2017 Agricultural Water Quality Workshop
Focus Area – Lower Lewis and Clark

- Clatsop SWCD has identified this area as one that needs much improvement
- This does not mean we can’t do projects in other areas
- What can you do?
  - Evaluate your property to make sure contaminants aren’t entering water
  - Make sure you aren’t preventing vegetation from growing along streams, rivers
  - Ask us to come out to your property and help address any concerns you have
Lewis and Clark River

- Impaired water quality
- Essential salmon habitat
- Eroding stream banks
- Few trees to provide shade
- Few trees to provide large woody debris
What affects water quality and why should I care?

- Stream temperature
- Bacteria
- Sediment
- Dissolved oxygen
- Nutrients
What affects water quality and why should I care?

- Stream temperatures are high because of lack of shade
- Bacteria levels are high because of manure runoff
- Sediment gets into streams when there is a lack of vegetation to filter it out, or bank erosion
- Low levels of dissolved oxygen are caused by algae and pyhtoplankton growth which is caused by high levels of nitrogen and phosphorus (manure, fertilizer)
- High levels of nutrients is caused by manure runoff
What affects water quality and why should I care?

- Cool clean water is essential for salmon, trout and other aquatic organisms.
- Improving streamside conditions will also benefit other wildlife such as songbirds, birds of prey, amphibians and mammals.
North Coast Area Plan and Rules

- Agricultural Water Quality Management Act 1993
- It requires the Oregon Department of Agriculture (ODA) to prevent and control water pollution from agricultural activities
- Describes conditions that you must achieve, rather than the practices you must implement
- Includes enforcement to ensure prevention and control of water quality
Roles

- Oregon Department of Agriculture = Enforcement
- Clatsop Soil and Water Conservation District
  - No enforcement
  - Provides technical assistance
  - Can help get funding for qualifying projects
North Coast Area Plan and Rules

- Guides local landowners on how to prevent pollution
- Focuses on voluntary and cooperative efforts
- Allows landowners flexibility in how they protect water quality
- Applies to all agricultural lands and activities

What does this mean to you?
All agricultural landowners must:

- Allow vegetation along year-round and seasonal streams to filter out pollutants
- Not pollute ground or surface water by discharging waste into water or placing waste in a location where it is likely to enter water
- Wastes include soil, manure, fertilizer
- Ensure tide gates open and close properly
- Ensure pesticides are used in accordance with the label
Examples of Projects – Manure Storage
Manure Storage
Installing gutters
Heavy Use Areas
Heavy Use Areas
Exclusion Fencing – Keep livestock away from the river
Exclusion Fencing + Riparian Planting
Off-channel Watering
Other Projects

- Streambank restoration
- Riparian planting
- Fish passable structures
- Invasive weed control in riparian areas
- Improvements that will reduce erosion and runoff
- Anything that will improve water quality
Managing your small horse farm

- Results of good management
  - Good grass cover, even in winter
  - Fewer weeds
  - Healthy horses
  - Clean water
Managing your small horse farm

- Results of poor management
  - Soil compaction
  - Muddy pastures in winter
  - More weeds
  - Unhealthy horses
  - Polluted streams, groundwater or wells
What you can do:

- Keep animals off muddy pastures
- Use a sacrifice area
- Install gutters and downspouts
- Cover the manure pile
- Compost the manure
- Plant vegetation buffer strips along waterways
Pasture Management

- It is recommended to have a minimum of 1 acre per horse for grazing
- Use pastures only when there is adequate green cover, 3” or more
- Identify the weeds in your pasture as some may be toxic to horses
- Remove weeds by pulling, mowing or digging
- Do not graze when the soil is saturated
Pasture Management

- Allow plants to recover after grazing
- Divide pastures into smaller sections, move animals when it has been grazed down to 3"
- Allow pasture to grow back to a height of 6-8” before grazing again
- A healthy pasture will have little to no weeds in it
- If you get bare spots, re-seed them in the fall/winter
Manure management

- 1 horse can produce 50 pounds of manure/day
- Keep paddocks clean
- Cover manure pile to prevent runoff
- Compost manure
- Spread manure on pastures during dry weather
Manure management

- Keep manure out of the path of runoff
- Fence horses out of the area of your well head
- Locate the manure pile at least 100 feet from your well
- Do not leave a hose submerged in a stock tank. Back-siphoning can occur and contaminate your well
- Manure can contaminate ground water. Be sure to cover the manure pile during the rainy season.
- Use stall mats to reduce the amount of bedding, which reduces the amount of stall waste
Riparian Planting

- We can assist you in developing a plan for streamside planting
- We can assist you in finding plants and trees suitable for the North Coast
- It is important to remove non-native species such as Japanese knotweed and Himalayan blackberry prior to planting
- It is important to incorporate a mix of deciduous, conifer and shrub species
Riparian Planting – The benefits of native vegetation

- It is more effective at filtering out sediment, pesticides and nutrients
- Sequesters more carbon
- Slows water flow to hold soil
- It has better root systems for stabilizing soil
- The soil will have a higher percentage of organic matter
- Increases organic carbon and nitrogen in soil
- Provides food, shelter, and nesting habitat for wildlife and invertebrates
Improving riparian function

- https://www.youtube.com/watch?v=3qvjuHFjb2w
Review

- Install gutters and downspouts on your barn and/or manure storage building
- Cover the manure pile
- Direct water away from wells, streams, irrigation ditches
- Plant trees and shrubs, tall grasses to filter runoff
- Limit livestock access to streams/rivers
- Keep pastures healthy and don’t graze below 3”
Here are some reasons you may want us to visit your property

- Take a look at your pastures
- Assess the drainage, runoff on your property
- Do a visual assessment to see if there is adequate vegetation to filter out sediment and nutrients
- Look at stream crossings/culverts that may need to be replaced
- Help you decide what to plant to improve wildlife habitat, water quality
- Identify weeds and help you come up with a plan to treat them
- Develop alternative sites for watering livestock
What happens when you ask us to visit your property?

- I will come out and listen to what your concerns are.
- I may see other things that could be improved upon.
- We will discuss different options for accomplishing your goals.
- I can provide designs for manure storage, planting trees and shrubs, and vegetative buffers.
- If a project is eligible, I can apply for cost-share funding.
- Put you in touch with other agencies, resources that can help you in areas outside of our scope of work (forestry, soil and water testing, etc.)
Questions?

- Clatsop Soil and Water Conservation District
- 503-325-4571