



# GARLIC MUSTARD CONTROL AND THE CLACKAMAS RIVER INVASIVE SPECIES PARTNERSHIP



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# CRISP

## Clackamas River Invasive Species Partnership



2

- 14 partners: public, private, non-profit
- Collaboration!
  - Pool resources to fund projects
  - Platform to ask for financial resources
  - Dedicated staff for watershed
  - Prioritization
  - Sharing data
  - Control weeds across property lines

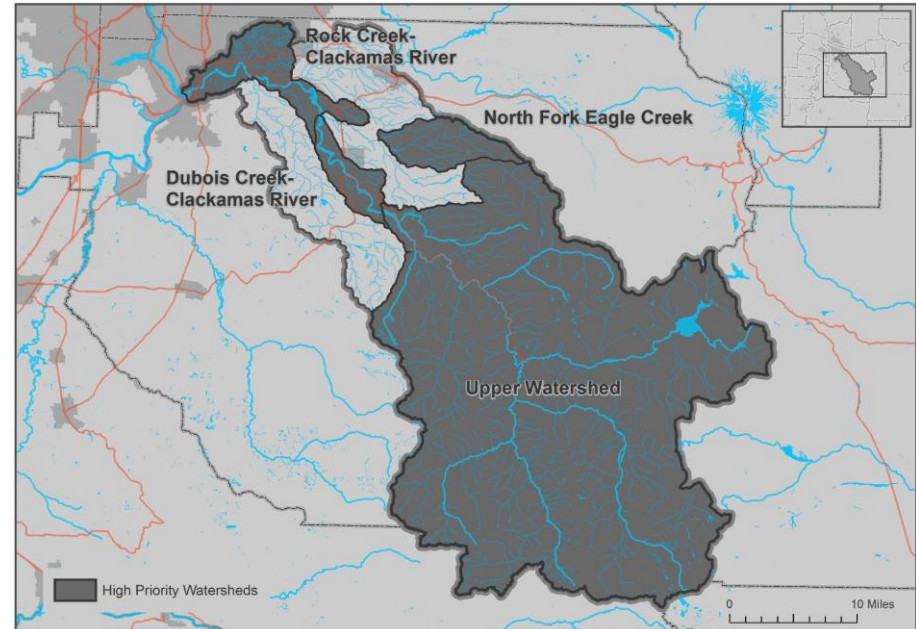
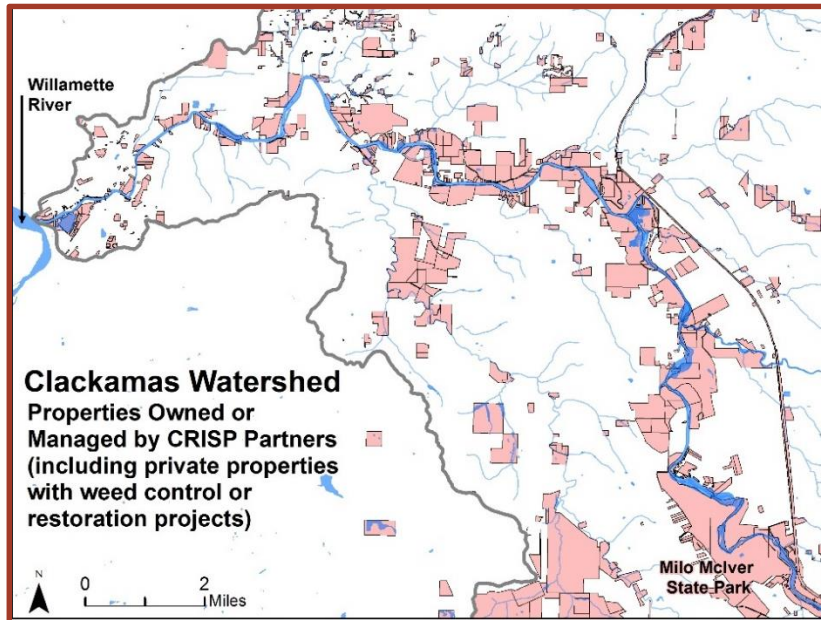


# Watershed Approach



3

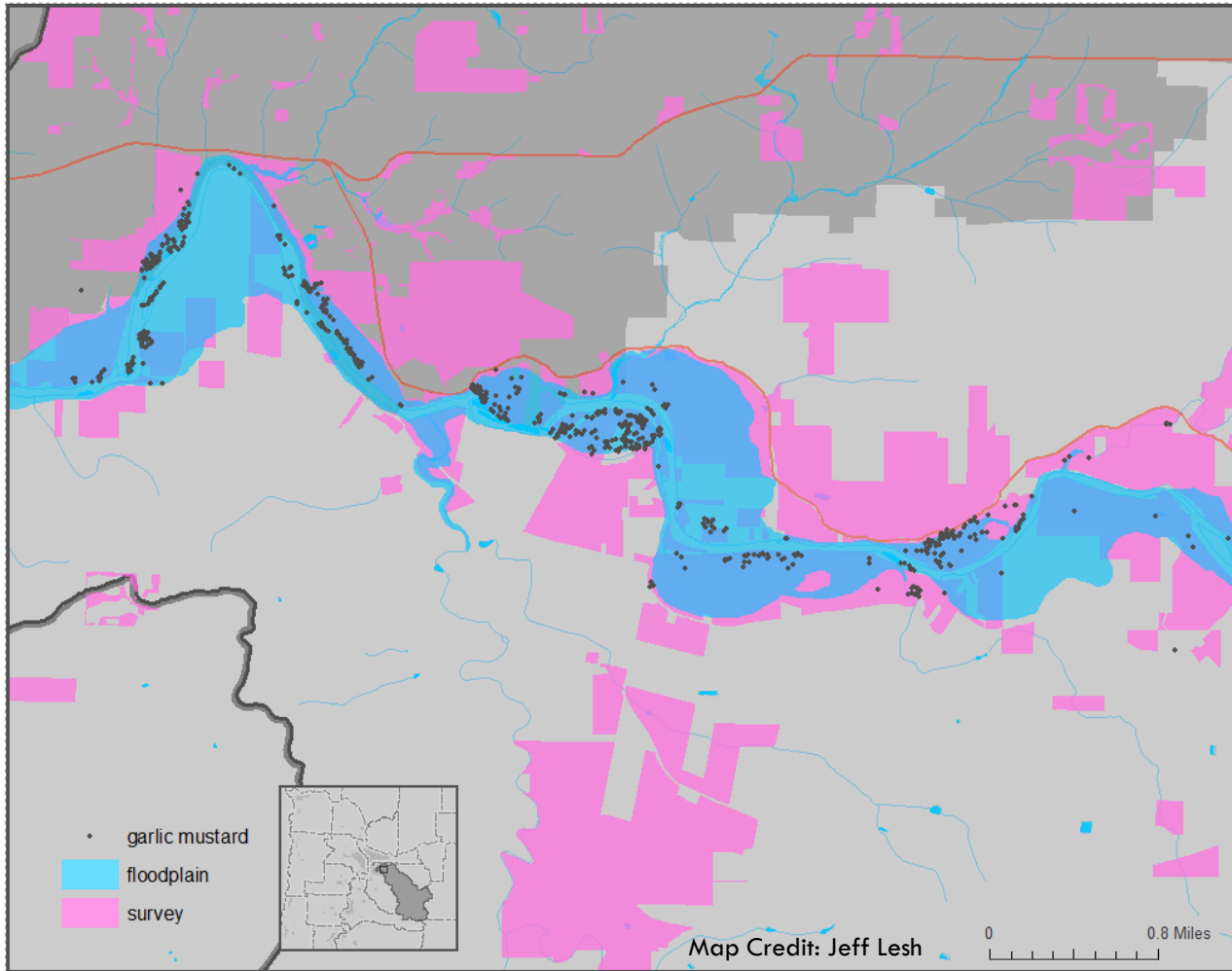
- Set geographic priorities
  - High quality habitat
  - High human activity
  - Significant partner investment



# Garlic Mustard: Dispersal and Distribution Analysis



4



- Outside Clackamas: 23% of patches are within a floodplain
- Within the Clackamas: 82% of patches are within a floodplain
- The rest are trails, roadsides, parks and forests





# Treatment Strategies



5

- Two spring treatments per site
- Treat both flowering plants and rosettes
- Spraying and hand pulling
- Utilize hand pulling on rainy days and at season's end
  - Gives contractors schedule flexibility
  - Reduces potential herbicide resistance





# Fall Treatments



6

- Fall treatments are helpful for :
  - “Carpets” of seedlings
  - Garlic mustard intermixed with native plants, especially native annuals that go to seed by fall
  - Making spring treatments lighter



# Clackamas Islands



7

- Islands are tricky to manage!
  - Ownership is difficult to determine
  - We don't have a boat!
- Large gap in our management
- Collaborated with multiple partners
- Found largest, most upstream garlic mustard patch and treated it



# Successes



8

- Difficult to measure treatment effectiveness.
  - Garlic mustard control is long term.
- Big successes:
  - Surveyed over 700 sites since 2016 (39 had garlic mustard)
  - Increased our Treatments (13 sites in 2015, 74 sites in 2018)
  - Found new patches of gm
  - Found new class A and other weeds
  - Many properties with no priority weeds!
  - No gm found in upper 2/3 of watershed!
  - Surveyed 10 sites with just a few plants. Returned the next year to find nothing or almost nothing





An aerial photograph of a river winding through a lush, green forest. The river is a vibrant blue, contrasting with the surrounding greenery. The forest is dense with various types of trees, and the overall scene is bright and clear.

# THANK YOU!



Photo Credits: Lindsey Karr, Sam Leininger  
Map Credits: Lindsey Karr, Jeff Lesh

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