

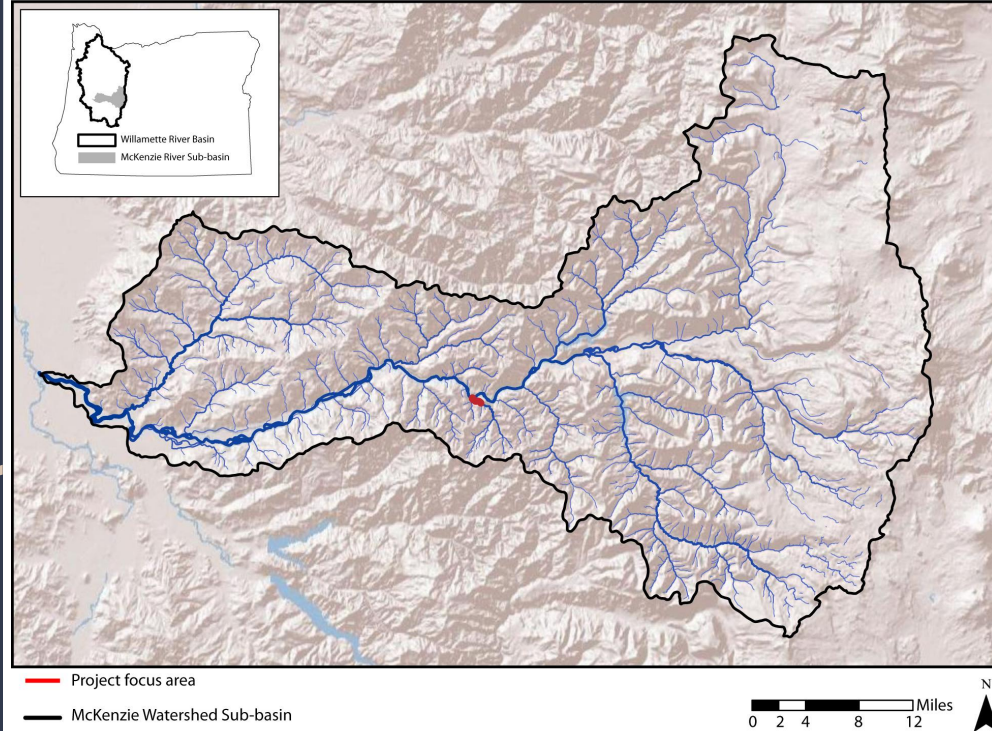


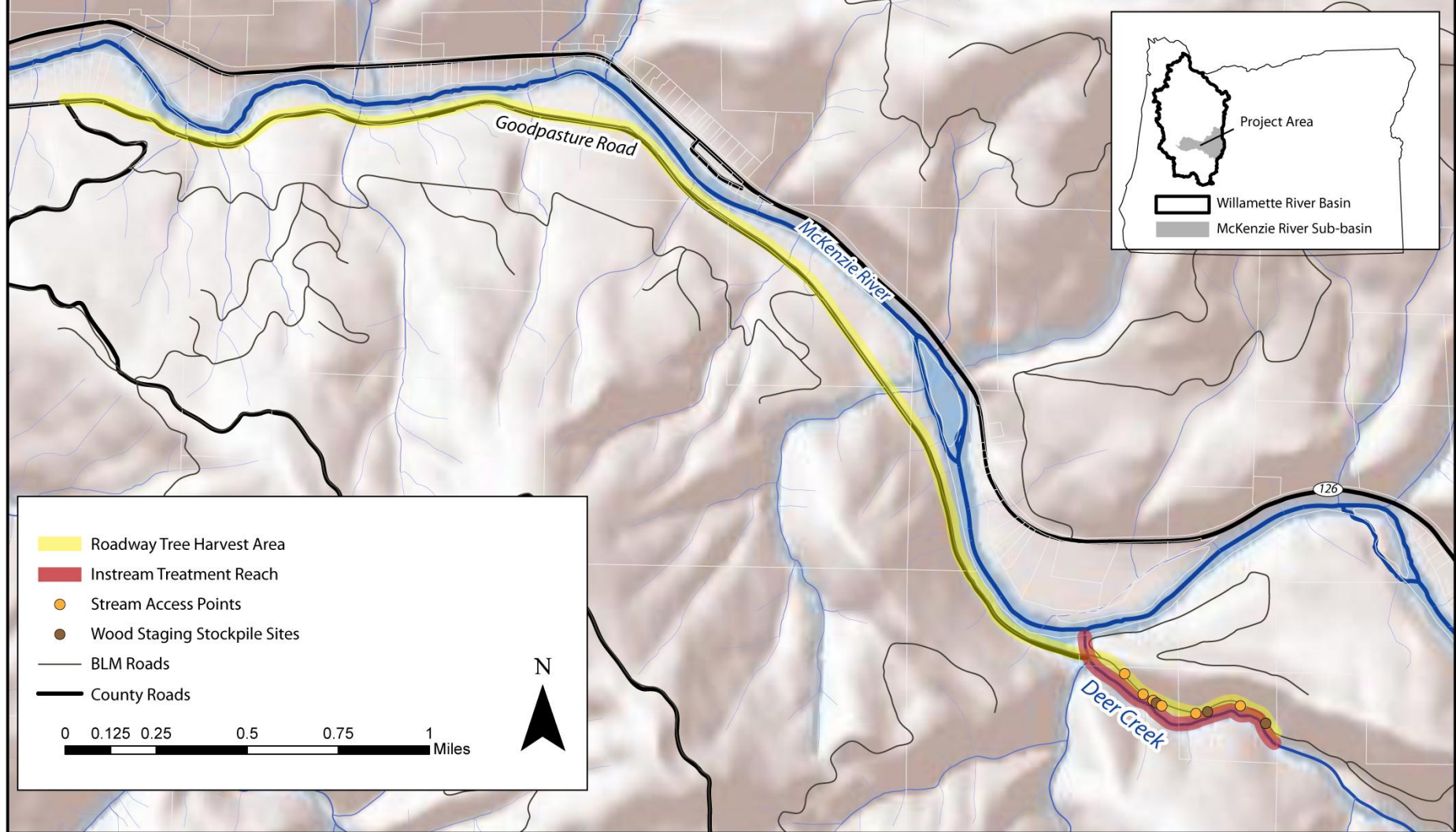
Lower Deer Creek: Pre-project Site Assessment and Analysis

Gwynneth Slater,
Springfield High School

Where is it located, and who owns it?

- A tributary off the McKenzie River subbasin
- 894 acres on public land managed by the BLM
- 3,000 acres managed by the US Forest Service
- 10,000 acres of private and public forest land.





The Historical Problem & Alteration

Weyerhaeuser, cites multiple times in 1994

- Lack of large wood
- Lack of pools in quantity & quality
- presence of fine sediment

Altered by

- Removal of large trees from riparian area
- Removal of large downed wood from streams

Decreasing rearing habitat potential for spring Chinook salmon

Why It Is Critical To Improve

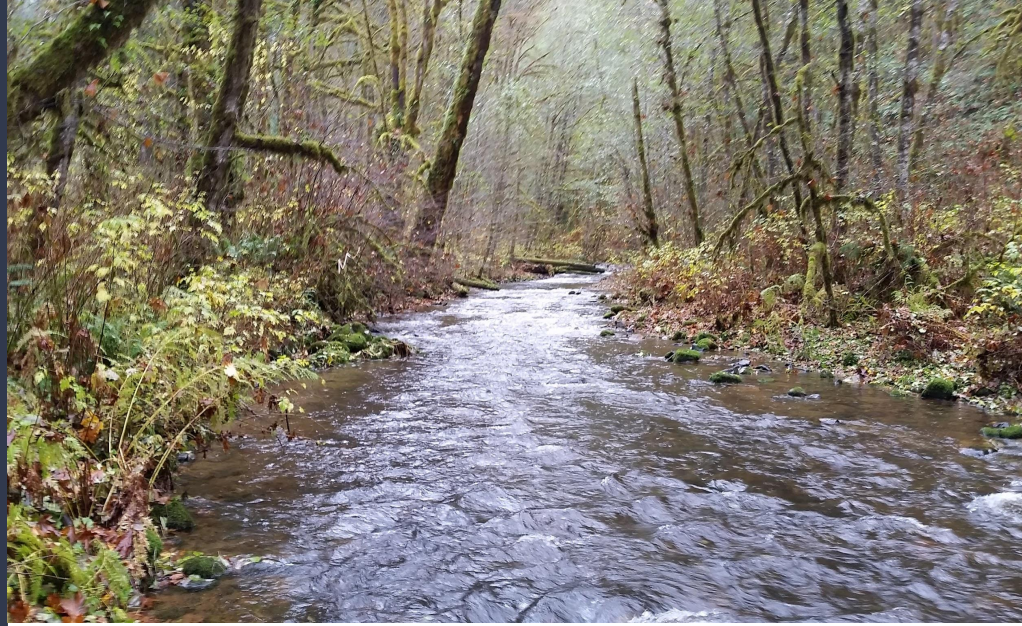
Improving the stream with large wood will increase pools, spawning areas, and create a better more diverse environment for these species.

The lower Deer Creek is a critical environment for

- Threatened Chinook Salmon
- Rainbow Trout
- Cutthroat Trout
- Other native fish

When a Stream Lacks Large Wood

- Reduces stream complexity
- Decrease in pools and in pool size
- Decrease in cover habitat
- Decreasing off-channel habitats
- Decrease in backwater pools
- Decrease in sediment storage
- Increase in fine sediment



The lower Deer Creek, with lack of wood and stream complexity.

-Photo 3

Large Wood Benefits.

- Increase in habitat diversity
- Increase in sediment storage
- Increase in pools and pool size
- Altering the flow velocity of water
- Increase cover habitats
- Increase in fish

Photo of the Lower Deer Creek,
a riffle lacking in large wood.





A redd found
in the lower
deer creek in
a pool with
large wood
present.



The large wood slowing water drastically to form the pool where the redd was found.

Goals and Objectives of the Lower Deer Creek

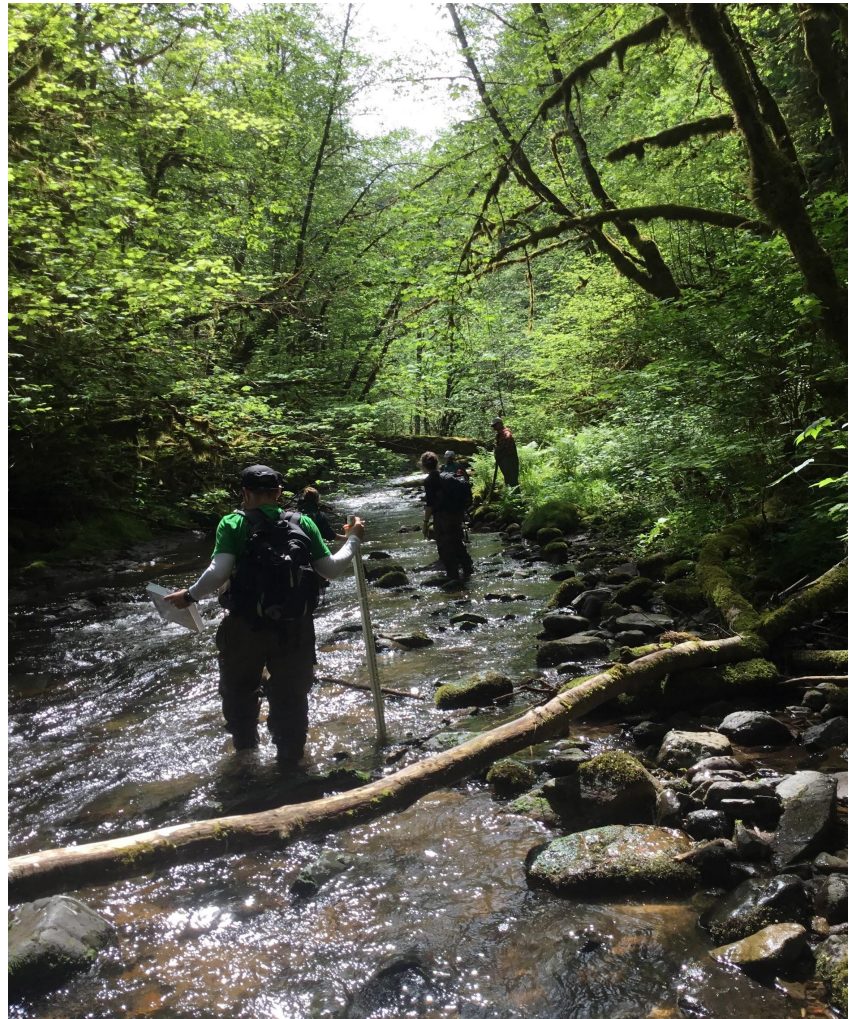
The goal of this project is to improve the numbers and quality of native fish while educating the public and raising awareness for watershed enhancement projects.

- Raise large wood count
- Increase pools in quality and quantity
- Increase spawning areas
- Increase fish population
- Educate and work with the public

What is My Project

All before restoration, I measured

- Amount of pool units,
- large wood count,
- amount of suitable substrate for spawning areas



Results

I found that in the lower Deer Creek before restoration-

- Pool area: 18.8%
- Residual Pool Depth: .55m
- Gravel Area: 7.97%
- Large Wood per 100m: 1.25

ODFW Benchmarks

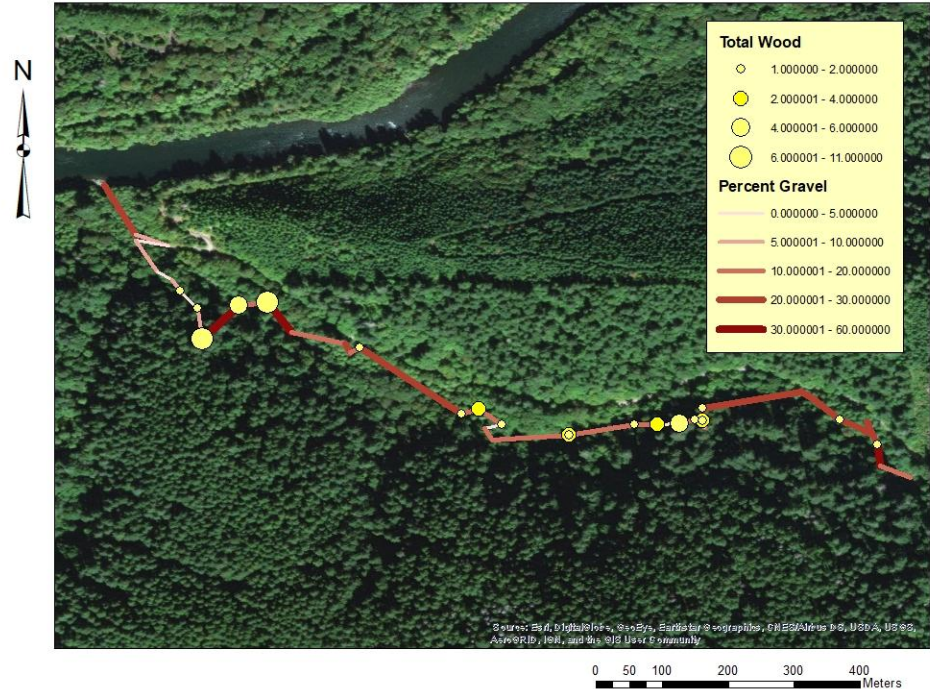
	Undesirable	Desirable
Pool Area	<10%	>35%
Residual Pool Depth	<0.2m	>0.5m
Gravel Area	<15%	>35%
Large Wood per 100m	<10	>20

Conclusion

More wood needs to be added to,

- Increase pool area
- Increase gravel percentage
- Maintain residual pool depth

Comparison of Percent Gravel and Large wood pieces in Lower Deer Creek



Map of the lower deer creek, sighting percent of gravel and total large wood amount in the stream.

Acknowledgements

Stephanie Lawless
Jennifer Weber
Steve Liebhardt
Brian Barr

Project Partners

- BLM
- MWA

