” are too vague.

**Section F. INSPECTION SCHEDULE**

Inspections are conducted to insure that the practices selected to prevent groundwater pollution are being used and are properly functioning.

* State the frequency of the inspections and what is to be inspected.
* Include an Inspection Checklist. The checklist is documentation that you are implementing the GPP. The checklist must include date, name of inspector, what is to be inspected, observations, actions taken, if any.

**Section G. WASTE MATERIAL**

* Waste material will not be used for deicing, fill, or any other use, unless that use is allowed by regulation or permit.

**Section H. SAFETY DATA SHEETS**

* Material Safety Data Sheets or Safety Data Sheets shall be provided for all chemicals, or substances, used or stored on site.

**Section I. GROUNDWATER DATA**

* Provide all available groundwater quality data for the facility as well as well locations or other sampling points.

**Section J. KARST MITIGATION PLAN**

(a) The preliminary and detailed site investigation(s) shall be completed as noted in the latest version of the Chesapeake Stormwater Network Technical Bulletin No. 1, “Stormwater Design Guidelines for Karst Terrain in the Chesapeake Bay Watershed”. This should be considered the minimum requirement and applicable to all Karst areas in West Virginia.

(b) All necessary site investigations as noted in the above-referenced bulletin shall be completed by a qualified professional engineer or geologist, licensed by the State of West Virginia and experienced in working in Karst Terrain.

(c) Sinkhole Mitigation **shall** **be** carried out according to the WVDEP Sinkhole Mitigation GuidanceDocument (August 2005, revised 2018), or other applicable standards asrecommended by the G or PE and approved by the West Virginia Department of Environmental Protection (WVDEP).

**Design Requirements**

**1.** The location of all sinkholes shall be shown on the existing conditions scale drawing, included with the preliminary plan submission. The edge of the sinkhole is to be considered the last closed contour based on five foot (5’) contour mapping.

**2.** All sinkholes identified prior to construction shall be either remediated or separated from construction by a minimum one hundred-feet (100’).

**3.** Remediation shall be carried out under the direction of a qualified Geologist or Geotechnical Engineer. Mitigation shall be carried out according to the WVDEP Sinkhole Management Guidance Document (August 2005 et. seq.), or other applicable standards as recommended by the G or PE and approved by the WVDEP.

**4.** Any improvements planned to fall within one hundred feet (100’) of any sinkhole (remediated or not), shall require a thorough subsurface investigation conducted by a qualified G or PE to ensure that the planned improvements do not present a threat to human health, safety, or the environment. Should these investigations detect previously unknown sinkhole features, paragraph 2 applies.

**5.** For any subsurface investigations requiring boreholes, such as air track drilling or rock coring, the boreholes must be grouted upon completion. All air track drilling operations used to determine the depth of overburden and continuity of bedrock shall be monitored full-time by a G or PE or other qualified individual.

**6.** Underground utilities located within one-hundred feet (100’) of a karst feature, then a dike of clay or other suitable material shall be placed across the trench at twenty-foot (20’) intervals or less along the entire length which passes through the one hundred foot (100’) radius, or as directed by a G or PE.

**7.** Do not apply any fertilizer, pesticides, or other chemicals within at least one-hundred feet (100’) of a sinkhole.

**8.** Immediately (within 24 hours) after disturbing any soil, lightly fertilize, seed, and mulch the area to control erosion. A geotextile may be needed on steep slopes.

**9.** At least one subsurface cross section should be submitted with the storm water plan, showing confining layers, depth to bedrock, and water table, if encountered. It should extend through the centerline of any proposed impounding storm water facility.

**10.** Natural karst swales should be protected whenever possible as an effective element in storm water design in karst regions.

**Section K. CERTIFICATION STATEMENT**

* The person who can make the managerial and/or financial decisions that are required to implement your plan should be the one signing the certification statement.
* Use the following certification statement verbatim.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.  Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.  I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature (hand signed)

Date