

## Appendix A

### CONSERVATION PROGRAM ON AGRICULTURE LANDS

#### Purpose Statement

The well-being of farms and ranches in Whatcom County depends in part on good quality soil, water, air and other natural resources. Agricultural operations that incorporate protection of the environment, including critical areas as defined by this chapter, are essential to achieving this goal.

#### Overview

A conservation farm plan identifies the farming or ranching activities and the practice(s) necessary to avoid their potential negative impacts (resource concerns). Practice selection depends upon the types of livestock raised and crops grown. Based upon the type and intensity of the operation, some generalizations can be made as to the resource concerns and remedies that apply.

Some operations present relatively low risks to critical areas because of their benign nature, timing, frequency, or location. For these operations, the resource concerns and remedies are relatively easy to identify and implement. These are described in more detail as low-impact agricultural operations subject to standardized farm conservation plans in Section 1 below.

Where the potential negative impacts to critical areas are moderate or high, solutions are more difficult to formulate and implement. In those circumstances, a more rigorous planning process is required. In such cases, a formal written plan shall provide the desired environmental protection. These types of operations are described as agricultural operations requiring custom farm conservation plans in Section 2 below.

Farm conservation plans prepared pursuant to Section 1 or 2 shall include all reasonable measures to maintain existing critical area functions and values.

#### **Section 1. Low-Impact Agricultural Operations Subject to Standardized Farm Conservation Plans**

These operations present a low potential risk to critical area degradation including ground/surface water contamination because the animals kept generate fewer nutrients than can be used by the crops grown there.

1. Criteria. To qualify as a low impact operation, a farm shall not exceed one animal unit per one acre of grazable pasture. One resource for guidance is "Tips on Land and Water Management for Small Farm and Livestock Owners in Western Washington." It can be obtained at: [http://www.kingcd.org/pub\\_sma.htm](http://www.kingcd.org/pub_sma.htm) or from the Whatcom conservation district. Other guidance may also be used, provided it is consistent with the best available science criteria in WAC [365-195-900](#) through [365-195-925](#).

2. Benchmark System and Resource Concerns. Keeping horses and other large animals creates potential adverse impacts to critical areas.

a. Nutrient Pollution of Water. Animal waste contains nutrients (nitrogen and phosphorous). With each rain, these wastes can wash off the land and into the nearest stream, lake or wetland. In surface water, phosphorous and nitrogen fertilize aquatic plants and weeds. As the plants and weeds proliferate and decay, the dissolved oxygen that fish need to survive is depleted. Nitrogen in the form of nitrate is easily dissolved in and carried with rainfall through our permeable soils to ground water. Nitrate concentrations exceeding the maximum contaminate level for safe drinking water are found in many wells of Whatcom County. These can present a significant human health risk, particularly to the very old and young.

b. Pathogen Pollution of Water. Manure contains bacteria and other pathogens. These can make the water unfit for drinking without treatment or shellfish unfit for human consumption. They can also make water unsafe for human contact and recreational sports such as fishing, swimming or water skiing. Both surface and ground water are vulnerable to this type of pollution.

c. Sediment Pollution to Surface Water. Regardless of the amount of supplemental feed provided, large animals will continue grazing until all palatable vegetation is gone. On especially small lots (one or two acres), the animals that are allowed free and continuous access to vegetation quickly graze-out and trample pasture grasses and forbs. These areas are then susceptible to invasion by weeds, including noxious weeds, and brush. The resulting bare ground is subject to erosion from wind and water. Lands that lack adequate vegetation are subject to erosion, and contaminated runoff from these areas can enter water bodies and wetlands and interfere with fish and wildlife habitat.

d. Degradation of Riparian Areas. The term "riparian" is defined in Article 8 of this chapter and includes the areas adjacent to streams, lakes, marine shorelines and other waters. A healthy riparian area is essential to protecting fish and wildlife, including salmon and shellfish. Dense riparian vegetation along the water's edge will slow and protect against flood flows; secure food and cover for fish, birds and wildlife; and keep water cooler in summer. Uncontrolled grazing removes important riparian vegetation.

3. Standard Farm Conservation Plan Requirements. Owners of low-impact livestock operations have limited options to control animal waste because their operations are small. The required farm conservation plan can be prepared by the landowner and include a simple map of the property, a standard checklist designed to protect water quality, and the following additional components:

a. System Siting and Design. Barns, corrals, paddocks or lots are to be sited to avoid runoff directly into critical areas. Where structures exist and cannot be relocated, corrective measures must be taken to avoid runoff of pollutants and bacteria to critical areas. Where trees and shrubs are absent along a stream, lake, pond or wetland, a strip or area of herbaceous vegetation shall be established and maintained between barns, corrals, paddocks and grazing areas pursuant to the National NRCS Conservation Practice 393, "Filter Strip." Livestock shall be excluded from

the filter strips established to protect critical areas pursuant to NRCS Practice 472, "Livestock Exclusion." Where trees and shrubs exist along a stream, lake, pond, or wetland, they shall be retained and managed to preserve the existing functions of the buffer pursuant to the NRCS Conservation Practice 391, "Riparian Forest Buffer."

b. Manure Collection, Storage and Use. Manure and soiled bedding from stalls and paddocks are to be removed and are to be placed in a storage facility protected from rainfall so that runoff does not carry pollutants and bacteria to critical areas. Manure is to be used as cropland fertilizer. The rate of manure application shall not exceed crop requirements. It is to be applied in a manner to avoid runoff of nutrients and bacteria to critical areas.

c. Pasture Management. Pastures are to be established and managed pursuant to "Prescribed Grazing" (NRCS Practice 528A).

d. Exercise or Barn Lots. These normally bare areas must be stabilized and managed to prevent erosion and sediment movement to critical areas. A diversion terrace shall be installed, where necessary, to hinder flow to and across the lot or paddock. Runoff from the lot must be treated via the filter strip or riparian buffer as described in subsection (3)(a) of this section to avoid contaminants reaching critical areas.

e. Existing native vegetation within critical area buffers shall be retained to the extent practicable.

## **Section 2. Agricultural Operations Requiring Custom Farm Conservation Plans**

These operations present a potential moderate or high risk to critical area degradation including ground or surface water contamination because the nutrients applied from manure or commercial fertilizers may exceed that which can be easily used by the crops grown there without careful planning and management. The agricultural activities are also likely to be much more intense than low-impact operations posing greater potential risks to other critical areas.

1. Moderate-Impact Operations. Examples include farms that exceed one animal unit per one acre of grazable pasture; orchards, vineyards, small fruit field and row crops; and drainage improvement districts.

2. High-Impact Operations. Examples include dairies and animal feeding operations/concentrated animal feeding operations (AFO/CAFOs). These operations are already highly regulated by state and federal governments (see Chapter [90.64](#) RCW et seq.; 40 CFR 122.23 and 40 CFR Part 412).

3. Custom Farm Conservation Plan Requirements.

a. Moderate-Impact Operations. Where potential significant impacts to critical areas are identified through a risk assessment, then plans shall be prepared to mitigate same by:

1. A planning advisor; or

2. Through the USDA Natural Resources Conservation Service; or

3. The Whatcom conservation district; or

4. An eligible farmer or rancher, who participates in this program by:

- Attending a county-sponsored or approved workshop, and
- Conducting a risk assessment of their farm or ranch, alone or with a planning advisor's assistance, and
- Developing a plan to mitigate any identified risks, and
- Having the plan approved pursuant to WCC [16.16.290](#).

b. High-Impact Operations. Farm conservation plans meeting the criteria of these state and federal laws fulfill the requirements of this chapter. (See USEPA Final Guidance – Managing Manure Guidance for Concentrated Animal Feeding Operations (CAFOs) at: <http://epa.gov/guide/cafo/>.)

4. Plan Standards. In developing the elements that an approved farm conservation plan must contain, the technical administrator may authorize the use of methods and technologies other than those developed by the Natural Resources Conservation Service when such alternatives have been developed by:

a. A land grant college; or

b. A professional engineer with expertise in the area of farm conservation planning.

5. Plan Performance. Implementation of the farm conservation plan must protect existing values and functions of critical areas. Benchmark conditions are to be captured and described in the plan. This may consist of photo documentation, written reports or both.

6. Treatment of Wetlands. Wetlands shall be conserved pursuant to the provisions of Title 180 – National Food Security Act Manual (see <http://www.nrcs.usda.gov/programs/wetlands/index.html>).

7. Custom farm conservation plans need not address the application, mixing and/or loading of insecticides, fungicides, rodenticides and pesticides; provided, that such activities are carried out in accordance with the Washington State Department of Agriculture and all other applicable regulations including, but not limited to: the provisions of Chapter [90.48](#) RCW, the Clean Water Act, United States Code (USC) Section 136 et seq. (Federal Insecticide, Fungicide, and Rodenticide Act), Chapter [15.58](#) RCW (Pesticide Control Act), and Chapter [17.21](#) RCW (Pesticide Application Act). (Ord. 2005-068 § 1).