



# Current Issues on Permits

Presented by:  
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NTM Engineering, Inc.



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



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## Agenda

- ◆ Quality of H&H Reports
- ◆ FEMA Study Areas
- ◆ Temporary Conditions
- ◆ Project Descriptions
- ◆ Utility Impacts
- ◆ District 8-0 Permitting Process

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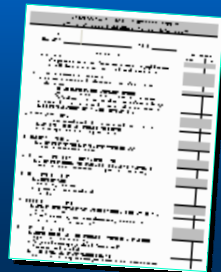
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## Quality of H&H Reports

- ◆ DM-2, Chapter 10 Requirements
- ◆ H&H Report Checklist  
– Appendix D
- ◆ Common Quality Issues



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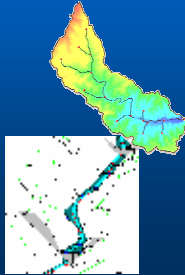
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## DM-2, Chapter 10 Requirements

### Section 10.7 – Guidelines for Preparation of H&H Report

- ◆ Site Data
- ◆ Hydrologic Analysis
- ◆ Hydraulic Analysis
- ◆ Risk Assessment
- ◆ Summary Data Sheet
- ◆ Cost Estimate
- ◆ Drawings
- ◆ Design Considerations
- ◆ Additional FEMA Considerations



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### CHECKLIST

#s match sections of DM-2.10.7

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## Common Quality Issues

- ◆ Existing and Proposed Floodplain Limits not shown on plans
- ◆ Inconsistency between data in reports and values shown on plans
- ◆ Hydrologic method selection and calculations
- ◆ Lack of information or modeling of temporary conditions
- ◆ Hydraulic Models in FEMA Detailed Study Areas
- ◆ HEC-RAS Setup
  - Cross section locations
  - Ineffective flow locations and coefficients
  - Bridge Modeling

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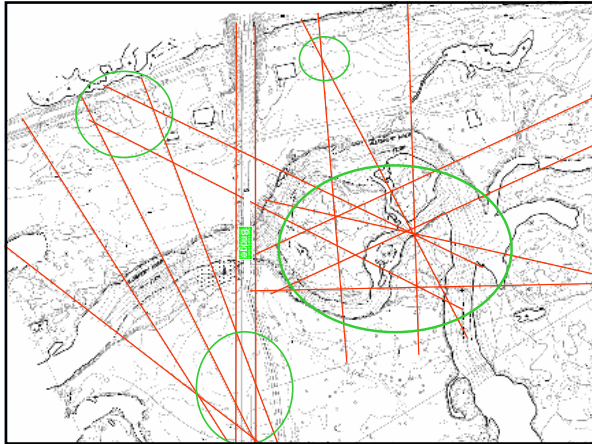
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### Common Quality Issues

- ◆ Riprap details
  - Velocities not taken from the bridge opening in sizing riprap
  - Safety Factors for Abutment/Pier not applied
- ◆ Significant velocities changes that are not explained
- ◆ Lack of use of DM-2, Chapter 10 Checklist
- ◆ Risk Assessment and required flowage easements for increases in 100-year WSE

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### FEMA Study Areas



- ◆ Approximate study (Zone A)
- ◆ Detailed study without floodway (Zone AE, AH, AO, A1-A30)
- ◆ Detailed study with floodway (Zone AE, AH, AO, A1-A30)

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## Approximate Study Area Requirements



- ◆ In Zone A areas (non-detailed), proposed projects may not increase 100-year flood elevations by more than **1.00 foot**



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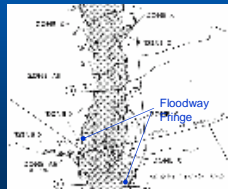
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## Detailed Study Area Requirements



- ◆ In Zone AE areas (detailed), proposed projects may NOT increase 100-year flood elevations by:
  - More than **0.00 feet** if project is located in the floodway
  - More than **1.00 foot** if project is located in the floodway fringe



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## Detailed Study Area Requirements



- ◆ In the absence of floodways, encroachments into the floodplain may not increase 100-year flood elevations by more than 1.00 foot



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## Existing Vs. Proposed Models

- ◆ Must evaluate the FEMA 100-year Published Flow
- ◆ PennDOT design should be based on flows developed using acceptable methods per PennDOT DM2
- ◆ Model FEMA and calculated PennDOT flow to show no increase in FEMA 100-year WSE
- ◆ Coordinate with PADEP to determine exact modeling requirements for FEMA detailed study areas

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## DEP-SCRO Requests For FEMA Study Areas

- ◆ Obtain Original FEMA Study (i.e. HEC-2 data)
- ◆ Create HEC-RAS model using original FEMA Data (effective model)
- ◆ Compare effective model HEC-RAS to published FEMA profile (should be within 6 inches)
- ◆ Update effective model with new survey data (this is the existing model)
- ◆ Use the existing model to create proposed with the proposed structure (proposed model)
- ◆ Compare Existing to Proposed for increases to the 100-year WSE

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## Temporary Conditions

- ◆ GP-8 – Temporary Road Crossings
- ◆ Project does not meet GP-8 requirements
  - If temporary conditions are expected to exceed 1 construction season – they should be evaluated according to the requirements for projects that do NOT meet GP-8 requirements

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## GP-8 Temporary Road Crossing

- ◆ **Conditions**
  - No fords in HQ and EV watersheds
  - Max. 1/2 channel width for causeways
  - Max. 200 ft crossing within a wetland
- ◆ **Does not apply**
  - Typical restrictions related to historic, landmarks, trout streams, and T&E sites
- ◆ **Applications**
  - Temporary detour road, causeway for pier construction, fords

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## Does Not Meet GP-8 Requirements

- ◆ **Evaluate temporary structures for the 2-year event**
  - Backwater
  - Velocities
  - Stability of temporary structure
- ◆ **Discuss overtopping discharge and frequency**

Note: This is guidance from SCRO- not official PennDOT Policy

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## Does Not Meet GP-8 Requirements

- ◆ **2-year storm indicates increases in flooding to adjacent properties (out of bank) – A temporary easement will be required**
- ◆ **Temporary easement should be shown on the ROW plans and show the area of increase for the temporary conditions**

Note: This is guidance from SCRO- not official PennDOT Policy

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**\*\*A copy of the description is located on the ASHE Website\*\***

## Permit Project Descriptions

- ◆ All proposed impacts should be listed separately
- ◆ Next to each impact provide the following:
  - Type of impact (wetland, stream relocation, etc)
  - Quad Map name and location on map
  - Latitude and Longitude
  - Municipality Name
  - County Name
- ◆ For specific impacts provide additional info as listed in the following document developed by PADEP South Central Regional Office:
  - Guidance for Preparing a Project Description for Water Obstruction and Encroachment Permit Applications

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## Utility Impacts

- ◆ Temporary construction measures may impact utilities
- ◆ Evaluate possible temporary and permanent utility impacts early in the design process
- ◆ Utility relocation can cause additional environmental impacts that must be addressed in the permit

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## District 8-0 Permitting Process

- ◆ Issues Email 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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# Questions



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