



## DEP Regulations Update, Including Design and Construction

**Presented by:**  
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**NTM Engineering, Inc.**



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



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## Agenda

- ◆ District 8-0 Permitting Process
- ◆ Tips on Current Issues with Permitting
- ◆ PennDOT/PADEP Taskforce for Bridge and Culverts
  - Hydraulic Modeling Requirements Guidance
  - Preliminary Design Field Checklist
  - Joint Guidance for Short Span Structures
- ◆ JPA/E-facts Electronic Permitting
- ◆ DEP's Top 5 Admin/Tech Deficiencies

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## District 8-0 Permitting Process

- ◆ Issues emailed to consultants March 2007 on the "Joint Permit Application Process"
- ◆ Step by Step process accounts for
  - Quality Checklists and Reviews
  - Pre-Application and Pre-submission meetings
  - E&S and NPDES
  - Use of JPA Expert System

Note: This process was emailed to consultants in March 2007

A copy of the process is located on the ASHE Website

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## District 8-0 Permitting Process

- ◆ DM-2, Chapter 10 H&H Report Checklist required
  - Appendix D

The image shows a complex checklist form titled 'HYDROLOGIC AND HYDRAULIC REPORT CHECKLIST'. It is organized into several main sections, each with a list of items to be checked. The sections include:

- GENERAL INFORMATION:** Project Name, Location, Date, etc.
- DESIGN:** Design Basis, Design Standards, etc.
- HYDROLOGY:** Hydrologic Analysis, Design Flood, etc.
- HYDRAULICS:** Hydraulic Analysis, Scour Analysis, etc.
- SCOUR:** Scour Analysis, etc.
- CONCLUSIONS:** Summary of findings and recommendations.

At the bottom right of the form is a table with columns for 'CHECKED', 'DATE', and 'BY'.

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## Planned H&H QA Checklists

- ◆ BQAD developing QA/QC checklists to assist PennDOT and consultants with design and review of H&H projects
- ◆ Checklists will target the primary technical H&H components for:
  - PennDOT bridge and culvert replacement projects

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## Planned H&H QA Checklists

- ◆ Hydrology per acceptable methods in DM-2, Chapter 10
- ◆ 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
  - Developed and issued in DM-2, Chapter 10 as of June 15, 2006

**Anticipated SOL for New Forms in 2008**

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## GP-11 vs JPA's

- ◆ District 8 scoped most of their planned bridges as GP-11 Permits
- ◆ After recent field views several were elevated to full Joint Permit Applications
  - Widening greater than 12 feet on 1 side
  - Relocation of Waters of the US

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## Agency Field Views



- ◆ Pre-Application field views are required for projects that will need individual authorizations
- ◆ Minimum of 1 month lead time to schedule field views
- ◆ Pre-application forms must be filled out and submitted to DEP before the field view

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## Individual Authorizations

- ◆ PA Statewide Programmatic General Permit (PASPGP)
  - Provides USACE Section 404 and DEP 105/106 clearance
- ◆ Activities NOT eligible for the PASPGP-3
  - More than 1.0 ac of impacts (temp or perm) to WOTUS
  - Within the ordinary high water line (OHWL) on non-tidal waters and/or mean high water line (MHWL) on tidal waters for:
    - Delaware River
    - Schuylkill River
    - Lehigh River
    - Ohio River
    - Beaver River
    - Little Beaver River
    - Mahoning River
    - Monongahela River
    - Youghioghney River
    - Allegheny River
    - Kiskiminetas River
    - Tenmile Creek
    - Lake Erie

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## PNDI Issues

- ◆ Ensure the PNDI and the clearance letters are current when the permit is submitted:
  - USFWS clearance letters are good for two years
  - Other agency's clearance letters are only good for one year

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## PNDI Search



### Project Location



### Location Accuracy

Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Request is solely responsible for the project location and thus the correctness of the Project Review Request content.

### 3 Potential Impacts

Under the Following Agencies' Jurisdiction: Pennsylvania Game Commission, Pennsylvania Department of Conservation and Natural Resources, Pennsylvania Fish and Boat Commission

Project Name: Otterbush United Methodist Church  
On behalf of: Self  
Project Number: 200022902144  
Date: 2/2/2009 1:37:37 PM  
# of Potential Impacts: 3  
Jurisdictional Agency: Pennsylvania Game Commission, Pennsylvania Department of Conservation and Natural Resources, Pennsylvania Fish and Boat Commission  
Project Category: Stream, Terrestrial, Treatment, and Disposal, Land  
State/County: Philadelphia/Philadelphia  
Modification: No  
Project Coordinates: Lambert: 398734.7822916, 516477.81523588 N  
Lat/Long: 40.42476032, -77.05444827 | DMS: 40° 25' 14.222467", 77° 3' 4.695959"  
ZIP Code: 19103  
County: PHILADELPHIA  
City: PHILADELPHIA  
USGS 7.5 Minute Quadrangle ID: 172  
Quadrangle Name: 5500-10-100  
Project Size: 14,550 sq

Page 1 of 6 APPLICANT INITIALS: \_\_\_\_\_

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## PennDOT/PADEP Taskforce for Bridge and Culverts

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## Bridge/Culvert Taskforce

- ◆ Taskforce Members from:
  - PennDOT Bureau of Design and District Offices
  - PADEP Central Office and Regional Offices
  - PA Fish and Boat Commission

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## Taskforce Current Issues

- ◆ Hydraulic Modeling Requirements Guidance
- ◆ Preliminary Design Field Checklist
- ◆ Joint Guidance on Alternative Analysis for Short Span Structures

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## Hydraulic Modeling Requirements for PennDOT H&H Reports

- ◆ Outlines hydraulic modeling requirements for PennDOT H&H Reports when
  - Project is located in a FEMA-regulated floodplain
  - Project is not located in FEMA-regulated areas
- ◆ Guidance is based on:
  - PennDOT's Design Manual 2 – Chapter 10
  - Code of Federal Regulations (CFR)
  - DEP - Chapter 105/106 Regulations

**Anticipated Joint Agency Guidance will be issued in Spring 2008**

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## Hydraulic Modeling Requirements

- ◆ Calculate hydrology with PennDOT accepted method(s), per PennDOT DM-2, Ch 10.6.C
- ◆ Compare FEMA published flows with calculated flows and justify use of flows, per PennDOT DM-2, Ch 10.6.C.2
- ◆ If PennDOT flows are higher than FEMA flows
  - PennDOT flows should be used to evaluate the stability of the structure
  - FEMA published 100-year flow must be modeled to determine the impact to the FEMA-regulated floodplain

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## Field Checklist for Permitting

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

**FIELD CHECKLIST FOR PRELIMINARY DESIGN PERMIT COORDINATION**

**INSTRUCTIONS**

This checklist was developed by PADEP and PennDOT to facilitate early coordination and documentation for projects. The checklist is intended to document permit requests and the proposed design 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 conditions may change in the project; any major design changes that significantly affect public safety should be noted.

Once the signed checklist and checklist is at attendees, the PennDOT District ADE Design, and the Distribution CC, All Agencies, PennDOT District ADE Design, PADEP Region - Chief of Waterway Section

**PROJECT DATA**

Project: \_\_\_\_\_  
 District: \_\_\_\_\_  
 Municipality: \_\_\_\_\_  
 County: \_\_\_\_\_

Attendee	Organization	Email Address

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Anticipated Joint Agency Guidance will be issued in Spring 2008

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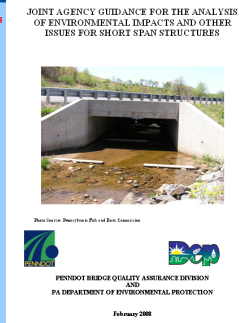
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## Joint Guidance on Short Span Structures

- ◆ Provides guidance for alternative analysis for box culvert versus bottomless structures



Anticipated Joint Agency Guidance will be issued in Spring 2008

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# JPA Expert/DEP E-facts Interface

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## Background



- ◆ JPA Expert System has been in production since 2000
- ◆ In 2004 DEP approached PennDOT to build an electronic data transfer from PennDOT's JPA System to DEP's eFACTS
- ◆ In 2006 both agencies launched projects to make enhancements to their system to accommodate this electronic data transfer
- ◆ Updated JPA Expert planned to be operational in 2008

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## Summary of Changes

- ◆ Fully Electronic submissions for:
  - ✓ GP-11
  - ✓ Small Projects
  - ✓ Standard Application Packages
- ◆ Providing DEP Facility Data directly to DEP's eFACTS
- ◆ Application review process revised to allow for electronic transfer of feedback and responses between the agencies during the review cycle. Emails go to:
  - ✓ Point of Contact specified in the application
  - ✓ Person who submitted the application
  - ✓ Central Office representative

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## Summary of Changes

- ◆ Electronic tracking system and email notifications of:
  - ✓ **Submission**
  - ✓ **Administrative and Technical Reviews**
  - ✓ **Deficiency Letters**
  - ✓ **Application Approvals**
- ◆ Verification rules updated to reflect DEP's rules regarding required fields and attachments
- ◆ Form added to house PennDOT-specific information that is part of the application but not part of the submission

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## Five-Step Process to Use the JPA Expert System

1. Generate an application
  - Verify the application interview
  - Generate an application
2. Complete an application
  - Complete documents
  - Update Application Interview data
  - Form/Document types
3. Submit an application
4. Revise an application
5. Approve and close an application

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## JPA Training Manual

- ◆ JPA Training Manual
  - Reference for system functionality
  - Tailored for district personnel and consultants that will use Expert System and are familiar with Chapter 105 processes and procedures
- ◆ JPA e-Training CD
  - CD-ROM with a 60-90 minute training course

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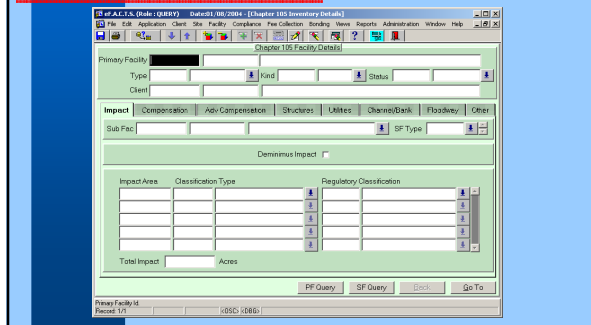
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## E-facts Screen



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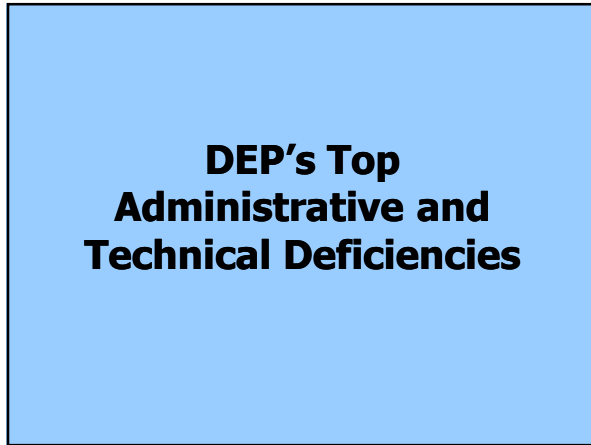
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## DEP's Top Administrative and Technical Deficiencies



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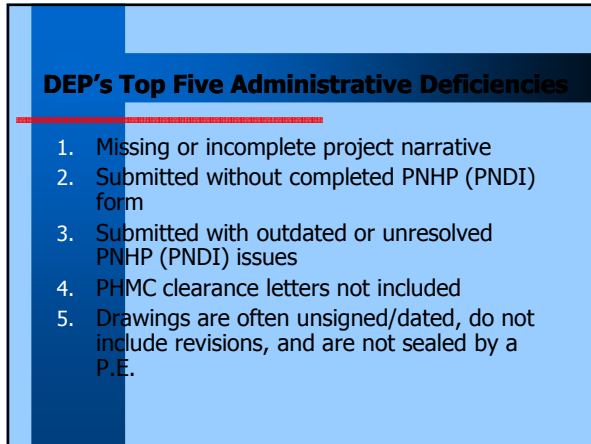
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## DEP's Top Five Administrative Deficiencies

1. Missing or incomplete project narrative
2. Submitted without completed PNHP (PNDI) form
3. Submitted with outdated or unresolved PNHP (PNDI) issues
4. PHMC clearance letters not included
5. Drawings are often unsigned/dated, do not include revisions, and are not sealed by a P.E.



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### DEP's Top Five Technical Deficiencies

1. Drawings or sketches do not meet content requirements listed in Chapters 102 & 105
2. Plans, cross sections and profiles do not show all environmental resources with proposed impacts and dimensions
3. Plans for construction of box culverts do not include the baffle design
4. Incomplete EA forms including alternatives analysis and mitigation plans
5. H&H study not done in accordance with Chapter 105, Subchapter C, Bridges and Culverts

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# Questions



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