

Sample Farm Plan San Juan Islands Conservation District

INTRODUCTION

This is a farm resource management system level (RMS) conservation and management plan for the San Juan Island farm property owned by the Farmers. The property is operated as a certified organic farm called “The Farm”.

Assisted by: Natural Resources Planner, San Juan Islands Conservation District

Date: October 2007

This information is provided to assist the landowners with obtaining their long-term farm management goals. Development of this plan, complete with recommendations, is intended to result in the protection of surface and ground water resources. The landowners are receiving practice implementation cost share from the San Juan Islands Conservation District. This plan fulfills the Conservation Commission’s requirements that the landowner have a conservation plan that addresses the practices being cost-shared. This plan is written at the owners’ request.

OBJECTIVES

The primary objectives of landowner(s) (You) are to improve pasture and hay land and market garden management activities by including the appropriate application of necessary plant nutrients at the time in the growing season when the nutrients are most likely to be used by the plants. Applying nutrients in a controlled manner in a way that protects soil, water, and plant resources is referred to as Nutrient Management. You are also planning to construct a barn; collect, compost, and utilize on-farm generated livestock manure; collect, store, and utilize barn roof runoff water; and you want to plant a windbreak/shelterbelt along each paddock fence line for energy conservation purposes.

This Plan will serve as a guide to assist you in implementing these practices.

EXISTING CONDITIONS

Farm Description

The Farmers are the property owners. The property is located at 54 Salmon Beach Road on San Juan Island in San Juan County, Washington. It is located in the e ½ of S. X, T. X n., and R. X w; the tax parcel identification number is: XXXXXXXXXX; please refer to the [maps in section 3](#) of this report. You have a 60 acre, certified organic farm where you raise a diversity of crops and animals including but not limited to: fruit trees, mixed garden crops, pasture, hay, sheep for wool production, pigs, a large flock of pasture raised chickens for meat production and a small, permanent flock of hens for egg production. You are thinking about adding meat cows, more sheep, and increasing the number of pigs on the farm.

On the map is a dotted blue line labeled “development boundary”. You have a conservation easement on your property and are prohibited from constructing any type of structure that is greater than 300 square feet in size below this blue line.

Table 1: The Farm Land Use

Field	Size – acres	Crop	Manure Applied?
1	6.50	Vegetable Garden and some pasture	
2	10.00	Hay	Fall of 2005 and spring of 2006 a load of chicken manure was applied
3	30.00	Orchard & Sheep Pasture	
4	1.50	Grass	
5	10.00	Grass	
Home, Barn, Yard, Driveway	2.00	N/A	
Total acres 60			

Table 2: The Farm Livestock Inventory

Animal	Average Number	Average Weight, Pounds	Grazing or Confined?	Number of Months on the Farm
Sheep	50 breeding ewes & 4 rams	150	Grazing	24
Chickens	700 – 1,000/year	8	Controlled grazing	24
Pigs	10	200	Confined with a small grazing area	24
Future Beef Cows	5	1200	Grazing and confined	12-24
Total	1065 (includes future cows)	15,350# (includes future cows)	Mixed	12-24

Soil

Of the three soil types found on your property, two are within the main farming areas and the third is at the southern end. These three soil types are a Roche-Haro-Rock Outcrop complex, 5-25% slopes (4005), Rock Outcrop-Haro complex, 25-75% slopes (5001), and Doebay-Cady-Rock Outcrop complex, 10-30% slopes (5008). For more information on these soils, their characteristics, and their use potentials please refer to The Farm Soil Types map and attached soil survey information located in [section 3](#) of this report.

As is typical of pigs, there is some mud forming in the pig confinement areas. You rotate the pig confinement area around the farm every season and you are taking measures to minimize the area their area that is turned into mud.

Other than the muddy area in the pig units, there are no visible signs of soil resource concerns such as erosion or compaction on your property.

Water

Surface

Your property lies within the Salmon Bay Watershed; please refer to The Farm Topography and Hydrology Map in [section 3](#) of this report.

There are no seasonal drainages found on your property. There are no water bodies of concern, as classified by the Washington State Department of Ecology, on or near your property.

There are 2 wetlands, as identified in the San Juan County 1992 Wetland Inventory prepared by Sheldon & Associates, on your property. The smaller of the two wetlands, identified as N-XXX, is less than 1 acre in size and is of an “unknown” category. The larger wetland, identified as F-XXX is 1-2 acres in size and is a category 3 wetland. For more information on San Juan County’s wetland classification system and regulations, please refer to the pertinent section of the Unified Development Code for San Juan County that is in [section 3](#) of this report immediately behind the topography and hydrology map.

You collect, store, and use water from your barn roof for the garden’s irrigation needs. You have a small pond in the orchard & pasture unit of the farm. The pond water is used to water your livestock and to supplement your market garden’s water requirements.

Ground

A well provides your domestic and livestock water needs and a small portion of your irrigation needs. Refer to map in [section 3](#) of this report for well and septic locations. No animals have access within 100’ of this well nor are any fertilizers or soil amendments applied within 100’ of the well.

Air

There are no known or identified air quality concerns in the area at this time.

Plants

Hay land, pasture land, and garden

You have identified the following weeds on your property: Canada thistle (*Cirsium arvense*), Bull thistle (*Cirsium vulgare*), curly dock (*Rumex crispus*), Redroot pigweed (*Amaranthus retroflexus*), quack grass (*Elytrigia repens*), field bindweed (*Convolvulus arvensis*), and oxeye daisy (*Leucanthemum vulgare*). You asked for species specific control recommendations. These are included with the **Brush Management** (314) specification information within [section 6](#) of this report.

You currently harvest hay from your hay field once each year. You would like to try harvesting two cuttings per year or harvesting one cutting and then follow-up by grazing your animals on the field. The current harvest yields X bales or X tons of hay for an average of X tons of dry matter/acre/year.

Your pasture area(s) are mostly tall Fescue with vetch and birdsfoot trefoil. To meet the nutritional and grazing/browsing needs of your animals, you would like to increase the diversity of forage plants that are in your fields. Plants that you would like to include in the pasture inventory include: chicory, clover, and other broadleaf plants with deep taproots. You plan on incorporating these species via an over seeding and/or tilling and reseeding process.

Your goal is to increase the quality and variety of plants in your fields.

Significant Natural Features

There are no known locations of Significant Natural Features (rare plants, high-quality ecosystems, or rare animals) on your property; verified on 10/13/2004 by reviewing the Washington Natural Heritage Information System list of Locations of Significant Natural Features in San Juan County.

Animals

Livestock

For an inventory of the livestock managed on the farm, please refer to table 2 on page 2 of this narrative.

You do not yet have a barn for winter housing of the animals. The sheep and chickens are provided shelter from the elements by the trees and smaller built run-in sheds you provide. You are planning on building a barn that will serve as equipment and animal housing.

The pigs are purchased as weaners and raised to slaughter weight. There are no pigs on the farm during the winter. The meat poultry are pastured between June, July, August, and September. The laying hens that live on the farm year-round are confined to a pen that is rotated as soil conditions permit. For the winter of 2005/2006 the laying hen flock is confined to your greenhouse and surrounding yard.

Wildlife

There are no known bald eagle nests on the property although bald eagles are known to frequent the area. In the event that an eagle nest is discovered during the course of harvest activities, all activities shall cease and you shall call the Washington Department of Fish and Wildlife (WDFW) bald eagle biologist, Julie Stofel at 425-379-2301. There are no known locations of any other endangered, threatened, or sensitive wildlife species on your property. This was verified on 10/13/2005 by checking the WDFW Species of Concern File.

Human

Landowners and operators Mr. And Mrs. Farmer are the primary laborers on the farm. Two Seasonal interns provide assistance with the day-to-day farming activities. Farm equipment available for practice implementation includes a 29-horse power tractor with a front-end loader.

EVALUATION AND ALTERNATIVES

Your current farm management practices were described above. For cost-share program planning purposes I am recommending that you perform **Nutrient Management**, (Natural

Resources Conservation Service (NRCS) practice code **590**) to maintain and if possible, improve the condition, health, and productivity of your pasture and hay lands. Improving productivity will serve to lessen the threat of ground and surface water quality contamination from nutrient and sediment runoff.

Resource conservation plans are dynamic management tools that should be periodically reviewed and updated to reflect your current farm management practices. Examples of other potential practices that I recommend you implement include **Prescribed Grazing** (528A) facilitated with **Fencing** (382), **Use Exclusion** (472), a **Heavy Use Area with Protection** (561) – for over wintering livestock such as cattle and sheep; a **Manure Composting Facility** (317), **Pasture and Hay Planting** (512), establishing a **Windbreak/Shelterbelt** (380), a **Roof Runoff Structure** (558), **Underground Outlet** (620), and **Watering Facility** (614).

NUTRIENT MANAGEMENT (590) –market garden, all pastures, and hay land - at least 40 acres

Nutrient Management is the balancing of all of the nutrients/resources generated or used on the farm (animal feeds, manure, other fertilizers, plants, animals, etc...) while protecting surface and ground water quality. Creating a nutrient balance assists in nutrient management and means applying manure/fertilizers (nutrients) at rates and times that plants can use them. Nutrient balance figure(s) help determine how much and how often you should apply manure or other fertilizers to your fields and in some cases, how much manure needs to be taken off farm and delivered elsewhere.

Soil Testing

Prior to performing any type of fertilizer or manure application, I strongly recommend conducting soil tests to establish a nutrient baseline and determine what concentrations of nitrogen, phosphorous, and potassium are actually available in your soil. It is important that you have a Bray test for phosphorous performed. The information obtained from the soil test results is necessary to ensure that you are maximizing the use of your pasture resource while preventing damage to our surface or ground water quality resources. When requesting your soil analysis, be sure to ask for fertilizer recommendations from the soil-testing lab, as these will be very useful to you.

There are two different types of soil tests, a fall soil nitrate test, also referred to as the post-harvest soil nitrate test, which measures the amount of nitrate left in the soil after the final crop harvest of the season. It is the most important tool used in monitoring the past management of nitrates on the farm. This test is used to look back in time to see how well you met the needs of the grass without doing harm to the environment in the process. The other soil test is a spring soil test to help you anticipate the nutrient needs of your fields. I recommend that you perform both of these types of soil tests at least once to establish a baseline for your operations. Once you have a good understanding of how nutrients are cycled on your farm, and if the initial test results do not indicate a serious nutrient imbalance, I suggest you perform these tests once every 3 years or so.

Take your fall soil nitrate test approximately 3 weeks after any manure/fertilizer applications have taken place and before the heavy fall rains begin. Take your spring soil tests early enough in the spring that you have the test results back in time to apply your nutrients to the

fields (i.e. once they have dried out enough to support the weight of soil spreading equipment and rains will not create a runoff potential).

Please refer to the additional 590-practice recommendation information in [section 5](#) of this report.

PRESCRIBED GRAZING (528A) – All pasture land, at least 30 acres

Prescribed Grazing, or rotational grazing is an alternative management practice that is recommended to help improve pasture production and utilization. Prescribed grazing involves using **fencing** to divide your pasture into smaller, individual management units called paddocks. This practice involves employing an animal rotation scheme to move the animals through the paddock system based on rate of grass growth. The key to rotational grazing is to get the animals off of the grass before they graze below a 3-inch height minimum and to allow the grass to recover to a 6-inch height minimum for tall growing grasses and 2-3 inches for low growing grasses, before resuming grazing. On average, a 21-day resting period is recommended for grass re-growth. When the animals are moved into the next paddock, mow the previous paddock to a uniform height of 3 inches to prevent any taller remaining grass clumps and weeds from going to seed and to keep grass production high. Harrowing is also recommended at this time to break up and disperse manure piles. At a minimum, the paddocks need to be mowed and harrowed twice a year to disperse manure piles and prevent weeds from going to seed.

The actual grazing period, the size, and the numbers of grazing paddocks are determined by the growing season and how fast the animals graze the grasses down to the 3-inch height minimum. A minimum of four grazing paddocks is recommended. Moving the animals every 3 to 5 days to prevent grazing of the short tender re-growth would be optimal, but you need to ultimately tailor the grazing period to your specific site conditions and needs. The crown of each grass plant is located within the lowest 3 inches of the plant, and provides the nutrients for the plant to keep growing. Therefore, protecting the crown portion of each plant is a critical concern because when the crown is grazed, the plant energy reserves become depleted, and the plant can wither and eventually die.

An important consideration in creating paddocks within the pastures is to design the paddock layouts with “the lay of the land.” Combine the paddocks based on the differing soil moisture levels that occur at different times during the year. Arrange your paddocks so that the wetter pasture areas are together, the quicker drying pastures together, and the quickest drying paddocks together. The goal of this arrangement is to turn the animals out in the paddock area(s) that are the first to dry out in the spring while preventing animal access to those areas that are still saturated. This will serve to alleviate soil compaction and mud issues and supply forage for a longer duration. As the paddocks progressively dry out the animals can be rotated into the newly dried out pastures.

All of the existing grazing paddocks will need periodic mowing to control dead grass, perennial non-grass vegetation, invasive weeds, and to keep grass production in a vegetative stage of growth.

Ideally, the animals should be kept off the pastures when they are wet and/or not growing (late fall to early spring). Having livestock in wet conditions is not conducive to maintaining a high level of pasture and animal health. Cool season pasture grasses go into a regenerative state in the early fall, just before winter. Pasturing and overgrazing at this time will greatly reduce the quality and quantity of forage returning in the spring. Having livestock on saturated and rain soaked pastures during the rainy season is a catalyst for soil compaction. Pastures in the Northwest simply cannot survive continuous grazing and trampling in the winter months when they are saturated with water. The soils are most vulnerable to compaction at this time. Compaction of the soil makes water filtration and plant growth very difficult and can lead to greatly reduced pasture productivity, poor grass stand condition, weed colonization, soil erosion, nitrogen runoff, and increased feed costs.

Use Exclusion is another recommended alternative management practice. It is essentially preventing livestock access to a specified area for a specified time. An example of use exclusion relevant to your situation is preventing the animals' access to any of the pasture area during the wet winter and spring months. Another time of year when **Use Exclusion** is important is during the very dry season, when the grasses are least productive, the number of animals high, and the potential for overgrazing is severe. **Use exclusion** can be achieved by establishing a *sacrifice or heavy use confinement area* to house the animals when the pastures are wet and easily damaged or in droughty/dormant growing conditions.

In order to aid in the restoration and rejuvenation of your pastures it is recommended that you use a **heavy use confinement or “sacrifice” area** throughout the year.

HEAVY USE AREA WITH PROTECTION (561) – At least 1

A Sacrifice Area, or Heavy Use Confinement Area, is a small enclosure, such as a corral, run, or pen, which is meant to be your animals' outdoor living quarters. It is called a sacrifice area because you are giving up, or sacrificing, the use of that small portion of land as a grassy area for the benefit of the rest of your pastures.

Size of heavy use areas with protection is dependent upon the type, number, size, and temperament of animal you will be confining. If you will be using a barn as a component of your sacrifice area, you only need approximately 60-80 square feet per 1,000 lbs. of animal or 1 AU. If you plan to use some of the pasture area, and no barn area, for the sacrifice area you may need an area of approximately 300-400 square feet per AU, and no bigger than 750 square feet per AU. You will also want to consider creating a footing layer that is at least 12 inches thick (if you use bark, hog fuel, or sawdust) or, a minimum thickness of 8 inches if you chose to use gravel. A concrete slab is another option for heavy use area protection.

*The conservation district can help you with the specifics of a design should you chose to undertake this activity.

The sacrifice area will be a key management component for achieving your management objectives. The benefits of this sacrifice area include the fact that you will rest the pastures thereby increasing pasture production, improving pasture quality, you will reduce your risks of soil compaction and unhealthy muddy situations, your animals will be in or close to the

barn to allow for almost daily inspection of them, and you will be freeing up more land area for potential pasture production.

The sacrifice area will be a valuable management tool year-round. You can confine all of the animals to the sacrifice area at night. You should confine your the animals to their sacrifice area(s) during the winter and early spring (when the soils are saturated) and in the summer (when the grasses go dormant and are susceptible to overgrazing) before your pastures become overgrazed. Keeping livestock off of saturated and rain soaked soils or a dormant and frozen pasture is critical if you want to maintain a healthy pasture and avoid muddy conditions.

Plan to pick up manure in your sacrifice area at least every 1 to 3 days. The manure should be properly stored (and perhaps composted) in a manure storage or composting facility. This is important for the animals' health as it reduces parasite reinfestation. It will greatly reduce the amount of mud build up as well. Mud is not healthy for animals to stand in for any length of time. Mud harbors bacteria and fungal organisms that cause diseases such as abscesses, Scratches, Rain Scald, and thrush (horse specific diseases but sheep and cows are susceptible to moisture influenced diseases too).

Mud is also a breeding ground for insects, especially filth flies. Insects are annoying at best and at worse carry diseases, bite and can cause allergic reactions for both you and your animals. If animals are fed on muddy ground they can ingest dirt, sand particles, or feces with hay. This can lead to serious digestive and other health issues. Standing in mud can lower body temperature, causing hypothermia and lowering their ability to produce meat and fiber. It also creates a slick, unsafe footing that can cause slips and injuries for animals and humans. When animals are allowed to walk around on wet, muddy soils they contribute to soil compaction and the destruction of the soil structure. This, in turn, decreases pasture productivity and enhances the potential for soil erosion and sediment run-off.

Heavy use protection areas should be located such that water flow through the area is minimal, and should be located well away from drainages.

Heavy Use Area Protection

Sacrifice areas can get heavy use during the wet months, and placing an alternative footing material over the ground is recommended for mud prevention. This management practice is known as Heavy Use Area Protection. The footing can consist of a minimum 12-inch thick layer of bark, hog fuel, gravel, or sawdust. If you chose to use gravel, the minimum thickness is 8 inches. We can help you with the specifics of a design should you chose to undertake this activity. All of the above footing materials work really well if no mud management problem already exists. If mud management problems already exist two inches of footing material should be laid down for every inch of mud encountered. Any hog fuel should be free of poisonous plants and foreign materials.

The maintenance involved with any sacrifice area regardless of footing material includes collecting manure and maintaining the footing. Regular cleaning of pens and sheds and periodic cleaning of paddocks and other outdoor areas can prevent large accumulations of manure while not being too time consuming.

COMPOSTING FACILITY (317) – At least 1

Establishing a regular manure collection, storage, and disposal routine is essential to the health of your livestock, you, and the environment. This is important for your animals' health because it reduces the potential for parasite (re)infestation. This is important for your and your animals' safety because manure + rain = mud and a muddy surface is slippery and poses safety hazards. Surface and ground water resources are better protected when you collect and store manure properly. Removing the manure from the animals' living areas is also aesthetically pleasing.

Assuming that the sheep weigh 100 pounds, the cows 1,000 pounds, and the chickens 8 pounds each, it is likely that all of these animals combined will produce 215.6 cubic feet of manure per month (1 cord of firewood is = 128 cubic feet). Please note, this figure is most likely an underestimation of what the animals will produce because your animals do weigh more than the hypothetically posed information. And, I did not include bedding as a component of the volume produced. Bedding, depending on the type used, will increase the volume of storage needed per month.

It is highly recommended that you design a manure composting facility large enough to handle the potential maximum amount of manure for a duration no shorter than 6 months.

Locate your manure storage facility on a high, dry, level area away from slopes. Locate the storage area as far away as possible from wellheads, streams, ditches, and wetlands. For chore efficiency, locate the storage area close to the barn, if possible. Cover the pile with a pinned-down tarp or locate it within a storage area with a roof and concrete floor. A level area away from slopes is important for accessing the pile with heavy equipment such as a truck or tractor. Locations away from slopes reduce the risk of manure contaminated water runoff. By covering the pile, you reduce the risk of nutrients being leached out of the manure and into surface water or percolating down into groundwater.

Until you are able to construct manure storage and composting bins, I suggest that you cover any piles with a tarp.

*The Conservation District will help you with structure designs when you are ready to implement this practice.

PASTURE AND HAY PLANTING (512) – Pasture 3, 30 acres

One of your pasture management goals is to increase the variety of forage species available to your grazing animals in pasture 3. You are doing this through a practice called Pasture and Hay Planting.

*The Conservation District can assist you with species selection, seeding calculations, seedbed preparation, and other pasture and hay planting parameters if you wish.

WINDBREAK/SHELTERBELT ESTABLISHMENT (380) – about 4,000 linear feet

A windbreak/shelterbelt serves to provide shade for grazing animals, energy conservation via protection from chilling and drying winds and from moisture wicking sunlight. One of your long-term goals is to establish a windbreak/shelterbelt along each fence line in pasture 3. The

plants will be established at least 5 feet from the pasture fence. This distance should be great enough to allow you access for pruning the trees and shrubs and for maintaining the fence. You are anticipating that you will plant a combination of shrubs with alder and timber trees.

*The Conservation District will provide you with site preparation, species selection, planting, and maintenance assistance for this practice.

ROOF RUNOFF STRUCTURE (558) – At least 1, size to be determined by size of barn
Installing rain gutters and downspouts with an appropriate outlet on any outbuilding including a barn, constitutes a Roof Runoff Structure. I suggest you implement this practice on the barn when it is built. Diverting the rainwater away from the immediate barnyard area will reduce the amount of animal waste potentially washed from the area and will prevent clean rainwater from becoming contaminated by manure. This will also have the added benefit of reducing the amount of water, and thus mud, in your immediate barnyard and probable wintering area. It is important to make sure that the area in which the water is diverted does not create another resource problem. I suggest that when installing gutters and downspouts you also install an **underground outlet** - a conduit installed beneath the surface of the ground to collect surface water and convey it to a suitable outlet.

It is possible that you could use this roof runoff water to supply drinking water to your animals in a **Watering Facility**, a practice discussed below. This water could also be diverted to your pond and used later as irrigation water for your market garden.

Installing a roof runoff structure is a wise resource utilization and protection decision because it reduces the burden on our already limited domestic drinking water supplies. The amount of rainfall we typically receive will most likely be greater than your watering facility will be capable of handling. To prevent trough overflow into the wintering area, an overflow outlet should be installed. The outlet should be diverted away from your animals' living area.

Note: Due to the erosion potential of the soils on your property, the ground surface where the overflow pipe or the gutter/downspout outlets should be protected in a manner that prevents erosion from occurring.

I suggest that you keep in mind an alternate source of water in case the winter rains do not provide the necessary volume of water your animals will need. If you are considering providing their water via a garden hose, there is the potential for freezing conditions and you should be prepared to manually fill the drinking trough(s). You may also want to consider heating the water trough(s) to prevent the water from freezing.

*Should you choose to implement this practice, the Conservation District will provide assistance with the design.

Watering Facility (614) – At least 1

A Watering Facility is a device (tank, trough, or other watertight container) for providing animal access to water. To make sure your animals have access to fresh, free choice water I suggest you install at least one tank, trough, or other watertight container in your wintering

area and in each grazing paddock. I also suggest that you place a heating element in the trough(s) to keep the water from freezing during the winter.

Size

The troughs or tanks should have adequate capacity to meet the water requirements of your animals. This should include the storage volume necessary to carry over between periods of replenishment. According to information from North Dakota University Extension's website (Greg Lardy, Beef Cattle Specialist & Charles Stoltenow, Extension Veterinarian), beef cows can consume anywhere from 6-14 gallons of water per day and ewes with lambs will consume about 3 gallons of water each day.

Where water supplies are dependable and animals are checked daily, troughs with little water storage capacity may be used. Troughs or tanks must at least provide the daily requirement of the animals and provide access to the entire herd within a short period of time.

Location

The site should be well drained; if not, drainage measures should be provided. Areas adjacent to the trough or tank that will be trampled by the animals should be graveled or otherwise treated to provide firm footing and reduce erosion. Design of the protective surface around the trough shall be in accordance with the Heavy Use Protection Area practice discussed above.

SUMMARY & DECISIONS

A farm plan is a dynamic management tool. Implementing practices will take time, and of course, money. There is no expectation that anything will happen over-night and it is recommended that you chose the practice that will give you “the biggest bang for your buck” to start with. Your management plan will be based on a set of practices that you decide to implement. These decisions will be summarized on the attached Conservation Plan/Planned Practice Application Schedule. These sheets provide a detailed list of practices you decide to complete and a general time frame in which you plan on using the practices. Below is a list of potential conservation practices you can decide on. Once you have made conservation practice decisions, those decisions will form your conservation plan. A conservation plan is a dynamic management tool and should be updated periodically to reflect current management practices.

Fencing – physical barrier used to support prescribed grazing and use exclusion

Prescribed grazing – pasture rotation to protect soils and improve pasture production

Nutrient Management – soil testing prior to applying or not applying fertilizers so plants take up nutrients

Heavy Use Area Protection – footings such as concrete, hogged fuel or gravel for heavy use area

Heavy Use Area – confinement area to reduce pressure on pasture

Use Exclusion – excluding animals from a specified area for a specified time

Manure Composting Facility – properly storing and composting manure to prevent nutrient runoff and leaching

Pasture and Hay Planting - Establishing native or introduced forage species.

Roof Runoff Management Structure – maintaining gutters and downspouts on your barn

Underground Outlet - A conduit installed beneath the surface of the ground to collect surface water and convey it to a suitable outlet

Watering Facility – trough or tank for providing fresh, free choice water access to livestock

Windbreak/Shelterbelt Establishment - Linear plantings of single or multiple rows of trees or shrubs or sets of linear plantings.

Once you have read my report we must discuss the contents and work together to make management-timing decisions. If you have any questions, feel free to call anytime, 378-6621.

Sincerely,

Natural Resource Planner
San Juan Islands Conservation District