

# Environmental Stewardship

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# Common Environmental Issues

- Fish, wildlife and habitat protection
- Bird and bat avoidance
- Water quality protection
- Pier and abutment work - in water and along bed and banks
- In-water work period restrictions
- Paint, waste and debris management
- Vegetation management
- Archaeology Sites
- Repairs to historic structures



# Addressing Environmental Issues in the Field

- Proper planning prior to field work
  - Should be several months in advance for activities below Ordinary High Water Line (OHWL)
- Consult an Environmental Specialist (REC)
- Use Best Management Practices (BMPs) for water quality and habitat protection
- Project permits- (if needed)
  - Were they issued yet?
  - What do they cover?
  - What are the conditions?
  - Do I understand them?

# The Blue Book

## ODOT's Routine Road Maintenance Water Quality and Habitat Guide

- Started in 1999. The 2014 version is the 4<sup>th</sup> iteration. Updated every 5 years.
- An avenue for ODOT to gain protections against ESA take prohibition through performance of routine highway maintenance activities.
- Only covers non-federal actions (funding source, permits, land ownership).
- Covers ODOT Maintenance employees, their contractors and municipal partners (as long as ODOT staff are involved) when the BMPs are followed.

# Which parts of the Blue Book applies to local agencies?

All.....and none!

- While implementation of the Blue Book BMPs are good practice and sound environmental stewardship, Endangered Species Act protections provided are not extended to outside agencies by simply using these BMPs.
- ODOT navigated a multi-year negotiation and approval process to secure this ESA section 4(f) exemption from take.
- A handful of other agencies have followed suit.



# Blue Book BMPs

## Drift Removal

- In-water work period, unless imminent danger to structure (ask REC if unsure)
- Priorities for removal
  1. Turn and float
  2. Remove to adjacent riparian area
  3. Cut and float
- Stabilize removed material above OHWL, haul away if no other options
- Repair damaged riparian areas, discuss long-term access options or embedded drift with REC

# Drift Removal



# Drift Removal





# Drift Removal



# “Drift” Removal





# Blue Book BMPs

## Bridge Cleaning

- Washing should occur during higher flow periods
- Remove debris to minimize material entering waterway
- Containment/disposal measures for paint, treated wood, feces
- Temporarily block drains where feasible
- Avoid conflicts with nesting birds, roosting bats
- Mimic natural stream conditions, don't inadvertently create a fish passage barrier
- Repair fish passage aids (weirs, baffles)

# Blue Book BMPs

## Water Withdrawals and Use

- Use non-chlorinated water when feasible
- Review Regional Water Withdrawal Authorizations (local watermaster)
- De-chlorinate municipal sourced water by leaving open overnight or using non-toxic dechlorinating agent
- Screen pump intakes in streams (Appendix D)



# Blue Book BMPs

## Bridge Repair

- Coordinate with the REC!
- Check Archy list (or have REC check), stop work if artifacts discovered during excavation (including old cans or old “garbage”)
- Repair stream channel disturbance to mimic natural conditions
- Repair fish passage aids
- Consider bio-engineered solutions to scour protection, where feasible

# Blue Book BMPs

## Bridge Repair (Cont.)

- Incorporate fish passage solutions/enhancements, where feasible
- Remove and dispose of materials properly, including ESC measures
- Keep “green” concrete out of the water
- Provide suitable located concrete clean-out
- Use cofferdams for in-water structural repairs
- Contain chips/sawdust from treated wood cuts
- Review treated wood guidelines (Appendix H)

# Blue Book BMPs

## Bridge Repair (Cont.)

- Avoid disturbing nesting birds (call REC in emergency)
- Avoid disturbing bats (Call REC for guidance)
- Install floating absorbent boom when cutting treated pile
- Coordinate with REC on noise reduction measures for pile driving contracts (can provide bubble curtain specifications)
- Use a non-toxic and foam to test and seal voids before filling with grout/concrete
- Contact the REC for an “accidents”

# Blue Book BMPs

## Vegetation

- Cut brush within 20 feet of, and under, structure for access and repair
- Do not grub, unless noxious weeds
- Leave cuttings on-site where feasible
- Replant two seedlings within nearby riparian zone for every tree greater than 12-inch dbh removed
- Coordinate with REC and/or Forester on species, location, etc.
- Review the MBTA Directive



# Questions/Discussion

