



Oil and Gas Management

2012 Industry Training Workshops

Jim Kline
Environmental Group Manager
Bureau of Regulatory and Resources Enhancement
Office of Oil and Gas Management



Oil and Gas Management

Oil and Gas Management

Oil and Gas Management



Stream Crossings



During this presentation, we will cover:

- The various GP's in Chapter 105
- The GP's that apply to Oil and Gas Activities
- Common Terminology
- Authorizations and Forms
- Waivers
- The applicability of the GP for Oil and Gas Activities...what is needed (when and where)
- Permit Conditions of the GP
- Notification Requirements
- Registration Requirements
- The GP Registration Process (who does what)
- Areas of Concern
- PA State Programmatic General Permit
- Joint Permit (Standard and Small Project)

The GP's

- GP-1 Fish Habitat Enhancement Structures
- GP-2 Small Docks & Boat Launching Ramps
- GP-3 Bank Rehabilitation, Bank Protection & Gravel Bar Removal
- GP-4 Intake and Outfall Structures
- GP-5 Utility Line Stream Crossings
- GP-6 Agricultural Crossing & Ramps
- GP-7 Minor Road Crossings
- GP-8 Temporary Road Crossings
- GP-9 Agricultural Activities
- GP-15 Private Residential Construction in Wetlands

Chapter 105- General Permits most commonly related to Oil and Gas Activities

- GP-4 Intake and Outfall Structures
- GP-5 Utility Line Stream Crossings
- GP-7 Minor Road Crossings
- GP-8 Temporary Road Crossings

Common Terminology

- PNDI-PNHP
- SLLA
- ACT 14
- Drainage Area
- FEMA Floodway
- Encroachment
- Water Obstruction
- Utility Line
- Watercourse

Pennsylvania Natural Diversity Inventory
(PNDI)
Pennsylvania Natural Heritage Program
(PNHP)

Location and status of important ecological resources (plants, vertebrates, invertebrates, natural communities and geologic features).

All searches resulting in a conflict must be resolved prior to a general permit being issued.

The common goal is the conservation of Biodiversity, resource conservation and preservation.

PNDI Tool Update

Effective July 2, 2012 PNDI receipts and clearance letters issued by the jurisdictional agencies will be valid for two years.

<http://www.naturalheritage.state.pa.us/>



SLLA

Submerged Lands License Agreement

Waters and permanently or periodically inundated lands owned by the Commonwealth (Submerged Lands of the Commonwealth), including lands in the beds of navigable lakes and rivers and beds of streams declared public highways which are owned and held in trust by the Commonwealth.

If applicable, the owner must obtain a SLLA authorizing the occupation.

The SLLA **must be** obtained prior to the utilization of any general permit or in conjunction with an individual Chapter 105 permit.



ACT 14



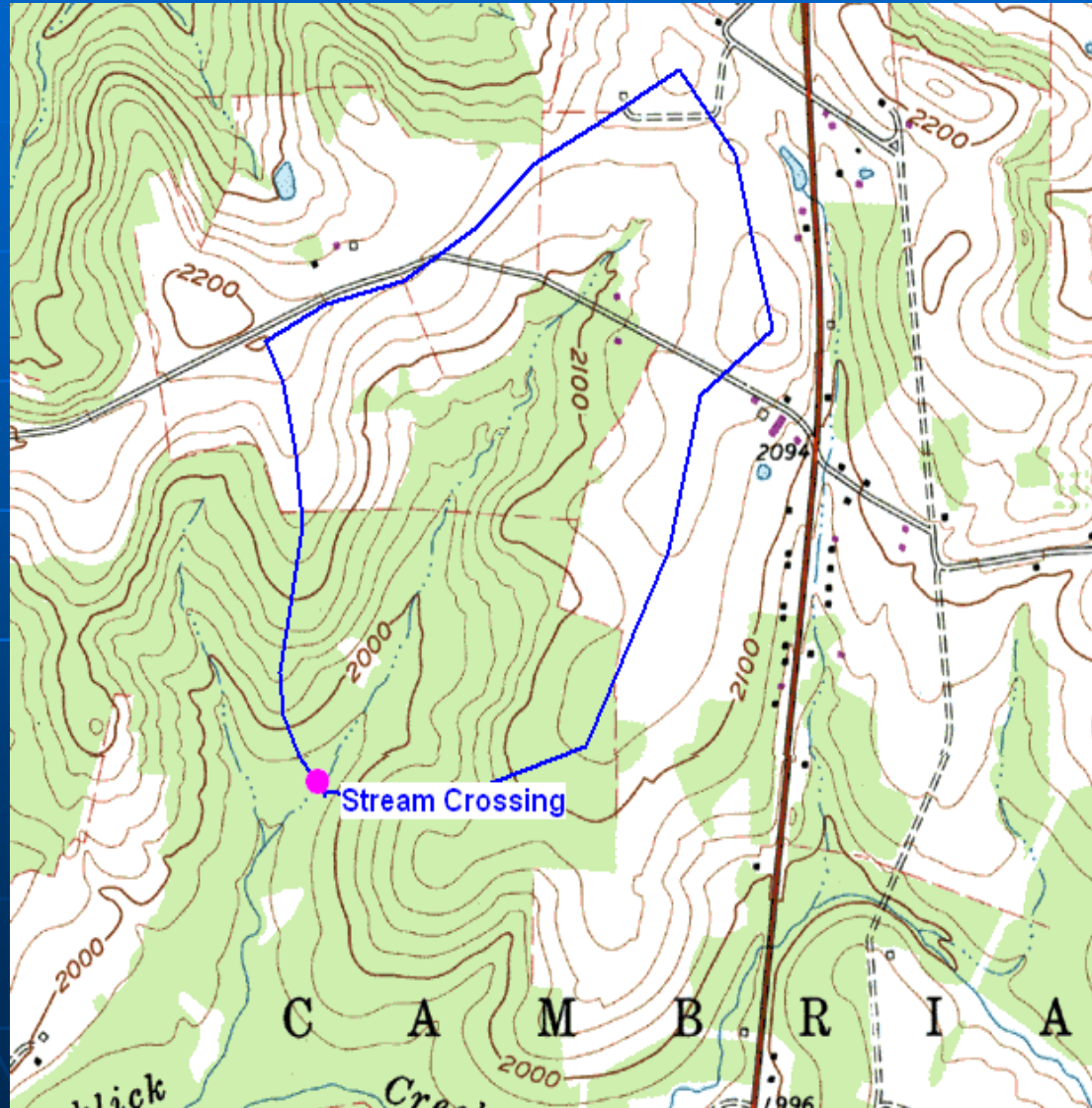
Requires every applicant for a new, amended or revised Department permit to give written notice to each municipality and county government in which the activity is to occur. The written notice must be received by the municipality and county government at least thirty (30) days before the Department may issue or deny an application.

The purpose of this letter is to inform the municipality or county of your intent to submit an application to DEP.

Drainage area

The drainage area is the total surface area upstream of a point on a stream, where the water from rain or snowmelt which is not absorbed into the ground flows over the ground surface back into streams to finally reach that point on the stream.

Drainage area



Distance Information

Start:	040° 31' 23.00" N	078° 43' 50.28" W
Start elevation:	2022 feet	
End:	040° 31' 23.00" N	078° 43' 50.28" W
End elevation:	2022 feet	
Projected Distance:	2.568 miles. 4.132 kilometers.	
Projected Area:	10751460 sq. feet 246.819 acres 0.998 sq. kilometers	

FEMA Floodway

Federal Emergency Management Agency

The channel of a watercourse and the adjacent land areas which are required to carry & discharge the 100 year frequency flood.

In areas where there are no FEMA maps or studies, it is assumed that the floodway extends 50' from the top of the bank of the stream.

WATERCOURSE

Any channel or conveyance of surface water having defined bed and banks, whether natural or artificial, with perennial or intermittent flow.



Water Obstruction

A dike, bridge, culvert, wall, wing wall, fill, pier, wharf, embankment, abutment or other structure located in, along or across or projecting into a watercourse, floodway or body of water.

Encroachment

A structure or activity which changes, expands or diminishes the course, current or cross section of a watercourse, floodway or body of water.

examples:

Excavations, fills and or structures in the stream, floodway or body of water (includes obstructions)



UTILITY LINE



Any pipe or pipeline for the transportation of a gaseous, liquid, liquefiable or slurry substance or, any cable, conduit, line or wire for the transmission of electrical energy, telephone, telegraph, radio, or television signals, including cathodic corrosion protection.



Authorizations

Waivers

General Permits (GPs)

- Projects qualify for a GP if they are designed and implemented in accordance with GP's conditions and criteria

PA State Programmatic General Permit (PASPGP-4)

Joint Permit (Standard and Small Project)

- PA Water Obstruction and Encroachment Permit
- USACOE Section 404 Permit
- *if the project does not require the discharge of dredge or fill material and/or the placement of structures in waters an ACOE Section 404 permit may not be required and only Chapter 105 requirements apply.*

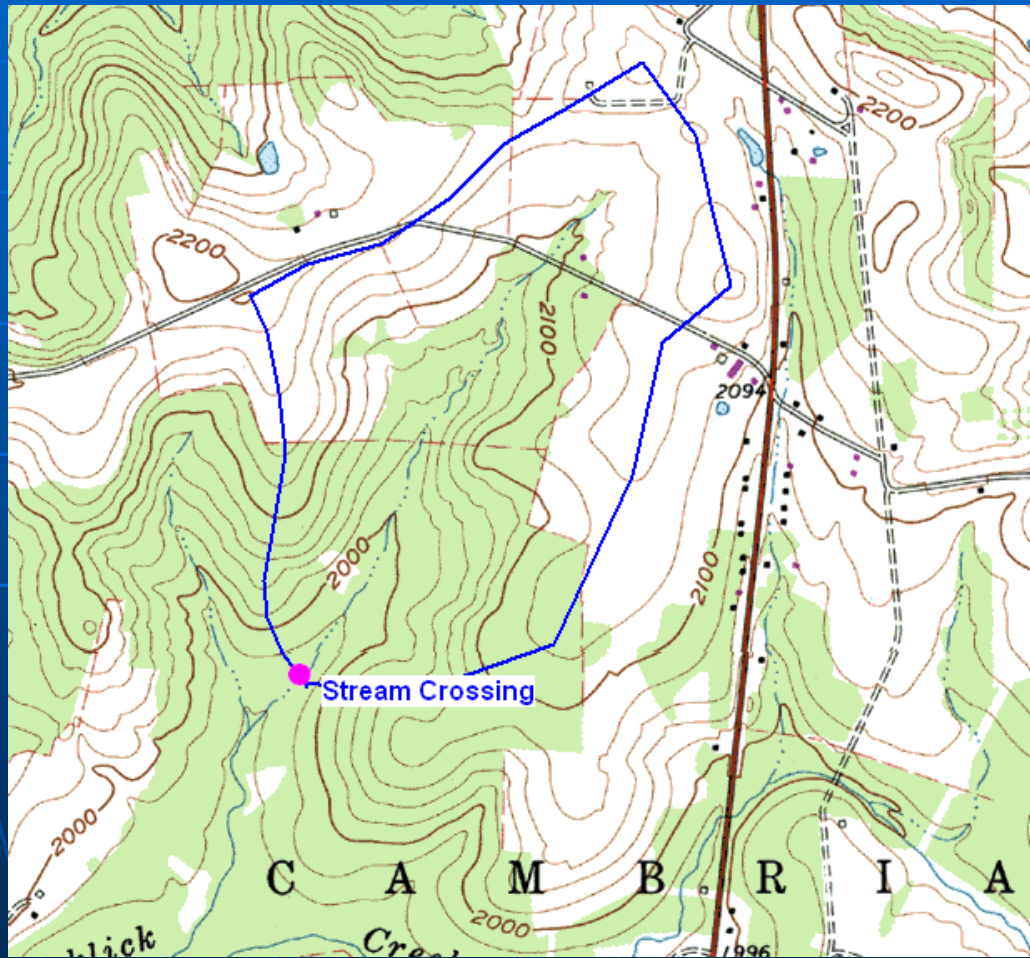
Waivers

Certain requirements may be waived. However, the activity or structure is still regulated.

These same activities or structures may require a permit, if the Department finds the activity or structure to have a significant effect upon safety or the protection of life, health, property or the environment.

105.12(a)(2) a water obstruction in a stream or floodway with a drainage area of 100 acres or less and no wetland impacts is waived from permit requirements and considered a waived activity (Waiver 2). Waiver 2 activities still may require federal authorization and are reported to the Army Corp of Engineers (ACOE) under the Pennsylvania State Programmatic General Permit (PASPGP-4).

Waivers



General Permit Registration

- The Department has up to 60 days to process a GP registration form.
- You must receive an acknowledgement of your submitted registration form from the DEP, prior to the start of construction.
- The form number is:

Form 3930-PM-WM0500

Current version: Rev. 6/2011

Section C (continued).

Detailed Directions to the Site

Project Description

- If GP-5, please, indicate “gathering” or “transmission”; the total pipeline size and length
- If GP-7 and 8, describe in detail

Section D.

Compliance Review

- Is the applicant currently in violation of any permits issued by the Dept?

Please provide:

- Permits Numbers
- Nature of the Violation
- Status of the Violation

Section E.

Certification

Original signature of the permittee

Person responsible for the installation, operation and maintenance of the authorized activity.

Section F.

Registration Checklist

- ✓ **Act 14 Notice (Municipality & County)**
Copies of the notification letters and proof of receipt ARE NOT required
- ✓ Cumulative Impact screening form
- ✓ Location map
- ✓ Sketch plan
- ✓ Cross section drawings (where req. GP 5,6,7 & 8)
- ✓ Color Photographs

Section F.

Registration Checklist

PNDI

- Completed PNDI Project Planning and Environmental Review Form
- Search Receipt - NO Known Impacts
 - Avoidance Measures
 - Potential Impacts & agency coordination

Section F.

Registration Checklist

- ✓ Bog Turtle Habitat Screening
 - ✓ Habitat screening form
 - ✓ “no effect” determination from the ACOE
 - ✓ Clearance from the US Fish and Wildlife Service

- ✓ Activities which permanently impact wetlands
 - ✓ Delineation with completed data sheets
 - ✓ Impacts > 0.05 acres – wetland replacement plan
 - ✓ If on-site is not feasible – fee schedule

Section F.

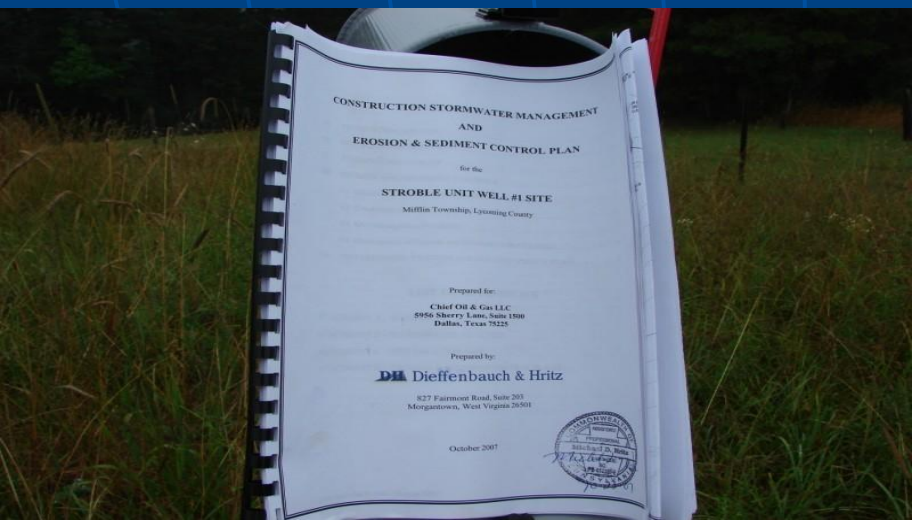
Registration Checklist

- Sketch Plan
- Project Cross Sections and Plan Views



Chapter 102- Erosion and Sediment Control

E&S Control Plans must be on site during all phases of construction





*The General Permits commonly
related to Oil and Gas Activities*



GP4- Intake and Outfall Structures

Structures in the watercourse or
floodway



GP4- Intake and Outfall Structures

Applicability for Use & Conditions

- Watershed drainage can be greater than 1 square mile
- Maximum diameter outfall culvert is 36"



GP4- Intake and Outfall Structures

NON-Applicability (Can not use for):

- Exceptional Value or High Quality Waters
- Areas of Historic or Archaeological Resources
- Wild or Scenic Rivers
- Natural Landmarks
- Wetlands
- Stocked trout streams
from March 1st through June 15th
- Wild trout streams
from Oct. 1st through Dec. 31st

GP5- Utility Line Stream Crossings



GP5- Utility Line Stream Crossings

Applicability for Use & Conditions

- Watershed drainage can be greater than 1 square mile
- Maximum line diameter is 36"
- 3' of cover (*1' of cover if the line is in rock*)
- High Quality Waters and below
- Installation of trench plugs (or other adequate measures) must be used in the trench to prevent sedimentation from entering the stream or from dewatering a wetland



GP5- Utility Line Stream Crossings

Applicability for Use & Conditions



-Mats, pads or other similar devices must be used when crossing the wetland by construction equipment. Compaction of wetland soils is not allowed.

-The owner must also obtain a GP-8 (Temporary Road Crossing) for construction vehicles crossing at these sites.

GP5- Utility Line Stream Crossings

NON-Applicability (Can not use for):

- Exceptional Value Waters
- Areas of Historic or Archaeological Resources
- Wild or Scenic Rivers
- Natural Landmarks
- Threatened or Endangered Species
- Wetlands greater than 10 acres in size
- Stocked trout streams
from March 1st through June 15th
- Wild trout streams
from Oct. 1st through Dec. 31st
- Reservoirs

GP-5 Areas of Concern



Running utility lines through existing culverts

GP-5 Areas of Concern

HDD inadvertent returns

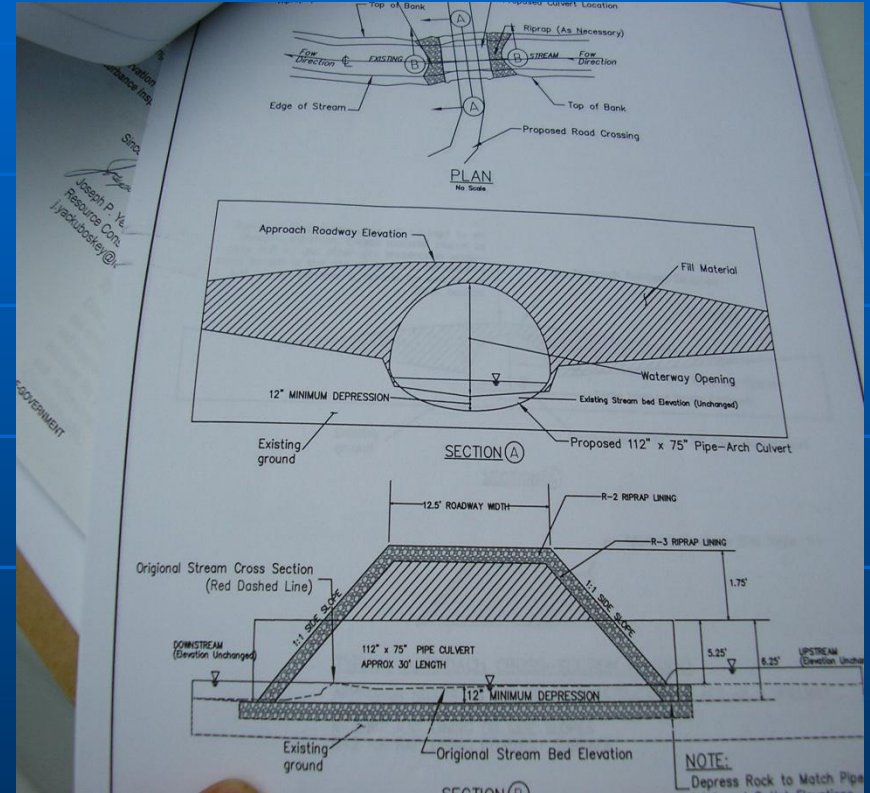
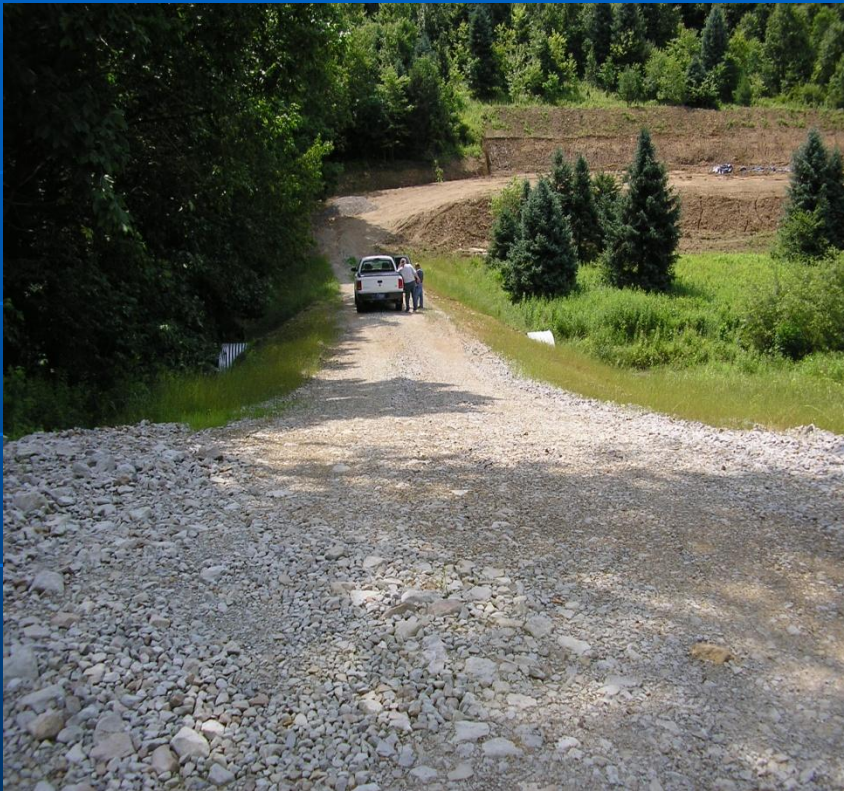


- ✓ Shallow depths
- ✓ Additives
- ✓ Contingency Plans



PHOTO COURTESY:
DEP Scott Sabocheck

GP7- Minor Road Crossing (*permanent structure*)



GP8- Temporary Crossing Structures in place for less than 12 months

**Among the many differences, one difference between the GP7 and GP8 is the amount of time the structure will be in place.*

GP7- Minor Road Crossing

Applicability for Use & Conditions

- The construction must be completed within 3 years. If not, the structure must be removed and the watercourse must be restored to the former condition.
- Crossings are installed at right angles to the stream



GP7- Minor Road Crossing

Applicability for Use & Conditions



The crossing must be kept open and clear of any obstruction or debris

GP7- Minor Road Crossing

Applicability for Use & Conditions

- Culverts must be installed with the invert at least 6” below the natural stream bed and that gradient of the invert does not deviate from the natural stream bed



GP7- Minor Road Crossing

Applicability for Use & Conditions



- The structure can not interfere with the migration of fish
- Culverts shall not increase the velocity or direct flow so as to result in the erosion of the stream bed or bank





GP7- Minor Road Crossing Applicability for Use & Conditions



- Culverts and bridges shall be sized accordingly and shall be of sufficient width and size so as not to narrow the existing stream channel
- Culverts must be aligned with the stream flow

GP7- Minor Road Crossing

NON-Applicability (Can not use for):

- If the watershed drainage is greater than 1.0 square mile
- Exceptional Value Waters (EV)
- Areas of Historic or Archaeological Resources
- Wild or Scenic Rivers
- Natural Landmarks
- Threatened or Endangered Species
- Wetlands crossing greater than 0.1 acre in size and less than 100' in length
- Stocked trout streams
 - from March 1st through June 15th
- Wild trout streams
 - from Oct. 1st through Dec. 31st

GP8- Temporary Road Crossing

Applicability for Use & Conditions

- The crossing may remain in place for one year.
- Crossings are done at right angles to the stream.
- Crossing of wetlands shall be avoided if an alternate location is possible.
- Crossing of wetlands must be located at the narrowest practicable point.
- Crossings must be restored to the original topography & stabilized
(except fords...the approaches must be adequately blocked & stabilized for restoration).

GP8- Temporary Road Crossing NON-Applicability (Can not use for):

- Wetland crossings greater than 200' in length
- Culverts less than 12" diameter
- Areas of Historic or Archaeological Resources
- Threatened or Endangered Species
- Natural Landmarks
- Stocked trout streams
from March 1st through June 15th
- Wild trout streams
from Oct. 1st through Dec. 31st

Fords (GP 7 or GP 8)

- These crossings must be stable
- Are prohibited on HQ and EV streams or in wild trout streams
- Discharge of sediment while vehicular crossing is not allowed





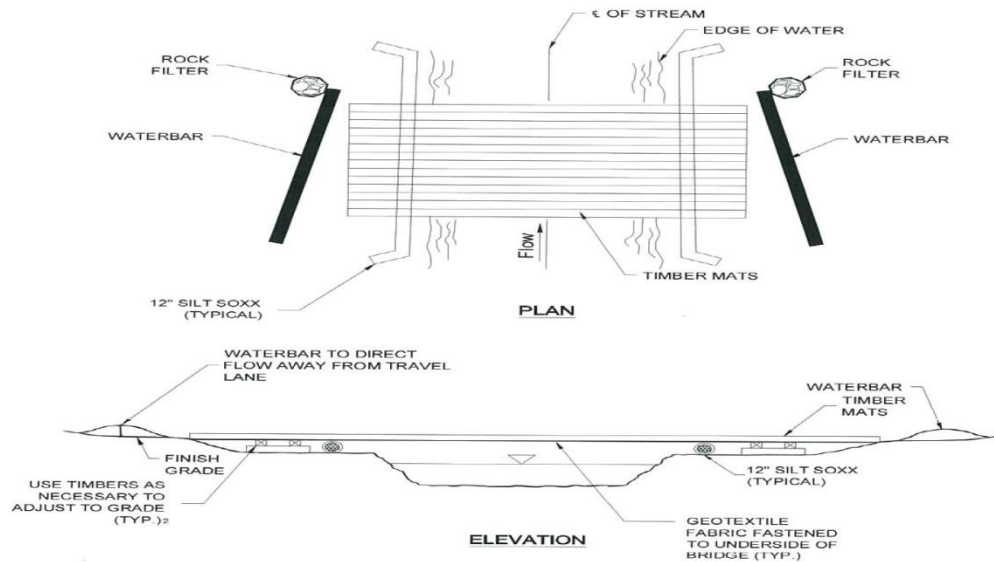
Fords



- Skidding equipment across a ford is prohibited.
- Fords are prohibited within 2,000' upstream from drinking water intakes or reservoirs for public water supplies
- If the stream bed does not have a rock bottom, then a layer of clean rock must be provided and can not obstruct stream flow
- The approaches must enter the stream at less than 10% grade within 50' of the stream

GP8- Areas Of Concern

Timber mat crossing



GENERAL NOTES:

1. THIS TYPE OF BRIDGE IS GENERALLY USED FOR SMALL STREAM & WETLAND CROSSINGS LESS THAN 20 FEET IN WIDTH IN COMBINATION WITH A PROPER STREAM & WETLAND BANK CONFIGURATION.
2. BRIDGE WILL BE TEMPORARILY REMOVED IF HIGH WATER RENDERS IT UNSAFE FOR CROSSING.
3. BRIDGE TO REMAIN IN PLACE UNTIL THE COMPLETION OF FINAL RESTORATION.
4. INDIVIDUAL MATS SHALL BE ANCHORED AND BUTTED TIGHTLY TO MINIMIZE THE INTRODUCTION OF SEDIMENT TO THE WATERBODY.
5. TIMBER MATS CAN ONLY BE INSTALLED FOR A MAXIMUM OF 1 YEAR.

TYPICAL SPAN MAT BRIDGE CROSSING

Geotextile Fabric securely fastened on the underside of timber mats to collect loose debris or sediment and prevent discharge into the stream.

GP8- Areas Of Concern



- ✓ attach geotextile to the underside
- ✓ install temporary E&S controls at the crossing to prevent sediment from entering the waterway

Notification Requirements

for GPs related to Oil and Gas Activities

- Registration form to the DEP OOGM
- Pa Historical & Museum Commission
(If resource was found during the activity)

Notification Requirements (cont'd) for GPs related to Oil and Gas Activities

You must notify the PA Fish & Boat Commission
Regional Headquarters 10 days prior to construction



Registration Requirements for GPs related to Oil and Gas Activities

- Act 14 Notification
- Cumulative Impact Project Screening Form
- USGS Location Map
- Sketch Plan
- Cross Sections
- Color Photographs
- PNDI
- Bog Turtle Screening
(required for GP 5,7 & 8)
- Wetland Delineations *(NOT applicable for GP4)*
- Erosion & Sediment Control Plan
- Submerged Lands License Agreement (SLLA)
* required if applicable

Where do you register a GP?



3930-PM-WM008 Rev. 11/2008
pennsylvania
 COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 BUREAU OF WATERBODY MANAGEMENT
 WATER OBSTRUCTION AND ENCROACHMENT

DEF USE ONLY
 Acknowledged Date _____
 GP _____
 GP _____
 PASPGP-3 Authorization Included: YES NO

GENERAL PERMIT REGISTRATION

CHAPTER 105 GENERAL PERMITS
 PLEASE CHECK ALL THAT APPLY:

GP-1 - Fish Habitat Enhancement Structures
 GP-2 - Small Docks & Boat Launching Ramps
 Please check one of the boxes below if utilizing GP-2, (See Part 1, Section C):
 private recreational dock
 public service facility
 other private or commercial facility

GP-3 - Bank Rehabilitation, Bank Protection & Gravel Bar Removal
 GP-4 - Intake and Outfall Structures
 GP-5 - Utility Line Stream Crossing
 GP-6 - Agricultural Crossings & Ramps
 GP-7 - Minor Road Crossings
 GP-8 - Temporary Road Crossings
 GP-9 - Agricultural Activities
 Activity Related to Oil and Gas Exploration and Production

Check One: New Permit Transfer of Existing Permit - complete Sections A, C & E and transfer form 3930-PM-WM0016

SECTION A. APPLICANT INFORMATION

Applicant Name: Fortuna Energy Inc.
 Contact Person Last Name: Gregory
 First Name: Tracy
 MI: _____
 Telephone: (607) 962-4032
 Mailing Address: 337 Daniel Zenker Drive
 City: Horseheads
 State: NY
 Zip + 4: 14845
 Email Address: tgregory@fortunaenergy.com

SECTION B. CONSULTANT (if different than above) N/A

Consultant - Last Name: Bowers
 First Name: Bud
 MI: _____
 Consulting Firm: Lands Services Group
 Mailing Address: 10139 Route 6
 City: Wellsboro
 State: PA
 Zip + 4: 16901
 Telephone: (570) 724-3395
 FAX: _____
 Email: Bowers@landsg.com

SECTION C. PROJECT INFORMATION

Project Name: Schildt to White Pipeline

Site Location: pipeline route
 City: N/A
 State: PA
 Zip + 4: _____

Municipality: Jackson
 City: Borough: Township: County: Tioga

How many acres of earth disturbance will occur as a result of this project?
 Less than one acre 1-5 acres 5 acres or more

- 1 -



DEP Pennsylvania Department of Environmental Protection
 200 West Third Street, Suite 101
 Williamsport, PA 17740-6448
 July 9, 2009

Northcentral Regional Office
 Oil & Gas Program - Eastern Region
 Tracy Gregory
 Fortuna Energy, Inc.
 337 Daniel Zenker Drive
 Horseheads, NY 14845
 570-327-3636
 Fax 570-327-3428

Re: GP0559160901 & GP0559160901
 Schildt to Aeon Pipeline
 Pipeline & Temporary Road Crossings
 Jackson Twp., Tioga County

Dear Mr. Gregory:

This will acknowledge receipt of your notification (copy enclosed) and registers your use of a General Permit issued by the Department. You are responsible for assuring the work is done in accordance with the drawings and conditions contained in the General Permit.

You may proceed with your project after making the required notifications stipulated in the General Permit and securing all other approvals that may be necessary.

Attached to this acknowledgment, please find your Federal Clean Water Act Section 404 authorization in the form of the Pennsylvania State Programmatic General Permit (PASPGP-3).

If you have any questions, please feel free to contact Andy Klinger at 570-327-3767 or by email at: anklinger@state.pa.us.

Sincerely,
Jennifer Means
 Jennifer Means
 Environmental Program Manager

Enclosure(s)

Copies of Exhibit(s) sent to:
 Pa. Fish & Boat Commission
 County Conservation District
 U.S. Army Corps of Engineers
 File

cc: U.S. Army Corps of Engineers
 File

An Equal Opportunity Employer
 www.dep.state.pa.us
 Printed on Recycled Paper

An acknowledged copy of this General Permit and the approved E&S Control Plan MUST BE AVAILABLE AT THE PROJECT SITE during construction (Ref. section F- Reg. Checklist of the General Permit Registration)

County Conservation Districts (CCDs) involvement concerning OOGM GPs



County Conservation Districts (CCDs) involvement concerning OOGM GPs

CCDs (with CH105 delegation) will review all GPs associated with transmission lines.

example.... An operator submits an ESCGP to a delegated CCD for a transmission line. Say the transmission line will cross a stream which requires a GP 5. The CCD will also issue the GP for this activity.

GPs not associated with transmission lines (collection, gathering lines etc and everything that we talked about today) will be covered by OOGM.

Federal Programmatic General Permit (PASPGP-4) “One Stop Shop”

- Pennsylvania State Programmatic General Permit-4 (4th version)
effective July 1, 2011
- Many projects in Commonwealth waters and wetlands also require federal authorization.
- For certain projects DEP can attach a federal SPGP permit to state permit
- When it applies, PASPGP-4 eliminates any need for redundant federal reviews

PASPGP-4

(Federal Authorization)

- Waiver of DEP permit
 - Under 100 acre of drainage area
 - Does not apply to wetlands located in the floodway
 - Must contact USACOE for Federal Authorization
- PASPGP-4
 - An automatic Federal Authorization when DEP General Permit is issued
 - If it is not attached, then an additional 45 day review by USACOE
 - If > 0.25 acre wetland impacts (accumulated)
 - If > 250 ft linear impacts of stream (accumulated)
- If > 1 acre of all water impacts (streams + wetlands)
USACOE will review and issue directly
- If < 1 acre water and not eligible DEP General Permit
 - Joint Permit
 - Full
 - Small Project (not any significant impacts (e.g. no wetlands, etc.))

PASPGP-4

Section 404(e) of the Clean Water Act (CWA) (33 United States Code [U.S.C.] Section [§] 1344) allows for the issuance of general permits on a statewide basis, which operate in conjunction with a State regulatory program that protects the aquatic environment in a manner equivalent to the Department of the Army regulatory program, provided that the activities permitted under each category of such general permits are similar in nature and result in no more than minimal individual or cumulative adverse effects on the aquatic environment. This Pennsylvania State Programmatic General Permit # 4 (PASPGP-4) is issued pursuant to Section 404(e) and is based on and consistent with the requirements of the CWA 404(b)(1) Guidelines.

<http://www.nap.usace.army.mil/cenap-op/regulatory/paspgp.html>

PASPGP3

All activities issued under PASPGP-3 that did not expire prior to June 30, 2011, are reauthorized by the PASPGP-4 without further notice to the applicable Corps District provided the proposed regulated activities comply with all terms, conditions, limits, and best management practices identified and required by the PASPGP-4; all special conditions attached to the original PASPGP-3 authorization; and all applicable PADEP Chapter 105 authorizations. The duration of these reauthorizations will be for: the term of the PASPGP-4 (June 30, 2016) for Category I or II activities, or the applicable PADEP Chapter 105 authorization, or five years from issuance of the PASPGP-3 Category III activities, whichever is less.

Joint Permit (Standard and Small Project)

- No work in wetlands
- No impacts to a Federal wilderness area or a National Historic Site
- No impacts on the habitat of rare, threatened or endangered species (PNDI-PNHP)
- No significant impacts to public water supplies, HQ or EV watersheds, scenic rivers or wild or stocked trout streams

Before completing this form, please read the step-by-step instructions and Section F Application Completeness Checklist provided with this Joint Permit package.

AGENCY USE ONLY		
Application ID# (Assigned by DEP) _____	RECEIVED DATE _____	CHECK NO. _____
Program Application No. _____	REQUIRED APP. FEE _____	AMOUNT \$ _____
SECTION A. APPLICATION TYPE: STANDARD <input type="checkbox"/> SMALL PROJECTS <input type="checkbox"/>		
SECTION B. APPLICANT IDENTIFIER		
Applicant Name _____		
SECTION C. PROJECT LOCATION DATA		
Name of stream and/or body of water and Chapter 93 designation. _____		
Corps District where project will occur: <input type="checkbox"/> Pittsburgh (Ohio River Basin) <input type="checkbox"/> Baltimore (Susquehanna River Basin) <input type="checkbox"/> Philadelphia (Delaware River Basin)		
Name of the U.S.G.S. 7 1/2 Minute Quadrangle Map where project is located: _____		
Indicate location of project: Latitude _____; Longitude _____		
Project type, purpose and need: _____ _____ _____		
SECTION D. PROJECT STATUS		
HAS ANY PORTION OF PROPOSED PROJECT BEEN AUTHORIZED? <input type="checkbox"/> yes <input type="checkbox"/> no _____ date authorized		
If yes, attach description of those portions of the project that have been authorized and identify dates of authorization. Also attach a completed PASPGP-4 Cumulative Impact Project Screening Form.		
SECTION E. COMPLIANCE REVIEW		
Yes	No	Is the applicant (owner and/or operator) currently in violation of any permits issued by the Department?
<input type="checkbox"/>	<input type="checkbox"/>	If yes, please provide:
		1. Permit Number: _____
		2. Nature of the violation (if any): _____
		3. Status of violation (i.e., schedule for compliance, etc.): _____

(3 page application)

Joint Permit Requirements

An application for a joint permit shall have the following information provided with it:

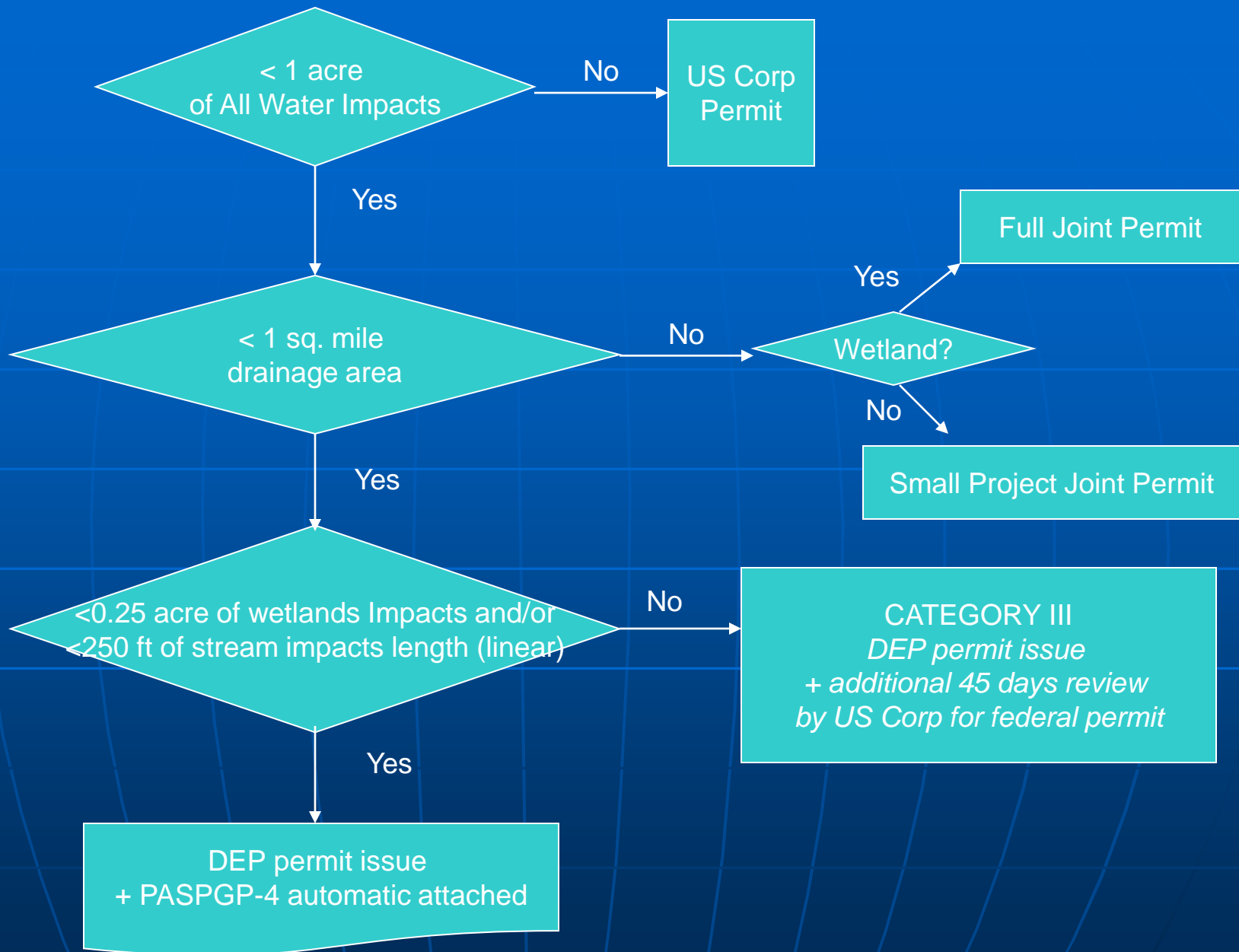
- A site plan
- A location map
- Project description
- Color photographs
- Stormwater Management Analysis
- Floodplain Management Analysis
- Risk Assessment

Joint Permit Requirements (cont'd)

- Alternatives analysis
- Mitigation plan
(avoid, reduce, minimize, compensate)
- Impacts analysis
- Other data required by Chapter 105
- Additional information requested by the Department
- Proof of an application for an Earth Disturbance Permit or an Erosion & Sedimentation Control Plan.

Joint Permit Registration

- Under Money Back Guarantee, the Department has up to 130 days to process a joint permit application
- You must obtain a written permit from DEP, prior to the start of construction
- Form 3930-PM-WM0036A
 - Current version: Rev. 6/2011
 - Do not use other versions



**not applicable for all cases.*



Oil and Gas Management

Questions

Jim Kline
Environmental Group Manager
Bureau of Regulatory and Resources Enhancement
Office of Oil and Gas Management
jamekline@pa.gov
(814)472-1903