

## 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: Chris Luerkens	Arrival Time: 2:00 pm	Departure Time: 3:10
Date: 4/25/13	Current Weather Conditions: Sunny, calm	

<b>Owner/Operator Information</b>	
Name: Harold Carter	Street: 2040 Thornton St.
City: Ferndale	Zip Code: 98248
Phone: 360-384-3695	Email:

<b>Site Information</b>	
County: Whatcom	Watershed: Nooksack
<p>General site description (include information about nearby waterbodies and description of farm conditions): Mr. Carter's 1.5 acre property in Ferndale is split by a drainage feature that flows from the north to the south. Currently the property has four horses, a goat, and chickens. Animals are kept on both sides of the property in areas largely bare of vegetation with exposed soil. Most of these bare areas are on steep slopes that allow sediment and manure laden runoff to enter state waters during rain events.</p> <p>The western portion of the property has two horses, a goat and chickens. This area is accessed by a trail that crosses over the watercourse. The western section is almost entirely bare of vegetative groundcover. Much of the western portion of the property slopes steeply to the watercourse. Animals have unrestricted access to the slope and watercourse. These conditions cause discharges of sediment and manure during rain events. The space available is likely insufficient to keep animals if an exclusion fence is installed at least 35 feet from the top of the slope as needed to ensure water quality is protected.</p> <p>Along with the residence, much of the eastern section of the property is used as pasture. There are currently two additional horses on this section of property. Most of this area steeply slopes toward Thornton Road and is mostly bare of vegetation. These conditions also likely cause runoff contaminated with sediment and manure during rain events. There is a catch basin near the southeast corner of the property that drains into a stream located east of the site. There is potential that runoff from Carter's field during rain events will reach this stream.</p>	

### Site Evaluation

<b>Stream Corridor and Areas Near Surface Water</b>	<input checked="" type="checkbox"/> Evaluated	<input type="checkbox"/> Not Evaluated
<input checked="" type="checkbox"/> Bare, exposed, eroding soils	<input checked="" type="checkbox"/> Absence of woody vegetation	
<input checked="" type="checkbox"/> Contaminated run-off (active or potential)	<input checked="" type="checkbox"/> Manure accumulations	
<input checked="" type="checkbox"/> Slumping stream banks and erosion	<input checked="" type="checkbox"/> Animal access to surface water	
<input checked="" type="checkbox"/> Overgrazing of grasses	<input type="checkbox"/> Livestock paths and trails along riparian areas	

<p>Comments: Livestock have direct access to the watercourse and most of the riparian corridor. Most of the areas where animals are kept are nearly bare of vegetation. The areas adjacent to the watercourse are very steep, denude of vegetation, and contain manure. These conditions cause contaminated run-off during rain events.</p>	

<b>Confinement Areas</b>	<input checked="" type="checkbox"/> Evaluated	<input type="checkbox"/> Not Evaluated
<input checked="" type="checkbox"/> Distance to surface water (0 ft) <input checked="" type="checkbox"/> Presence of mud and manure <input checked="" type="checkbox"/> Signs of previous runoff reaching surface water	<input checked="" type="checkbox"/> Polluted run-off reaching surface water <input checked="" type="checkbox"/> Roof runoff water flows to confinement areas <input checked="" type="checkbox"/> Adjacent land slopes toward surface water	

Comments: Area west of the watercourse is too small to provide pasture and essentially functions as a confinement area. Conditions surrounding the stream are described above. Gutters and downspouts are not installed on barn to direct clean roof water runoff away from areas animals have access. Because of the steep slopes and limited space, confinement of animals in this area cannot ensure that discharges will not occur. A confinement area should be developed on the eastern portion in a location that will not cause discharges and will require heavy use area protection, manure storage, and stock water. Confinement on the western portion is not protective of water quality.

<b>Stock Water</b>	<input checked="" type="checkbox"/> Evaluated	<input type="checkbox"/> Not Evaluated
<input checked="" type="checkbox"/> Distance to surface water (75 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:

<b>Upland Pasture Areas</b>	<input type="checkbox"/> Evaluated	<input type="checkbox"/> Not Evaluated
<input checked="" type="checkbox"/> Animal access to stream corridors <input type="checkbox"/> Distance to surface water (      ft)	<input checked="" type="checkbox"/> Signs of overgrazing and erosion <input checked="" type="checkbox"/> Manure accumulations and bare ground	

Comments: Animals on western section of property have direct access to both surface water and the steep slope leading down to the watercourse. The upland area is too small for the number of animals and also slopes toward surface water. Both sections of the property are significantly overgrazed and denuded of vegetation. During rain events manure and bare ground result in pollution discharges from the upland pastures.

<b>Manure Management</b>	<input checked="" type="checkbox"/> Evaluated	<input type="checkbox"/> Not Evaluated
Current manure management plan? No Manure collected and stored? No	Manure stored on covered, impervious surface? No Applied during growing season? No	

Manure storage properly sized? No	Manure applied during non-growing season? No
Manure storage covered? No	Vegetated buffer when manure is applied? No
Manure being collected often? No	Manure applied or stored off site? No

Comments: Manure is not collected and stored on either sections of property. This will need to be done regularly to reduce the potential to discharge. Development of a heavy use area protection for confinement should include properly sized and covered manure storage.

#### 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 75 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. **Confinement area should be constructed by September 30, 2013 if animals will be kept on the property next winter.**
- Provide heavy use protection in confinement areas and at stock tanks to prevent run-off. This should be included as part of the confinement area above.
- Construct stream-crossings and emergency water locations in ways that protect the stream
- Other Actions:
  - a) It is strongly recommended that animals be removed from the western portion of the property and that the area not be used for future animal confinement. The appropriate setback needed to confine animals is at least 35 feet from the top of the slope. This 35 foot setback needed to protect water quality would not result in adequate space to keep animals in the western portion. Exclude animals from this area by June 30, 2013.**
  - b) Immediately establish and maintain short term best management practices (BMPs) to stabilize soil and cease further sediment discharges on the western portion of property (coordinate with City of Ferndale).**
  - c) Manage pasture land to minimize bare soil and ensure grass regrowth. Animals should be removed from areas where grasses have been grazed to 3 inches in height. Reseed the eastern portion of property and**

exclude horses until a dense growth of forage and roots have reestablished. Vegetation should be established prior to the fall rain season to ensure discharges do not occur during rain events.

Photos Taken:  Yes  No      Sample Taken:  Yes  No

**Additional Comments**

I strongly recommend that Mr. Carter reduce the number of horses on this property to help ensure other management measures can successfully eliminate pollution discharges. If animals are removed from the western portion, then a cost share program may be available to support installation of BMPs to help manage the eastern portion of the property and help ensure compliance with state water quality law. During our subsequent site visit on 5/2/13, Mr. Carter mentioned that his family plans to use another 10 acre property to pasture horses during part of the year. This may be a good option. Please contact me prior to moving animals to this discuss the suitability of the site for horses.

**Ecology Contact Information**

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Inspector Signature: Chris Luerkens

Date: 6/3/13