Charlton to Palmer
A Swamp Mat Case Study

March 11, 2016
Swamp Things – SWCSS-NEC Winter Conference
Charlton to Palmer project

- 16 miles
- Pole replacement & reconductoring
- Vehicle access to every structure (~190)
- Larger work pads for live line work & concrete foundations
- Multi-year construction
  - Live line work – September 2014 – December 2015
  - Phase II – September 2016 – March 2017
- 400,000 SF of swamp matting permitted
- Sensitive resources – DCR park, coldwater fishery, vernal pool, rare plants, archaeological sites
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- Evaluation of wetland crossings
- Use of other BMPs
- Minimization of the spread of invasives
- BMPs during mat removal
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Evaluation of Wetland Crossings
Evaluation of Wetland Crossings

- Project team reviewed design and access to avoid wetlands and other known sensitive areas
- Where avoidance is not possible, team evaluated minimization alternatives:
  - Use existing ROW access where available
  - Where no existing ROW access is present, avoid wetlands
  - Cross wetlands at the narrowest point possible or at the location of a previously used crossing
  - Minimize trips through wetlands
Evaluation of Wetland Crossings – Exceptions

Historic ROW access road

Narrowest portion of wetland per DEP request
Evaluation of Wetland Crossings

- Avoid and minimize stream crossings
- Minimize access road width through wetlands to a maximum width of 16 feet (swamp mat width)
- Conduct work manually (without vehicles) in wetlands, wherever possible
- Use swamp mats in wetlands to minimize soil disturbance and rutting when crossing or working within wetlands
Evaluation of Wetland Crossings

- Evaluate the use of low ground pressure pressure vehicles
Evaluation of Wetland Crossings

- Where outages allow, coordinate the timing of work to cause the least impacts:
  - During the regulatory low-flow period under normal conditions
  - During frozen conditions
  - After the spring songbird nesting season
  - Outside of the anticipated amphibian migration window

- Seek other alternative routes or work methods to minimize impact
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Use of Other BMPs
Best Management Practices – Beaver Management
Best Management Practices – Swamp Mats in Sensitive Areas
Best Management Practices – Stream Bridging
Best Management Practices – Work Near Vernal Pools
Best Management Practices – Erosion Controls
Best Management Practices – Do Not Enter Fencing
Best Management Practices – Monitoring

- Construction Oversight, Monitoring, Inspections
  - Pre-construction Coordination & Training
  - Inspections During Construction
  - Weekly “Look-Aheads” During Construction
  - Post Construction inspections
  - Restoration Monitoring

- EG-303NE – Access, Maintenance and Construction Best Management Practices
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Minimization of the Spread of Invasives
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- Cleaning of Swamp Mats
  - Mats certified clean by vendor prior to installation.
  - Grid certification form (EG-303NE Appendix 8)
  - Clean is defined as being free of plant matter (stems, flowers, roots, etc), soil, or other deleterious materials prior to being brought to the project site
  - Equipment and mats cleaned before moved along project
  - Equipment and mats cleaned before removed from project

- Post-construction inspections
  - Identify areas of invasives, spread of invasives
  - Identify corrective measures
Minimization of the spread of invasives
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BMPs During Mat Removal
BMPs during mat removal

- Restoration, as needed
  - Back-blading/grading
  - Seeding
  - Mulching
BMPs during mat removal

- Wetlands inspected for sand or other materials that may have fallen through swamp mats
- Inspection conducted at time of removal or within 5 business days of mat removal
- Inspections documented using EG-303NE form
- Matted area returned to pre-existing conditions by light hand raking or by back-blading with machinery
- Area will be seeded and mulched where adequate root and seed stock are absent
BMPs during mat removal

- Inspection of restored areas by Environmental Monitor for 60 calendar days
- Ensure no noticeable adverse affects to the plant community, soil characteristics and micro-topography
- Monitor for the presence of nonindigenous invasives species where non dominant in wetland prior to construction
BMPs during mat removal
Thank You!