

## Livestock and Water Quality Site Visit



Site Visit Information	<input checked="" type="checkbox"/> First Visit	<input type="checkbox"/> Follow-up Visit
Prepared by: Chris Luerkens	Arrival Time: 4:25	Departure Time: 5:05
Date: 8/27/13	Current Weather Conditions: Clear and dry	

Owner/Operator Information	
Name: Amy Harksell	Street: 931 Birch Bay Lynden Rd.
City: Lynden	Zip Code: 98264
Phone: 354-1173	Email: harksella@gmail.com

Site Information	
County: Whatcom	Watershed: Lower Nooksack (Bertrand)
<p>General site description: The Harksell's reside at this property where they currently keep two horses and four goats here year round. The property is approximately 2.5 acres.</p> <p>The horses are usually kept on the northern portion of the property. This area includes two small confinement areas and a portion of pasture. This area is heavily grazed. There are no ditches near this area and it is unlikely that contaminated field runoff from this area would reach any surface water.</p> <p>The goats spend most of the time confined to a small area on the eastern edge of the property and it also appears unlikely that this area poses a risk of to pollution of surface water.</p> <p>Horses are also sometimes kept on the southern portion of the property below the residence. This area slopes down from the residence toward a ditch and large wetland complex. A small area of pasture has been developed at the base of the slope. The ditch was full of water at the time of the visit and the area has a high water table. This pasture was described as often saturated during the rainy season and sometimes even flooding. A fence excludes animals approximately 10 feet from the edge of the ditch. This pasture was described as not generally used during wet season and had a vigorous growth of grass at time of visit.</p> <p>Manure is collected from the northern pasture and stored in a large pile on the slope in the southern pasture area. The area below the manure pile slopes toward the ditch. The manure pile is uncovered and poses a risk of discharging into the ditch during rain events when the pasture is saturated.</p>	

### Site Evaluation

Stream Corridor and Areas Near Surface Water	<input checked="" type="checkbox"/> Evaluated	<input type="checkbox"/> Not Evaluated
<input type="checkbox"/> Bare, exposed, eroding soils	<input checked="" type="checkbox"/> Absence of woody vegetation	
<input type="checkbox"/> Contaminated run-off (active or potential)		
<input type="checkbox"/> Slumping stream banks and erosion		
<input type="checkbox"/> Overgrazing of grasses		
	<input type="checkbox"/> Manure accumulations	
	<input type="checkbox"/> Animal access to surface water	
	<input type="checkbox"/> Livestock paths and trails along riparian areas	
Comments: A fence excludes animals approximately 10 feet from the ditch in the southern pasture.		

Confinement Areas	<input type="checkbox"/> Evaluated	<input checked="" type="checkbox"/> Not Evaluated
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<input checked="" type="checkbox"/> Distance to surface water (>250 ft) <input type="checkbox"/> Presence of mud and manure <input type="checkbox"/> Signs of previous runoff reaching surface water	<input type="checkbox"/> Polluted run-off reaching surface water <input type="checkbox"/> Roof runoff water flows to confinement areas <input type="checkbox"/> Adjacent land slopes toward surface water
Comments: Horses are confined in the front of the pasture several hundred feet from the ditch and wetland. It is unlikely runoff from this area reaches surface water.	

<b>Stock Water</b>	<input type="checkbox"/> Evaluated	<input checked="" type="checkbox"/> Not Evaluated
<input checked="" type="checkbox"/> Distance to surface water (300 ft) <input type="checkbox"/> Overflow from tanks on to the ground	<input type="checkbox"/> Mud and standing water at tanks <input type="checkbox"/> Animals accesses stream for stock water	
Comments: A tanks is in the northern pasture and not evaluated.		

<b>Upland Pasture Areas</b>	<input checked="" type="checkbox"/> Evaluated	<input type="checkbox"/> Not Evaluated
<input type="checkbox"/> Animal access to stream corridors <input checked="" type="checkbox"/> Distance to surface water (10 ft)	<input type="checkbox"/> Signs of overgrazing and erosion <input type="checkbox"/> Manure accumulations and bare ground	
Comments: The northern pasture is grazed heavily. However, there are no obvious routes for pasture runoff to reach surface water from this pasture. The southern pasture has an exclusion fence to keep livestock at least 10 feet from the ditch. At time of visit, the pasture had a dense growth of grass. Because of the small setback and slope toward the ditch, it is important to actively manage the pasture to ensure mud and manure does not accumulate and cause discharges during rain events. Maintaining a vigorous growth of grass on the pasture, removing livestock during the rainy season, and collecting manure from the pasture will help reduce the risk of discharge.		

<b>Manure Management</b>	<input checked="" type="checkbox"/> Evaluated	<input type="checkbox"/> Not Evaluated
Current manure management plan? NO Manure collected and stored? YES Manure storage properly sized? NO Manure storage covered? NO Manure being collected often?	Manure stored on covered, impervious surface? NO Applied during growing season? NOT APPLIED Manure applied during non-growing season? NOT APPLIED Vegetated buffer when manure is applied? Manure applied or stored off site?	
Comments: Manure from the northern portion of the property is collected and piled in the southern pasture. The pile is not covered and is approximately 100 feet from the edge of the ditch on ground that slopes toward the ditch. Additionally, the pasture downhill of the manure has a high water table and occasionally floods. When this pasture is saturated, contaminated runoff from the manure pile may sometimes be carried as surface flow		

and discharge in the ditch.

#### Other Areas of Concern

Comments:

#### Corrective Actions

- ☐ Install livestock exclusion fencing to keep animals at least          ft from surface waters (35ft minimum)
- ☐ 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. **Manure should be collected stored under cover to ensure polluted runoff does not discharge from the pile. Currently the pile is uncovered and on bare earth the slopes toward surface water. Relocating the manure storage from the slope that drains to surface water would decrease the likelihood that contaminated runoff from the manure storage pile would reach surface water.**
- ☐ 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:

Photos Taken: ☒ Yes ☐ No

Sample Taken: ☐ Yes ☒ No

#### Additional Comments

Comments:

#### Ecology Contact Information

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Inspector Signature:

*Chris Luerkens*

Date: 9/23/13