



DEP Permitting, Stormwater and E&S

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NTM Engineering, Inc.



Fifth Annual
ASHE-Harrisburg
PennDOT Engineering District 8-0
Conference




Agenda

- Permit Requirements
 - PNDI
 - Lead Agency Review
- General Permit Limitations
 - E&S Plans and GP-11 Permit
 - Bog Turtle Habitat Assessment
- Quality Checklists and Agency Coordination
- EV Wetlands
- NPDES
- Permitting and Design-Build



Permit Requirements

- PNDI must be run for every permit including E22-9999 permits
 - PNDI's and Clearance Letters must be valid up to the time the permit is issued
- USACE Lead Agency for 100% State Funded Bridges 
 - USACE must be involved in projects with adverse impacts to historic resources and with endangered species coordination.
 - For all State and Federal funded projects, District's responsibility to develop projects that avoid, minimize or mitigate impacts.



Pennsylvania Natural Heritage Program

information for the conservation of biodiversity

General Permit Limitations

- General Permits have special conditions that cannot be modified on a project-by-project basis
- This has been an issue for projects that need preconstruction survey to clear the area for Bog Turtles or mussels.
- As a temporary solution, the USACE has agreed to allow the Department to fully incorporate avoidance measures into the E&S Plan.
 - Including the preconstruction bog turtle surveys and placement of fencing to prevent bog turtles from entering work areas

E&S Plans for GP-11's



- Special Condition 8 on page 5 of the GP-11 conditions requires that DEP provide the review and approval of the E&S plans when a GP-11 is submitted
- Therefore, the E&S plans must be submitted to DEP with the permit application for the GP-11 and do **NOT** need to be submitted to or approved by the county conservation district
- This does **NOT** apply to other General Permits or the E22-9999 permit

Bog Turtle Clearance

- PNDI – no hits for Bog Turtle on a PNDI receipt does not clear the area for Bog Turtles in the Bog Turtle Counties of:
 - Adams, Berks, Bucks, Chester, Cumberland, Delaware, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Schuylkill (Swatara Creek Watershed), and York Counties
- If no wetlands present or no impacts to wetlands then the PNDI can be signed and you are clear
- Otherwise if wetlands are present and impacted – habitat assessment required

Bog Turtle Habitat Assessment

- Bog Turtle Assessment is **NOT** the same as a wetland identification and delineation
- As a minimum, requires a wetland scientist with Phase I bog turtle habitat training and experience
- If habitat considered “marginal” – A *Phase II Qualified Bog Turtle Surveyor* should reevaluate the habitat. The District and resource agencies prefer that the Phase I assessment be done by a *Qualified Phase II Bog Turtle Surveyor*.



Bog Turtle Habitat Present

- Issues include constructability, wetland location, stream width, and detours
- There are 3 Options and all require agency coordination
 1. Go directly to Phase II Bog Turtle Survey (must be performed in April – June) – If not turtles found, project can proceed.
 2. Assume turtles are present and incorporate pre-construction consultation into the job. Only applies when impacts are minor and requires a Phase II surveyor searches the area and assists in setting fencing so bog turtles cannot enter construction area.

Bog Turtle Habitat Present

- Option 3
 3. Time restriction to avoid doing work when bog turtles are hibernating (Typically Nov 1st to April 1st). It cannot be used when there are impacts to the mucky soils that bog turtles hibernate



**Bog turtle habitat in
Chester County in March**

USFWS Phase II Bog Turtle Surveyors
List (as of 1/15/08)

http://www.nap.usace.army.mil/cenap-op/regulatory/BT_qualified_PA_011508.pdf

Hydrology and Hydraulic Checklists

- DM-2, Chapter 10 Appendix D
 - Hydrology
 - HEC-RAS for bridges and culverts
 - HY-8 for simple culvert replacements
 - Scour per DM-4, Chapter 7 and HEC-18
 - H&H Report Checklist
- Attach to PennDOT Files in the JPA2 Electronic Permitting

HYDROLOGY CHECKLIST QUALITY ASSURANCE REVIEW		
Project:		District:
Municipality:		County:
Reviewer(s):		Date:
DESCRIPTION	YES	NO
1. FEMA CONSIDERATIONS		
Is the proposed project in a detailed FEMA study area?		
If yes, are the following provided:		
- Published FIS flows		
- Is FEMA hydrologic method acceptable per DM-2, Chapter 10? page _____		
- Are FEMA flows compared with calculated flows using PennDOT acceptable methods? page _____		
- Is FEMA's published 100-year flow included in the analysis?		
Comments:		
2. ACT 167		
Is there a DEP approved Act 167 Stormwater Management Plan?		
How were the flows developed in the Act 167?		
Were there flows provided in the vicinity of the project site?		
Have the flows been included for comparison to calculated flows? page _____		
Comments:		
3. DESIGN FLOODS		
PennDOT roadway classification _____		
PennDOT design event (check one) <input type="checkbox"/> 10-yr <input type="checkbox"/> 25-yr <input type="checkbox"/> 50-yr		
PADEF event (check one) <input type="checkbox"/> 25-yr (rural) <input type="checkbox"/> 50-yr (suburban) <input type="checkbox"/> 100-yr (urban)		
Comments:		
4. HYDROLOGIC ANALYSIS		
Drainage area at site (DA) is correct _____ square miles		
Applicable hydrologic method used (check all that apply)		
<input type="checkbox"/> WRC method		
<input type="checkbox"/> Rational method (up to 200 acres)*		
<input type="checkbox"/> PSU-NV (comparison only)		
<input type="checkbox"/> USGS 00-4165*		
<input type="checkbox"/> HEC-1/HEC-HMS*		
<input type="checkbox"/> EFH2 (1 to 2000 acres)		
<input type="checkbox"/> TR-55* (10 acres to 3.1 sq. miles)		
<input type="checkbox"/> WinTR-55 (1 acre to 25 sq. miles)		
<input type="checkbox"/> Other**		
* Methods may be used within the Watershed Modeling System (WMS) program		
** Project Engineer should ensure that the model is appropriate and that approvals are obtained from the Department.		
Which method was chosen for the design flows?		
Was justification provided for the selection of the peak flow method? page _____		
Comments:		

Checklist to be completed by the Designer and included with the H&H when it is submitted for review. Note the QA Checklists are saved in the PennDOT files Folder when information is uploaded to the JPA2 System.

HYDROLOGY AND HYDRAULICS QUALITY ASSURANCE CHECKLIST SUMMARY					
PROJECT DETAILS					
Project: _____ District: _____ Municipality: _____ County: _____ H&H Report Sealed by Licensed Engineer: _____					
CHECKLISTS					
Section	Checklists Completed	Designer	QA Reviewer	Date	
I	<input type="checkbox"/> H&H Report <input type="checkbox"/> Abbreviated <input type="checkbox"/> Full	_____	_____	_____	
II	<input type="checkbox"/> Hydrology	_____	<div style="border: 2px solid black; width: 150px; height: 15px;"></div>	_____	
III	<input type="checkbox"/> HEC-RAS	_____	_____	_____	
IV	<input type="checkbox"/> HY-8	_____	_____	_____	
V	<input type="checkbox"/> Scour*	_____	_____	_____	
*Not Required with Preliminary H&H Report Submission					
Instructions:					
Summary H&H_Abbrev H&H_Full Hydrology HEC-RAS HY-8 Scour Add Comments					

Agency Field Views



- Field dates are reserved monthly and can be used for Pre-Application field views but must be coordinated with PennDOT project Manager and Central Office HQAD
- Following must be invited for Field Views:
 - USACE
 - SCRO DEP – Andy Blascovich and Brian Bailey
 - PFBC – Bill Savage
 - PennDOT – Project Manager and Environmental Unit
 - Environmental Subconsultants
- Mitigation required should be negotiated with the resources agencies and District at the field visit
- Mitigation measures agreed upon must be documented in PS&E

Field Checklist for Permitting

- Optional Checklist to document field permit scoping decisions
- Developed by DEP/PennDOT/PFBC

FIELD CHECKLIST FOR PRELIMINARY DESIGN PERMIT COORDINATION		
INSTRUCTIONS		
<p>This checklist was developed by PADEP and PennDOT to facilitate early coordination and documentation for projects. The checklist is intended to document potential impacts and the proposed designs early in the preliminary design phase. The checklist can be used by both agencies as a record of discussions in the field and anticipated permitting requirements based on the conditions at the time of the meeting. It should be noted that design constraints and/or changes in the impacts may require different permits than originally anticipated when this checklist was completed.</p> <p>Scan the signed checklist and distribute to all attendees, the PennDOT District ADE-Design, and the PADEP Region Chief Waterways Section within 7 days of the field meeting.</p> <p>Distribution CC: All Attendees PennDOT District ADE - Design PADEP Region - Chief of Waterways Section</p>		
PROJECT DETAILS		
Project: _____		
District: _____		
Municipality: _____		County: _____
Attendees	Organization	Email Address

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EV Wetlands

- Construction projects that disturb more than 1 acre and affect exceptional value (EV) wetlands will need an Individual NPDES Permit
- EV Wetlands consist of:
 - Wetlands on the floodplains of waterways capable of supporting natural trout reproduction (list on PFBC's website is constantly updated)
 - Wetlands on the floodplains of Scenic Rivers
 - Wetlands that serve as habitat for threatened or endangered species
 - Wetlands associated with EV watershed according to Title 25, Chapter 93
 - Wetlands along an existing public or private water supply



NPDES Permits

- National Pollutant Discharge Elimination System (NPDES)
- Pennsylvania NPDES General Permit (PAG-2) for Stormwater Discharges Associated with Construction Activities
 - Earth disturbances between 1 and 5 acres with a point source discharge (**during construction**) to surface waters of the Commonwealth
 - Earth disturbances > 5 acres

NPDES Permit Background

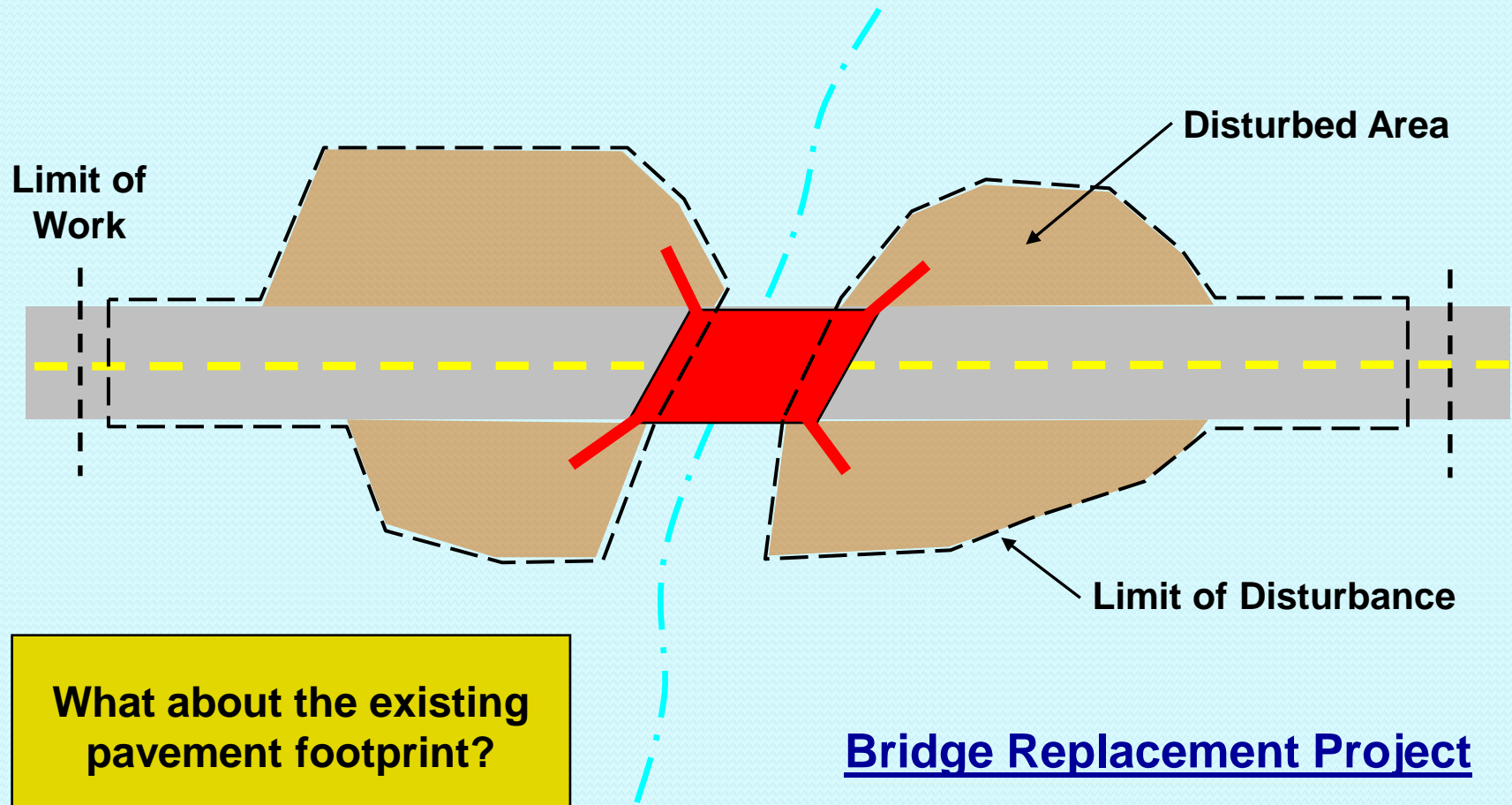
- General PAG-2 Permit
 - More common
 - Less documentation
- Individual PAG-2 Permit
 - Special protection watersheds (EV, HQ, and EV-wetlands)
 - Affects existing WQ standards
 - Affects threatened or endangered species habitat (PNDI)



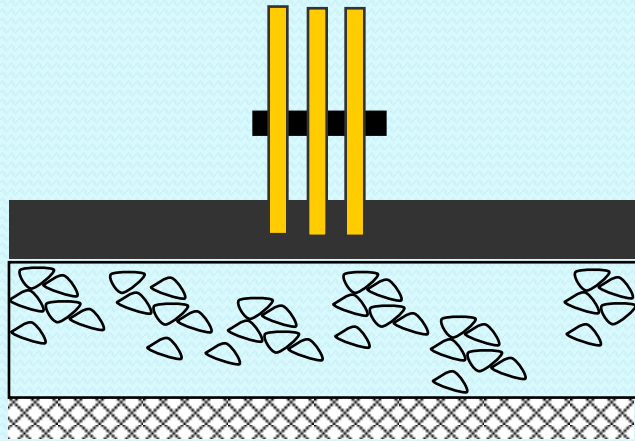
NPDES Permits

- Total amount of disturbed area on a project must be determined
- Disturbed areas include:
 - Grading and removal of topsoil

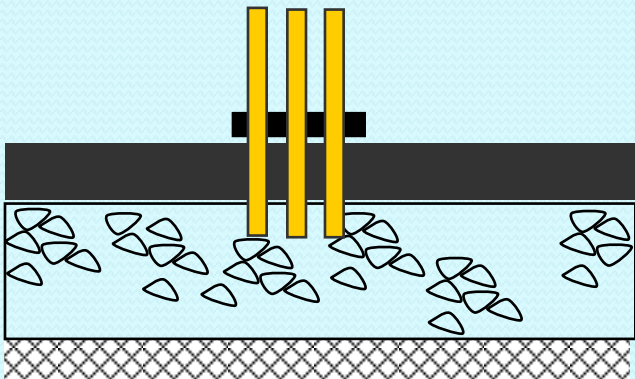
What Constitutes Disturbed Area?



When is paving considered a “disturbance”?



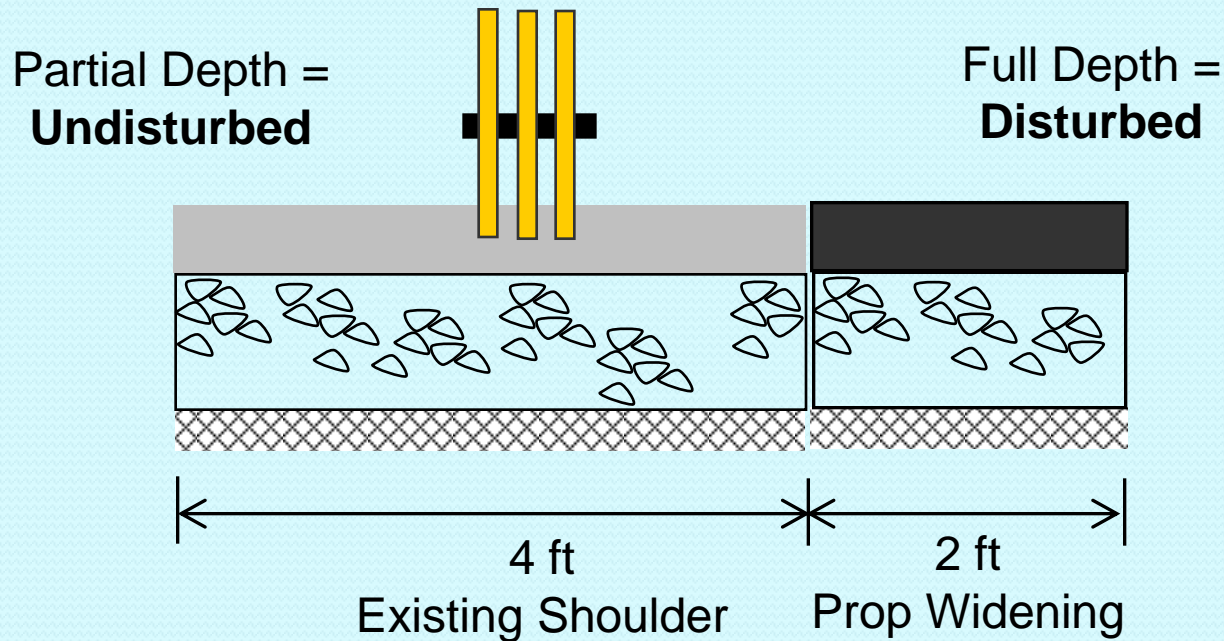
Milling and
Overlay =
Undisturbed



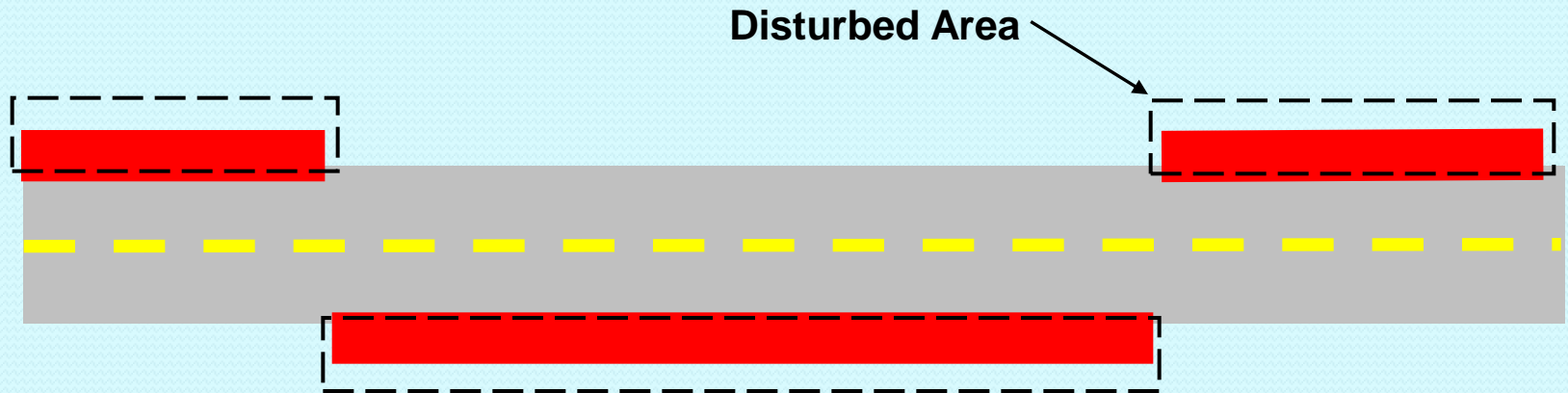
Full Depth
Reconstruction = **Disturbed**



When is paving considered a “disturbance”?



What Constitutes Disturbed Area?



Add up multiple disturbed areas outside of existing pavement footprint for total

Shoulder Widening Project

Project Management Teams

- Not all of the information from the original permit is being transferred to the transferee-co-permittee form
 - The information from the NPDES Permit Applications must get loaded into ECMS
 - Special conditions/mitigations must be in PS&E packages
- Erosion and Sediment Control Plans should be scoped in Preliminary Engineering, not in Final Design

For District 8 Design-Build

- Permits will be obtained by the contractor
- Make sure that the permit process is built into the construction schedule – should be reflected in the Open Plan schedule
- Provide adequate time for agency review and comment

Permit Review Times

- Allow enough time for DEP comments
- Quality significantly impacts review times
- Review time does not begin UNTIL the application is accepted as administratively complete
 - GP-3, 4, and 7 allow 60 days max.
 - GP-11 allow 45 days min., 60 days max.
 - Joint 404/105 allow 65 days min., 130 days max.
 - NPDES Individual allow 65 days min., 150 days max.
 - NPDES General allow 90 days max.

Minimum times based upon admin complete and max times based upon NO technical deficiencies.



QUESTIONS?