

## Livestock and Water Quality Site Visit



<b>Site Visit Information</b>	<input checked="" type="checkbox"/> First Visit	<input type="checkbox"/> Follow-up Visit
Prepared by: Jessica Kirkpatrick	Arrival Time: 10:00 am	Departure Time: 11:00 am
Date: June 10, 2013	Current Weather Conditions: Dry and sunny.	

<b>Owner/Operator Information</b>	
Name: Craig Mayberry	Street: 9333 Guide Meridian St.
City: Lynden	Zip Code: 98264
Phone: 360-441-9903	Email: ckmayberry@clearwire.net

<b>Site Information</b>	
County: Whatcom	Watershed: Lower Nooksack (Bertrand)
General site description (include information about nearby waterbodies and description of farm conditions): Mr. Mayberry accompanied Chirs Luerkens and me on this site visit. This is a small farm that drains to Duffner Ditch and its tributaries. Mr. Mayberry raises sheep, poultry and pigs at this property.	

### Site Evaluation

<b>Stream Corridor and Areas Near Surface Water</b>	<input checked="" type="checkbox"/> Evaluated	<input type="checkbox"/> Not Evaluated
<input type="checkbox"/> Bare, exposed, eroding soils	<input type="checkbox"/> Absence of woody vegetation	
<input type="checkbox"/> Contaminated run-off (active or potential)	<input type="checkbox"/> Manure accumulations	
<input type="checkbox"/> Slumping stream banks and erosion	<input type="checkbox"/> Animal access to surface water	
<input type="checkbox"/> Overgrazing of grasses	<input type="checkbox"/> Livestock paths and trails along riparian areas	
Comments: Duffner ditch is the only stream corridor near this property. It runs between this property and Guide Meridian St. on the east border of the property. The stream corridor looked to be in good condition, with an abundant growth of grass. Sheep use the southern pasture during the summer time, and are fenced back about 5 feet from the high water line. Mr. Mayberry stated that during the winter rainy season Duffner Ditch periodically overflows its banks and floods the southern part of the pasture.		

<b>Confinement Areas</b>	<input checked="" type="checkbox"/> Evaluated	<input type="checkbox"/> Not Evaluated
<input checked="" type="checkbox"/> Distance to surface water (variable 15 to 50 ft)	<input type="checkbox"/> Polluted run-off reaching surface water	
<input checked="" type="checkbox"/> Presence of mud and manure	<input type="checkbox"/> Roof runoff water flows to confinement areas	
<input type="checkbox"/> Signs of previous runoff reaching surface water	<input type="checkbox"/> Adjacent land slopes toward surface water	
Comments: There are three confinement areas on this property: a) The winter sheep confinement area on the west border, behind the garden. This confinement area is located well away from Duffner Ditch and appears to drain to the west where there appears to be little risk of polluted		

water from this area reaching the water.

b) The pig confinement area in and on the west side of the barn. This confinement area houses approximately 25 pigs year round. Manure is scraped into a concrete lined containment area. At the time of the inspection, it appeared unlikely that runoff from this area could discharge into Duffner Ditch. However, this area needs to be observed during a late winter runoff event to conclude that it poses to risk to discharge.

c) The sheep confinement area between the barn and Duffner Ditch. The fence of the confinement area is approximately 15 feet away from Duffner Ditch. The ground between is flat. At the time of the inspection, there was a heavy growth of tall grass. This area poses the potential to discharge manure-contaminated runoff into Duffner Ditch.

<b>Stock Water</b>	<input checked="" type="checkbox"/> Evaluated	<input type="checkbox"/> Not Evaluated
<input type="checkbox"/> Distance to surface water (        ft)	<input type="checkbox"/> Mud and standing water at tanks	
<input type="checkbox"/> Overflow from tanks on to the ground	<input type="checkbox"/> Animals accesses stream for stock water	
Comments: All animals are provided stock water well away from Duffner Ditch. These watering facilities do not appear to pose any risk of discharging to Duffner Ditch.		

<b>Upland Pasture Areas</b>	<input checked="" type="checkbox"/> Evaluated	<input type="checkbox"/> Not Evaluated
<input type="checkbox"/> Animal access to stream corridors	<input type="checkbox"/> Signs of overgrazing and erosion	
<input type="checkbox"/> Distance to surface water (        ft)	<input type="checkbox"/> Manure accumulations and bare ground	
Comments: The only pasture is located on the south half of the property. Fifteen to twenty Sheep are pastured here from May to September. The fence of this pasture is approximately 5 to 10 feet away from Duffner Ditch, in places the ground slopes towards the ditch. Mr. Mayberry explains that he leaves a good growth of grass on the pasture at the end of the season, and removes the sheep before it becomes wet. Mr. Mayberry offered to move the fence back to the top of where the slope breaks towards Duffner Ditch (approximately 10 -15 feet in places) to minimize the risk of a discharge.		

<b>Manure Management</b>	<input type="checkbox"/> Evaluated	<input type="checkbox"/> Not Evaluated
Current manure management plan?	Manure stored on covered, impervious surface? See below.	
Manure collected and stored? Yes	Applied during growing season? yes	
Manure storage properly sized? n/a	Manure applied during non-growing season? no	
Manure storage covered? no	Vegetated buffer when manure is applied? yes	
Manure being collected often? n/a	Manure applied or stored off site?	
Comments: Sheep manure is stored in an uncovered pile near the middle of an area Mr. Mayberry has planned for a garden. The manure will be composted and spread on the garden in the summer. Pit manure is stored in a concrete lined pit at the end of the pig confinement area.		

**Other Areas of Concern**

Comments:

**Corrective Actions**

- ☒ Install livestock exclusion fencing to keep animals at least 35 ft from surface waters (35ft minimum)  
Permanent buffers function most effectively to protect water quality and prevent invasion by weeds when planted and maintained with native shrubs and trees suited to the soils and hydrology of the site.
- ☐ Install off-stream stock water watering facilities and locate them at least           ft from surface to prevent risk of water quality impacts (minimum of 75ft)
- ☐ Collect manure frequently and store it in a dry, covered area with an impervious floor or deck
- ☐ Apply manure during the growing season at proper rates and times (minimum of 100ft setback from surface water, or the use of a 35ft vegetative buffer)
- ☐ Site and design confinement and manure storage areas to prevent pollution of surface and ground water
- ☐ Provide heavy use protection in confinement areas and at stock tanks to prevent run-off
- ☐ Construct stream-crossings and emergency water locations in ways that protect the stream
- ☒ Other Actions:
1. Maintain a 3" tall growth of grass in all areas of the winter sheep pasture on the south half of the property.
  2. Collect manure frequently from the small sheep confinement area between the barn and Duffner Ditch. Maintain a 3" tall growth of grass in this area or install heavy use area protection.

Photos Taken: ☒ Yes☐ NoSample Taken: ☐ Yes☒ No**Additional Comments**

Comments: During the inspection I discussed with Mr. Mayberry that, should he choose not to implement 35 foot vegetated buffers between his animal operation and Duffner Ditch, that I would need to return to the property during a runoff event in late winter to verify that the practices he is using are effectively preventing polluted runoff from discharging from his farm.

Please note that the Corrective Actions above are my recommendations for how Mr. Mayberry can comply with RCW 90.48.080, the state law that prohibits the discharge of pollution into state waters. If Mr. Mayberry chooses to take the actions I have recommended, I can presume that his operation is in compliance with state law. If he chooses to take different actions to address the issues noted in the report, I will need to return to this farm during a rainy season runoff event to verify that those actions are effectively preventing pollution from discharging into state waters. I will be following up with Mr. Mayberry in August.

Ecology Contact Information	
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Inspector Signature: \_\_\_\_\_

Date: \_\_\_\_\_ June 13, 2013 \_\_\_\_\_