



Environmental Tips & Best Management Practices

Chris Maguire

**ODOT Wildlife Program Coordinator
& Natural Resources Team Lead**

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Q: What is environmental?

A: 290 Specs



Biological Resources and Their Habitats:

Fish, Wildlife, Plants, Wetlands, Water

Cultural Resources:

Archaeological, Historical

HazMat

Noise



Target species for this talk:

Fish and birds protected
under federal and state natural
resources laws





Q: What actions are allowable?

A: Based on the permits

(permit conditions must be reflected in the specs)





So what can go wrong?



Looney Tunes



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In-water work period:
An ODFW set period of time
for in-water work to minimize
potential impacts to fish,
wildlife and habitat
resources

(a variance may be possible)



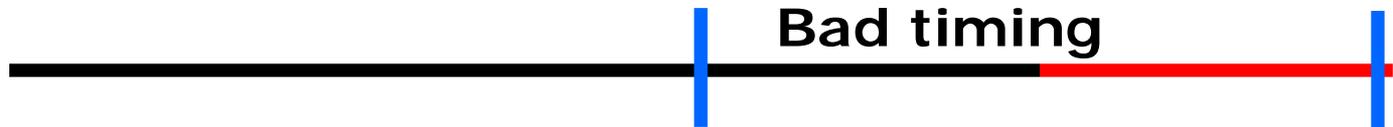


In-water work variance:

ODFW, on a project by project basis, may consider variations in climate, location, and category of work that would allow more specific in-water work timing recommendations



In-water work and the in-water work window

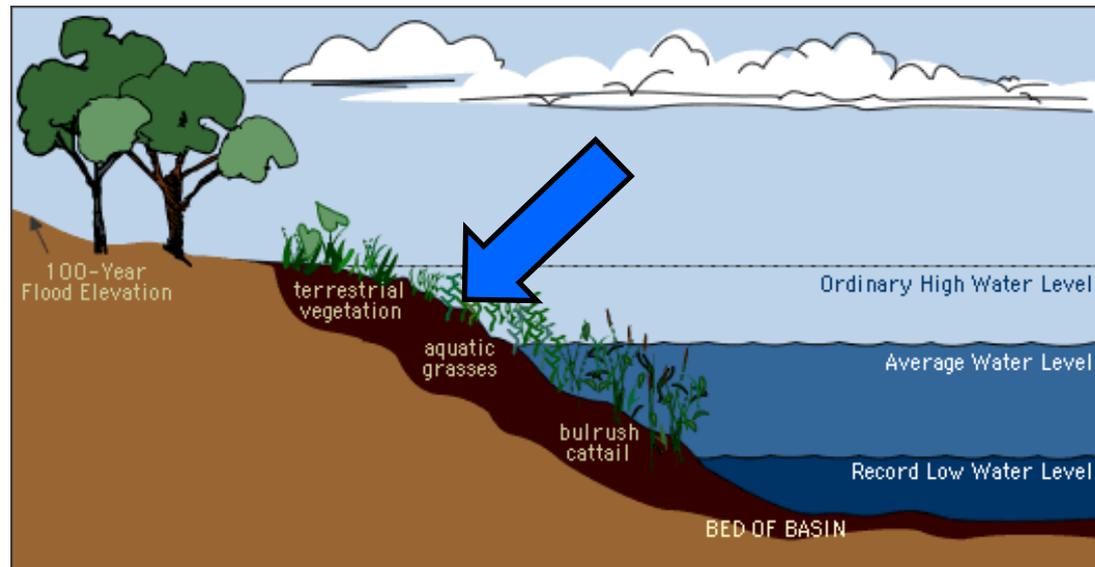




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Q: What is in-water work?

A: Work within the ordinary high water (OHW) elevation
(even if there is no water)





Work within **isolated work area** within OHW **is still in-water work**





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Temporary Water Management:

- Isolate the area
- Divert the water
- ✓ • Salvage fish
- Remove remaining water
- Perform work
- ✓ • Reconnect stream





Potential Problems:

- Area insufficiently prepped for fish salvage

(stream needs to be clear of debris; fish remain in the work area)





Potential Problems:

- Fish salvage is incomplete or performed poorly

(crowded fish, little water...results in predation, heat stress, suffocation)





Potential Problems:

- Design insufficient for conditions
(e.g., storm surge)





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Fish Passage:

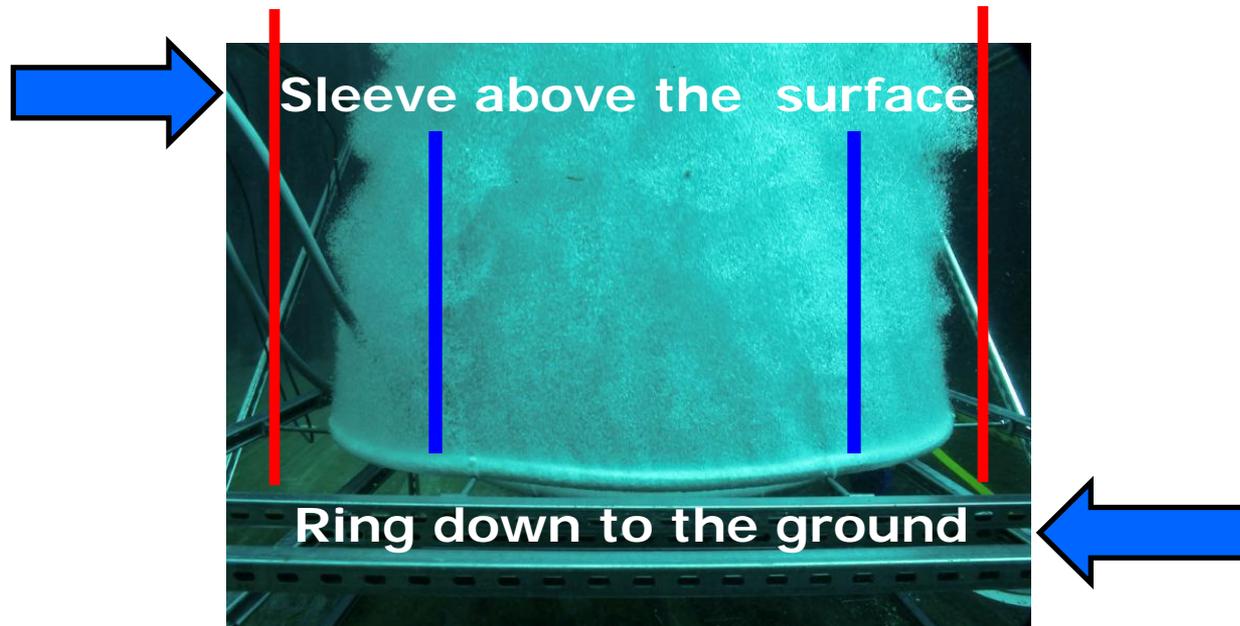
Maintain for project duration





Confined Bubble Curtain:

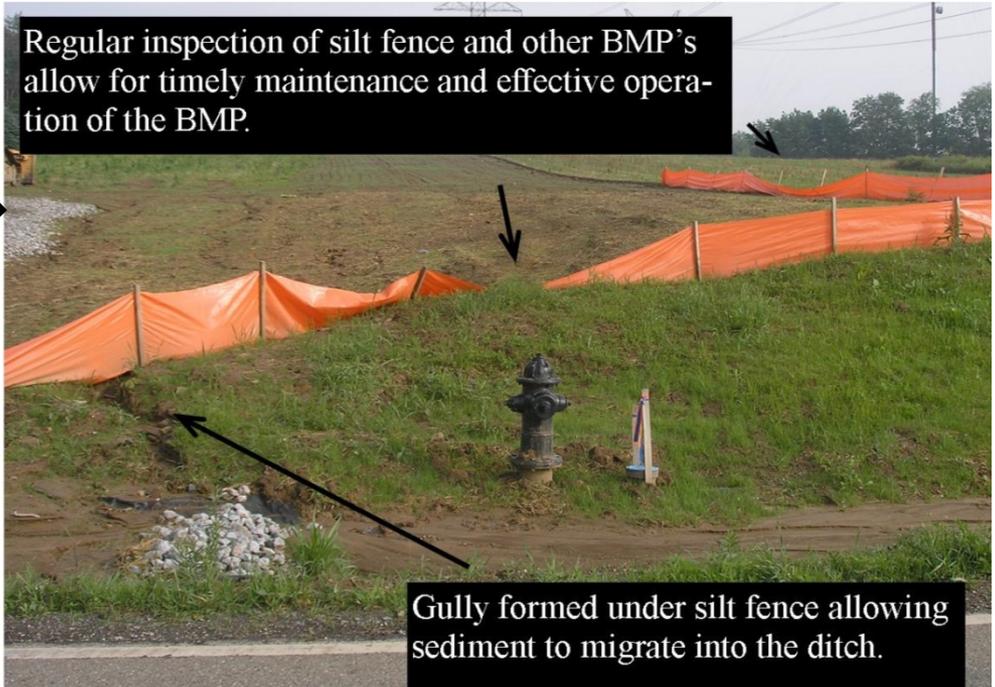
- For pile driving
(pile, pile sleeve, and bubble ring)
- Attenuates underwater sound





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Materials Containment: It should be appropriate for the situation and leak-free



Regular inspection of silt fence and other BMP's allow for timely maintenance and effective operation of the BMP.

Gully formed under silt fence allowing sediment to migrate into the ditch.



All water finds a fish



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Storm Water Treatment Required:

- Additional impervious surface
- Reconstructions down to subgrade
- Redirected water flow (e.g., curbing)





Bird Management:

- Don't hurt a bird...
- Don't move an active bird nest...
- Don't significantly disrupt nesting bird behavior...

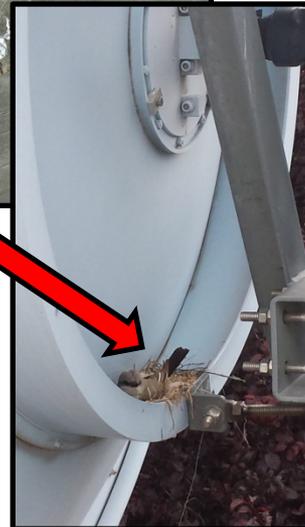


*~ 99% of all bird species are protected under the **Migratory Bird Species Act**; some are also protected under the **Endangered Species Act***



Be Prepared:

Birds nest in **MANY** places in addition to vegetation





Top 3 Best Management Practices for Birds:



- Remove vegetation in non-nesting season (*~September – February*)
- Dissuade nesting throughout the nesting season (*start early!*)
- Avoid disturbing activities in the area until young have fledged





ODOT MBTA Permit for Take: Requires use of APHIS Wildlife Services or ODOT biological staff

**Local Governments can get
their own MBTA permits**



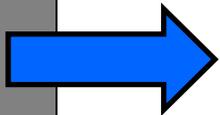


Final Note:

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Endangered Species Act take authorization

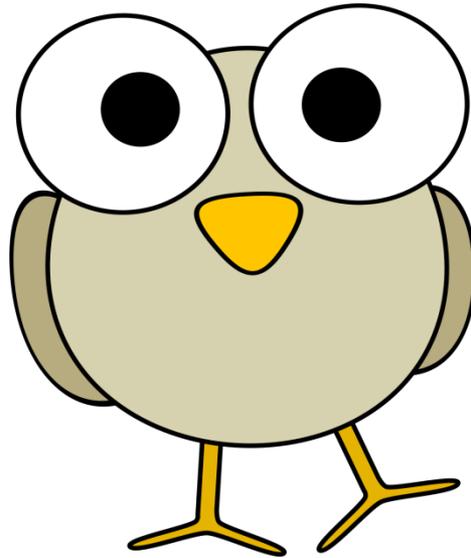
ODOT ESA FAHP 'Permit':



Requires FHWA \$

(limited 'permit' options without a federal nexus...AVOID TAKE)





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