

Research Department

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Minnesota House of Representatives

July 29, 2013

TO: Representative Wagenius

FROM: Colbey Sullivan

RE: Agency authority to regulate certain activities in Cass County

You asked me to analyze existing state agency authority to regulate the land conversion activities you described in Byron Township, Cass County. You described a process whereby R.D. Offutt Company purchases forestland from Potlatch Corporation and converts the parcel to irrigated potato fields that receive fertilizer and pesticide applications.

Corporate farm restrictions

In general, Minnesota law prevents corporations from owning or operating farmland (Minn. Stat. § 500.24). According to the Minnesota Department of Agriculture (MDA), R.D. Offutt Company is considered a corporate farm, however the company is authorized to own or lease farmland under the “family farm corporation” exemption established by the legislature (Minn. Stat. § 500.24, subd. 2, para. (c) and subd. 3, para (a)). Family farm corporations and other exempt entities must obtain a conservation plan from the local soil and water conservation district. (Minn. Stat. § 500.24, subd. 3, para (a) and subd. 4, para (a), clause (7).

Deforestation for conversion to agriculture

The conversion of at least 640 acres of forest to a different “open space land use” triggers a mandatory Environmental Assessment Worksheet completed by the Responsible Governmental Unit (Minn. Rules part 4410.4300, subpart 36, item B). The Winnemucca Farms project proposed to convert 1,459 acres, resulting in the EAW completed by Cass County on December 11, 2012 (Project Title “Winnemucca Farms Cass County Potato Farm”).

In general, land use laws and restrictions are created and administered by local units of government.

Irrigation

According to the EAW, the project requires well water for irrigation. A person proposing to dig a well and appropriate water for irrigation must notify the Minnesota Department of Health and

pay a fee before constructing the well (Minn. Stat. § 103I.205). Before appropriating irrigation water from the well, the person must obtain a permit from the Minnesota Department of Natural Resources (Minn. Stat. § 103G.271, subd. 1). DNR may issue a groundwater appropriation permit only if the use satisfies the statutory sustainability standard – i.e., the use will not prevent future generations from satisfying their groundwater needs and will not harm ecosystems, degrade water, or reduce water levels beyond the reach of public water supplies or private domestic wells (Minn. Stat. § 103G.287, subd. 5).

As of July 1, 2013, before drilling a well that will require a DNR water appropriation permit, the person must obtain preliminary DNR approval (Laws 2013, ch. 114, art. 4, sec. 71).

Pesticide and fertilizer applications

Groundwater Protection Act

To achieve the stated goal of preventing groundwater degradation to the greatest extent possible, the 1989 Legislature adopted the Groundwater Protection Act (Minn. Stat. ch. 103H). The Groundwater Protection Act identifies two distinct classes of groundwater pollutants – agricultural chemicals (i.e., pesticides and fertilizers), and nonagricultural chemicals (i.e., everything else).

The legislature assigned MDA responsibility for pesticides and fertilizers. Specifically, the legislature directed MDA to monitor water quality and, when required, develop voluntary best management practices (BMPs) and mandatory regulatory mechanisms to protect groundwater from agricultural chemical contaminants (Minn. Stat. § 103A.204 “Groundwater Policy” and ch. 103H “Groundwater Protection Act”).

Monitoring

MDA must monitor and evaluate agricultural chemicals in the state’s groundwater. When a pollutant or a breakdown product of a pollutant has been detected, MDA is required to develop BMPs (see next heading) and continue to monitor for the pollutant or breakdown product. MDA also must evaluate the frequency and concentration of agricultural pollutants.

Best Management Practices – voluntary

MDA must develop BMPs to prevent groundwater degradation from agricultural chemicals and practices (see Minn. Stat. § 103H.151). MDA must promote BMPs to farmers and professional applicators. MDA must monitor the use and effectiveness of BMPs and report this information to the Environmental Quality Board.

In conjunction with University of Minnesota Extension, MDA provides BMPs for nitrogen fertilizer use on irrigated potatoes¹. These BMPs build on MDA’s general nitrogen BMPs and include the following best practices for applying nitrogen to potatoes grown in sandy soils:

1. Select a realistic nitrogen rate
2. Time the nitrogen application to match potato demand

¹ Rosen, Carl J. and Peter M. Bierman. “Best Management Practices for Nitrogen Use: Irrigated Potatoes”. University of Minnesota Extension, publication # 08559. Copyright 2008.

3. Select appropriate nitrogen sources
4. Use proven water management strategies to minimize leaching
5. Follow potatoes with a cover crop

Water Resource Protection Requirements – regulatory

If voluntary BMPs are “proven ineffective” in preventing or minimizing groundwater pollution from pesticides and fertilizers, MDA has authority to adopt “water source protection requirements,” or enforceable regulations that are commensurate with the pollution and are consistent with the state’s groundwater degradation prevention goal (Minn. Stat. § 103H.275). By law, these regulations “must be based on the use and effectiveness of best management practices, the product use and practices contributing to the pollution detected, economic factors, availability, technical feasibility, implementability, and effectiveness.”

MDA must develop water source protection requirements through a public rulemaking process and submit proposed requirements to the legislature for review.

To date, MDA has not issued water source protection requirements under the Groundwater Protection Act.

Pesticide Control Law

In conjunction with the Groundwater Protection Act, Chapter 18B “Pesticide Control” provides MDA authority to regulate pesticides that contaminate groundwater. MDA has statutory authority to take action (by rule, special order, or delegation agreements with other agencies) necessary to “prevent the contamination of groundwater resulting from leaching of pesticides through the soil, from the backsiphoning or backflowing of pesticides through water wells, or from the direct flowage of pesticides to groundwater” (Minn. Stat. § 18B.10, para. (a)).

Chemigation

Chemigation is the application of pesticide or fertilizer via irrigation equipment. A person may not perform chemigation without an MDA permit (Minn. Stat. §§ 18B.08 and 18C.205). A person must ensure that chemigation equipment is equipped with technology that prevents the backflow of pesticide or fertilizer into the well or public water supply.

Surface water protection

The Winnemucca Farms project area includes portions of an unnamed Public Waters Wetland (#11-0654W) as well as several type 3 (shallow marsh) and type 6 (shrub swamp) wetlands.

MPCA rules aim to protect the beneficial uses of the state’s surface waters, including all wetlands:

Policy and wetland beneficial uses. It is the policy of the state to protect wetlands and prevent significant adverse impacts on wetland beneficial uses caused by chemical, physical, biological, or radiological changes. The quality of wetlands shall be maintained to permit the propagation and maintenance of a healthy community of aquatic and terrestrial species indigenous to wetlands, preserve wildlife habitat, and support biological diversity of the landscape. In addition, these waters shall be suitable for boating and other forms of aquatic recreation as specified in part 7050.0222, subpart 6; general industrial use as specified in part 7050.0223, subpart 5; irrigation, use by wildlife and livestock, erosion control,

groundwater recharge, low flow augmentation, stormwater retention, and stream sedimentation as specified in part 7050.0224, subpart 4; and aesthetic enjoyment as specified in part 7050.0225, subpart 2.

Wetland conditions shall be protected from chemical, physical, biological, or radiological changes to prevent significant adverse impacts to the designated beneficial uses listed in subpart 1. The nondegradation provisions in this chapter are applicable to wetlands (Minnesota Rules 7050.0186, subs. 1 and 1b).

Further, chapter 7050 charges MPCA with maintaining the beneficial uses of Minnesota’s waters by protecting them from point and nonpoint source pollutants and wetland alterations (Minn. Rules part 7050.0185, subp. 2).

For purposes of chapter 7050, I believe the wetlands in the Winnemucca Farms project area are classified as class 2D, 3D, 4C, 5 and 6 (see Minn. Rules part 7050.0425). When a water body is included in multiple classes, the most restrictive standards apply (Minn. Rules part 7050.0450).

Table 1 displays the narrative standards that apply to class 2D, 3D, 4C, 5, and 6 waters.

Table 1: Surface Water Quality Standards - Narrative

Class	Narrative standard
2D - Aquatic life and recreation; wetlands	“The quality of Class 2D wetlands shall be such as to permit the propagation and maintenance of a healthy community of aquatic and terrestrial species indigenous to wetlands, and their habitats. Wetlands also add to the biological diversity of the landscape. These waters shall be suitable for boating and other forms of aquatic recreation for which the wetland may be usable.”
3D – Industrial consumption; wetlands	“The quality of Class 3D wetlands shall be such as to permit their use for general industrial purposes, except for food processing, with only a moderate degree of treatment.”
4C – Agriculture and wildlife; wetlands	“The quality of Class 4C wetlands shall be such as to permit their use for irrigation and by wildlife and livestock without inhibition or injurious effects and be suitable for erosion control, groundwater recharge, low flow augmentation, stormwater retention, and stream sedimentation.”
5 – Aesthetic enjoyment and recreation	“The quality of Class 5 waters of the state shall be such as to be suitable for aesthetic enjoyment of scenery, to avoid any interference with navigation or damaging effects on property.”
6 – Other uses	“The uses to be protected in Class 6 waters may be under other jurisdictions and in other areas to which the waters of the state are tributary, and may include any or all of the uses listed [for classes 1 to 5], plus any other possible beneficial uses. The agency therefore reserves the right to impose any standards necessary for the protection of this class, consistent with legal limitations.”

Source: Minnesota Rules, chapter 7050

In addition to the narrative standards, chapter 7050 establishes numeric water quality standards for each surface water class. Numeric standards exist for at least the following substances/characteristics/pollutants:

Chlorides, Hardness, pH minimum and maximum, Acenaphthene, Acetochlor, Acrylonitrile, Alachlor, Aluminum, Ammonia un-ionized as N, Anthracene, Antimony, Arsenic, Atrazine, Benzene, Bromoform, Cadmium, Carbon tetrachloride, Chlordane, Chloride, Chlorine total residual, Chlorobenzene (Monochlorobenzene), Chloroform, Chlorpyrifos, Chromium +3 total,

Chromium +6 total, Cobalt, Copper, Cyanide, DDT, 1,2-Dichloroethane, Dieldrin, Di-2-ethylhexyl phthalate, Di-n-octyl phthalate, Endosulfan, Endrin, E. coli, Ethylbenzene, Eutrophication (Phosphorus, Chlorophyll-a, and Secchi disk transparency), Fluoranthene, Heptachlor, Heptachlor epoxide, Hexachlorobenzene, Lead total, Lindane (Hexachlorocyclobenzene, gamma-), Mercury total in water, Mercury total in edible fish, Methylene chloride (Dichloromethane), Metolachlor, Naphthalene, Nickel total, Oil, Oxygen dissolved, Parathion, Pentachlorophenol, Phenanthrene, Phenol, Polychlorinated biphenyls total, Radioactive materials, Selenium, Silver, Temperature, 1,1,2,2-Tetrachloroethane, Tetrachloroethylene, Thallium, Toluene, Toxaphene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethylene, 2,4,6-Trichlorophenol, Turbidity value, Vinyl chloride, Xylene, and Zinc.

Wetland Conservation Act

Administered by local units of government, the Wetland Conservation Act generally prohibits partially or wholly draining or filling a wetland without restoring or creating a wetland of at least equal public value pursuant to an approved replacement plan (Minn. Stat. §§ 103G.222-103G.2372, Minn. Rules ch. 8420).

According to the EAW, the proposed Winnemucca project would not drain wetlands in the project area but would fill portions of some wetlands to create a wheel path to accommodate the movement of center pivot irrigation booms.

CC: Mike Molzahn, Erik Anderson

CS/nh