

# Difficult Wetlands



**Presented by**  
**Jacob Kercher, Region 3 Wetland Specialist**  
**Ron Francis, Region 2 Wetland Specialist**

# Identifying Difficult wetlands

Do I need to be able to identify every type of wetland?

**NO**

Do I need to know what type of wetland it is?

**NO**

Do I need to know what a hydric soil looks like?

**NO**

Do I need to know if it is Jurisdictional?

**NO**

**Do I need to know Wetlands are not**

- Always wet
- Always obvious
- Always easy to identify?

**YES**

**Do I need to get the wetland specialist involved early in the game?**

**YES**

# What do we mean by “DIFFICULT”?

- Difficult to Delineate
  - Difficulties in Project Scheduling
    - Who is involved?
      - Rail Road
      - Irrigation district
- Difficult to Identify
  - Dry seasons
  - Disturbances

# Difficult Wetlands – Why?

- Difficult wetlands are hard to identify because
  - of missing indicators due to recent disturbances
    - Land uses
      - Farming practices
      - Developing
      - Clearing
      - Recent unregulated fill activities
    - Natural processes.
      - Flooding
      - Fires
  - and because some wetlands just like to be difficult
    - Temporal shifts in climates
      - Drought
      - Only have to be wet 5 out of 10 years
    - Volcanic Ash or Diatomaceous earth
    - Recently developed wetlands
    - Etc.

# Looking for Signs of Disturbance



# Looking for signs of Natural Processes

- Extraordinary floods
- Forest fire
- Slide activities
- Temporal shifts in climate

# Examples of Difficult Wetlands

- Seasonality (Spring vs. Summer)
- Agricultural (Farmed, Mowed, Grazed)
- Man-made wetlands (Artificial)
- Recent natural process (Flooding)
- Irrigated wetlands
- Saturated only wetlands
  
- Normal circumstances vs. atypical situations

# Seasonality

- Western U.S. wetland differences are based on a Mediterranean climate (wet winters and droughty summers).
- Effects on vegetation – different plant communities during different seasons (i.e. wet pastures – meadow foxtail in spring with orchard grass in summer). Expectation is that the determination is based on a normally-occurring plant community in the wet part of the year during a typical water season.
- Effects on hydrology – flooded in winter and bone-dry by June.

# **You might have a Farmed Wetland if you hear.....**

- Years of heavy rainfall were increasing his salinity problem in some areas while perpetual mud kept him out of other areas.
- “So in a wet spring, which we always seem to get now, there’s 1,200 acres I can get onto when I want. I don’t have to wait for those fields to dry up. I just go.”
- “If I mow that hay field before late July I’ll get my tractor stuck.”

# Agricultural Wetlands

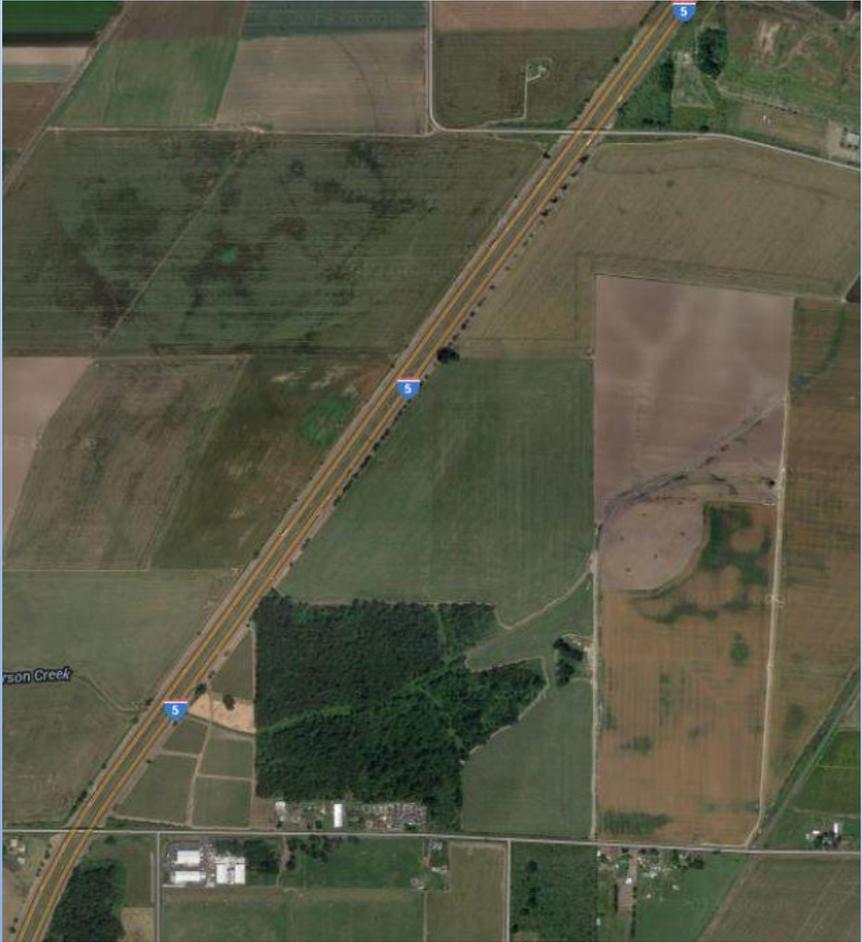
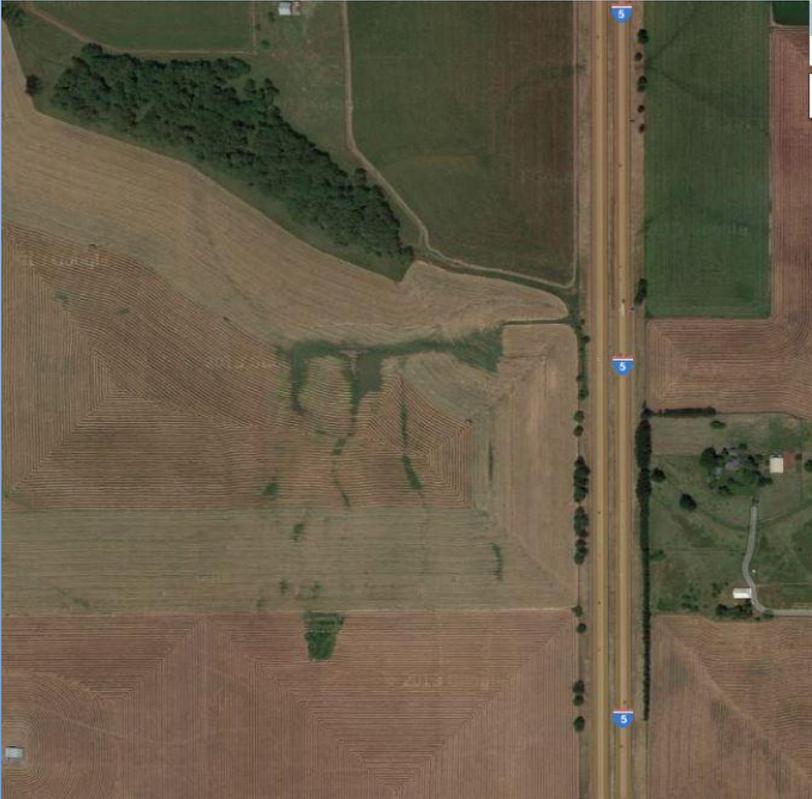
- Most difficult wetland delineation: hayed pasture with wet-grass seed mix near ditches and drain tiles in August.
- Generally, portions of a field may have been drained so spring assessments are required to verify hydrology. This includes an evaluation of at least three historic aerials (during early portion of the growing season). Wetlands drained by agricultural practices may also result in relic hydric soils. Therefore, the spring hydrology verification is the most crucial criteria for the jurisdictional determination.

# Farmed Wetlands



Examples of wet signatures in agricultural fields

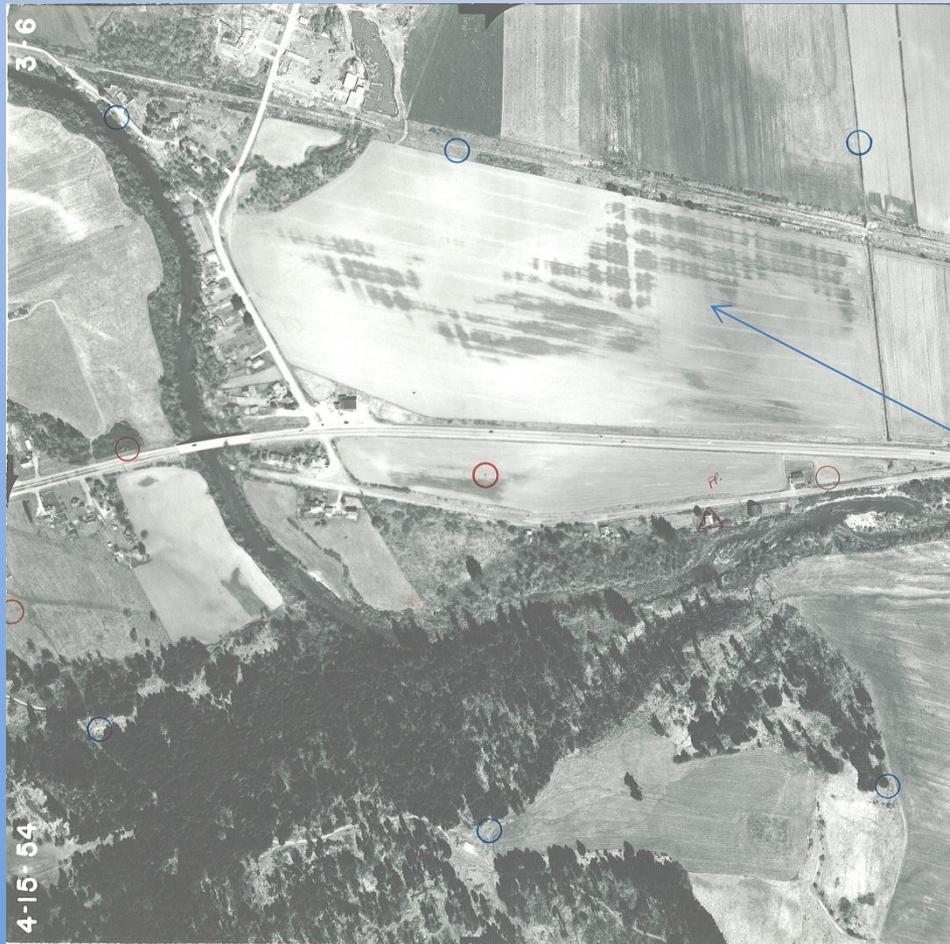
# Farmed Wetlands



# **Agricultural Wetland Examples**

- OR 18 at Fort Hill: agricultural fields on mapped hydric soils. Alterations include ditching, drainage tiles, and recent tilling with introduced exotic grasses.
- Newberg-Dundee By-pass: active farming including annual plowing and seeding of wheat grass.

# Ft. Hill Historical Aerial Photo Review



Wet signatures:  
Dark tones of  
surface  
saturation.  
April 1954

# Ft. Hill Historical Aerial Photo Review



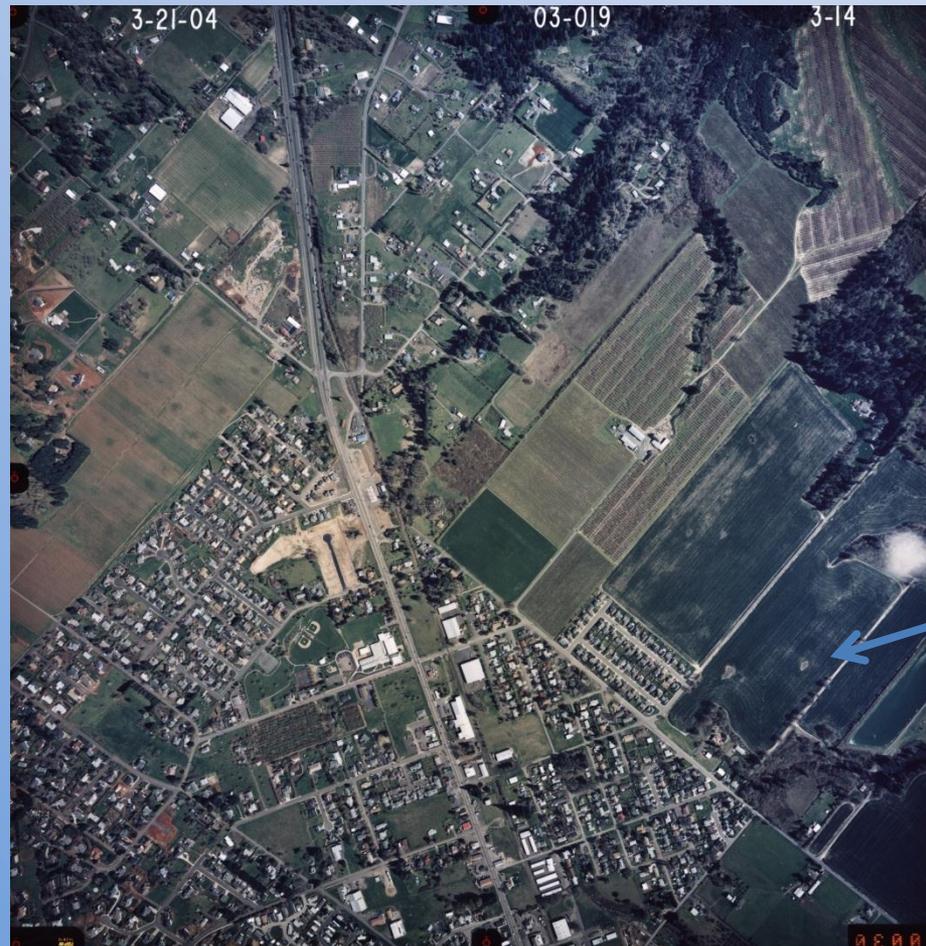
Spot of drowned vegetation due to surface hydrology.

# Ft. Hill Historical Aerial Photo Review



Wet signatures:  
dark tones of  
surface saturation.  
Lighter tones  
indicate ground  
too wet to grow  
crops.  
May 1998

# Newberg-Dundee Use of Aerial Photos to Aid in the Delineation



Aerial showing reoccurring wet signature

# Newberg-Dundee Wetland Delineation



Summer field conditions at time of delineation.

# Newberg-Dundee Wetland Delineation



Using aerial to help find wetland based on reoccurring wet signature

# Newberg-Dundee Wetland Delineation



Reoccurring wet signature one year later during project construction

# OR 22 Sublimity Interchange Artificial Wetlands



Past project in mid-1990's that cut into terrace slope and constructed flat bench that captured seep hydrology. Wetland was greater than 1 acre in size (DSL) and was considered connected with other Waters of the US (COE).

# OR 22 Sublimity Interchange Artificial Wetlands

Flat bench on truncated clayey soil perching seep hydrology creating suitable conditions for wetlands. Note colonization of rushes on right side of photo. Area was considered to have normal circumstances because of permanent conditions.



# OR 22 Sublimity Interchange Artificial Wetlands



# Nehalem River Bridge Difficult Due to Natural Processes



2007 Flood Event. Tons of sediment and logs were deposited on flood plain.



# **Dredge Disposal Sites**

- Disposal areas of hydric soils, including vegetation (i.e. reed canarygrass).
- Verify hydrology to confirm current status.
- Sampling to look for buried, native non-hydric soils.

# **Flood Irrigated Wetlands**

- Leaky irrigation ditches
- Artificial vs Natural

# Leaking Flood Irrigation



# Saturated Only Wetlands



# What do difficult wetlands mean to project schedule?

- Verification of hydrology during spring months require splanning to meet project schedule. Early coordination with wetland specialist to determine difficult wetland types (i.e. agricultural wetlands, seasonal wetlands).
- Possible year delay for flooded irrigation wetlands to determine active status of hydrology. This would include coordination with ODOT ROW, irrigation districts, and private land owners. Again, early coordination with wetland specialist is needed to avoid potential conflicts with project schedules.
- Types of wetlands (i.e. forested wetlands, spruce bogs, estuaries), which may take significant time and ROW coordination for mitigation planning. Coordination early in project development for ROW needs would be required to ensure that the project schedule can be meet.

**ARE YOU READY TO  
PLAY  
Wetland Or Not!**

# Wetland or NOT!



# Wetland or NOT!



# Wetland or NOT!



# Wetland or NOT!



# Wetland or NOT!



# Wetland or NOT!



# Wetland or NOT!



# WHAAAAAT?



# Wetland or NOT!



# Wetland or NOT!



# Wetland or NOT!



# Wetland or NOT!



# Wetland or NOT!



# WHERE IS THE WETLAND?



# What?







# Summary:

- Difficult wetlands are valuable resources protected by both federal and state laws.
- Compliance with these laws requires a substantial investment for ODOT wetland staff.
- Each project requires an independent wetland evaluation, which takes into consideration past disturbances and natural processes.
- Role of Best Professional Judgment, based on training and experience.