Swamp Mat Considerations for Linear Projects

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Overview

- Why Use Swamp Mats?
- Site Evaluation Considerations
- Pre-Construction Planning
- Site Inspections
- Swamp Mat Removal and Restoration
Why Use Swamp Mats?

Minimize Environmental Impact

- Compressed soils
- Habitat degradation
- Invasive species colonization
- Regulatory impacts
Why Use Swamp Mats?

- Avoid Permanent Stream Crossings
Why Use Swap Mats?

Minimize Impacts to Maintained Lawn

Avoid impacts to agricultural land

Swamp Mats as Retaining Walls

Minimize impacts to other utilities
Why Use Swamp Mats?

- Facilitate Site Access and Work
  - Allow use of Heavy Equipment
  - Provide access to difficult areas
  - Provide stable work platform
Why Use Swamp Mats?

- **Allow for Year Round Construction**
  - Spring- Flooded Conditions
  - Summer
  - Fall
  - Winter- Snow Cover
Site Evaluation Considerations

**Scope of Work - Nature of Facility**

- Distribution ROW: 40 feet
- 115 kV Transmission ROW: 100 feet
- 115 kV/345 kV Transmission ROW: 180 feet
- 345 kV Transmission ROW: 450 feet
Site Evaluation Considerations

- **Equipment and Work Area Evaluations**

  - Insulator Replacement
    Work Pads: 16’X30’
  
  - Line Reconductoring
    Work Pads: 60’X60’

  - Structure Replacement
    Work Pads: 150’ X 150’
Site Evaluation Considerations

- Existing Access
  - Historic Roads
  - ATV Access
Site Evaluation Considerations

- Access Alternatives

Off ROW Access
Site Evaluation Considerations

- **Access Alternatives**

![Map with Access from Opposite Side highlighted]
Site Evaluation Considerations

- **Length of Crossings/ Stream Spanning**

  Stream Spanning

  ![Length of Crossing Image]

  ![Temporary Wetland Impact: +/- 2,483 Sq.Ft. Image]
Site Evaluation Considerations

■ Hydrologic Regime

- Scrub-Shrub
- Open Water
- Floodplain
- Perennial Stream
Site Evaluation Considerations

- **Hydrologic Regime**

![Images of open water and floodplain perennial streams]
Site Evaluation Considerations

- Steepness of Terrain
Pre-Construction Planning

- **Review of Existing Data**
  - Previous projects
  - GIS resources
  - Aerial photos
  - Soil mapping
Pre-Construction Planning

- Resource Area Delineations
Pre-Construction Planning

- Preliminary Mapping
Do we have any NERC preliminary mapping we could use?
Daniel P. Rukakoski, 3/8/2016
Pre-Construction Planning

- Site Walk
Pre-Construction Planning

■ Final Mapping
Site Inspections

■ **Purpose**
  – Permit Requirement

■ **Inspection Issues**
  – Adhering to plans
  – Housekeeping
  – Sediment tracking
  – Soil/Spoil Management
  – Dewatering
Swamp Mat Removal and Restoration in Wetland

Pre-Construction: 02/20/2012

Restoration: 11/12/2012

During Construction: New Structure Installation 07/21/2012

Post Construction: 9/6/2013
Mat Removal and Restoration in Upland

May 25, 2016

June 25, 2013

July 26, 2013

August 30, 2013
Mat Removal Considerations

- Remove by “backing out” of site
- Address rutting
- Seed/mulch areas of disturbed soil
- Remove invasives from mats
- Recover sediment and broken mats
Swamp Mat as a Viewing Deck

Questions?

Tighe & Bond
Engineers / Environmental Specialists

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