

**Southern Willamette Forest Collaborative  
Rigdon Collaboration Committee**

Wednesday, May 31<sup>st</sup>, 9:00 – 2:00

Middle Fork Willamette Watershed Council – Staley Floodplain Restoration  
Pre-Project Field Trip

**Participants:** Chandra L, Fergus M, BJ K, Mike B, Alexis H, Loren H, Thalia L, Sarah D, Audrey S, Michelle E, Karen, Sarah A  
Forest Service: Lisa K, Matt H, Leslie E, Allen H, Steven Todd J

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### Healthy Floodplains

(see power point)

1. Healthy floodplains have complex habitats
  - a. Provide nutrient delivery and dynamic transitional zones
  - b. When occurring properly there is large woody debris, sediment, and different habitats with organisms at all different life stages.
2. At the landscape scale valley confinement is a controlling factor
  - a. Confined valley – streams move fast and are transport reaches
  - b. Unconfined valley- streams spread out – depositional reaches
    - i. Water spreads out, drops sediment and wood, creating complex habitats
    - ii. Floodplains can effect low and high flows
3. There is a lot of potential for restoration in our unconfined valleys (see changed conditions slides)
  - a. Existing state – when floods or increased flow the stream moves faster and doesn't spread out and dissipate like it should
  - b. Floodplains will be more resilient to change if healthy
4. Staley Creek /Middle Fork river confluence
  - a. The lower quarter mile is unaltered old growth and there 10 locations the stream can meet the river.
  - b. In the 1960's the forest service allowed stream cleaning with the first clear cut – at the time it was thought clearing streams of wood helped fish get access upstream.
  - c. In the 1980s the rest of the lower Staley Creek area was clearcut by Pope & Talbot mill

### Project

1 stream mile of lower Staley Creek– 46acre floodplain

1. LIDAR shows potential for 800' wide floodplain in some areas
2. Floodplain habitats are biological hotspots and could help build resiliency at the landscape level and are important for all species. They are also critical habitat for Bull trout, Spring Chinook, Pacific lamprey, and Western pond turtle. There are 15 native fish species.
  - a. You would expect to see a complex and diverse lower Staley floodplain with an array of substrate but we don't see that

- b. Large wood dam projects don't work in this area because the stream has channeled down too far.
  - c. Berms need to be removed to connect smaller wetted channels (see slides)
  - d. Not trying to reset a condition, instead removing barriers that allow the stream to naturally recover as quickly as possible
3. Staley Creek current condition:
    - a. The main stream is narrow and downcut
    - b. extremes – no shade or lots of shade
    - c. steep banks up to 12' or no banks
    - d. Side channels are only accessible to the main stream during high flow events every few years
    - e. Floodplain is much drier than it should be
    - f. Loss of semi wetted and periodically wetted areas
  2. The project uses a new methodology – a lot of old science was learned from rivers that had already been altered from their natural state before studied.
  3. The project work is dramatic but is necessary to remove the existing infrastructure that is confining the stream.
    - a. Project work:
    - b. Raise the main stream bed
    - c. Push berms back into stream
    - d. Look for historic or relic side channels that can be reused
    - e. Save large Cottonwood trees to create islands within the floodplain
    - f. Small trees will be added to larger log jams
  4. When the project is “done” the floodplain will be on a trajectory to recovery as a functioning floodplain
  5. It is possible to do this project here because there isn't valuable infrastructure downstream such as roads or bridges that will be impacted

## Monitoring

1. It is important to be able to communicate outcomes
  - a. Developing new techniques to survey outside of the steam channel
  - b. Pre-project data – 105 meter grids will be monitored now, 1 year, and every other year for 6 years. Coal Creek is also being monitored as a control watershed
  - c. Pre and Post project data:
    - i. Wet and dry zones
    - ii. Substrate
    - iii. Vegetation
    - iv. Species – macro invertebrates and fish
    - v. Flow categories
    - vi. Elevation
    - vii. Photo points