

## Agricultural Water Quality Requirements in Floodable Areas

### Summary

#### **Definitions**

- Flood Hazard Area – land in floodplain within a community subject to 100-year flood
- Floodplain – any land area susceptible to being inundated by water from any source
- Floodway – watercourse and adjacent land areas reserved to discharge base flood

#### **Field Stacking**

- Field stacking is prohibited in floodways, areas of annual flooding and 200ft from surface water.
- The Secretary may authorize site-specific standards other than those listed.

#### **Nutrient Management**

- All CSFOs, MFOs and LFOs managing manure or fertilizer must implement a Nutrient Management Plan.
- Annual cropland subject to frequent flooding must be planted with cover crops.

#### **Nutrient Application**

- Manure winter spreading ban exists on all land between December 15 and April 1.
- The Secretary can extend the winter spreading ban from December 1 to April 30.
- Manure spreading is prohibited on frequently flooded land after Oct 16 or before April 14.
- Manure applied to annual cropland on frequently flooded land must be injected or incorporated within 48 hrs.
- Manure spreading is prohibited when field conditions are conducive to flooding regardless of NMP recommendations.
- Manure spreading is prohibited on land saturated with water with potential to runoff to surface water.
- Manure spreading is prohibited on saturated, frozen or snow covered land.
- Manure shall not be applied in exceedance of nutrient recommendations.

#### **Exemptions**

- The Secretary may approve a seasonal exemption for manure spreading on a case-by-case basis upon written request.

#### **Buffers**

- Perennial vegetative buffer is required 25ft from top of bank of surface water and 10ft for ditches.
- Manure spreading and tillage are prohibited in the buffer, except for buffer establishment.
- Spoils from ditch maintenance shall not be stored in the buffer or as such to discharge to surface water.
- Exceptions to required vegetative buffers widths on site-specific basis will never be less than 10ft wide.

#### **Mortalities**

- Animal mortalities (buried or composted) are prohibited in floodways or land subject to annual flooding.

#### **Composting**

- On-farm food composting facilities are prohibited in floodways, annual flooding or concentrated runoff.
- Unimproved sites will never be located less than 100ft from surface water.

### **Streambanks**

- Streambanks shall be left in their natural state, except as allowed by this rule for grazing livestock.
- Stabilization of farm field banks of surface water shall be constructed according to set standards.
- Livestock are excluded from accessing surface water when banks are unstable or pose a threat to water quality.

### **Farm Structures**

- Farmer must notify town zoning administrator in writing prior to construction.
- Local setbacks and those set forth in this rule shall be observed.
- Construction of farm structures in Flood Hazard Areas and River Corridors are required to obtain a permit from ANR.
- Farm structures constructed in existing production areas require 50ft setback from surface water.
- Farm structures constructed in new production areas require 50ft setback from surface water.
- Waste storage facilities constructed in new production areas require 200ft setback from surface water.
- The Secretary may authorize exemption if location is best available site for protecting water quality.

### **Section 11**

- The Secretary can require implementation of additional conservation practices if there is potential for agricultural wastes to enter waters of the State.

### **ANR Requirements**

- Flood Hazard Area and River Corridor General Permit may be required for agricultural practices.
- Stream alteration permits are required to prevent creation of flood hazards.
- Farms using surface water for irrigation require permit from DEC for withdrawals above a de minimis rate.

## Required Agricultural Practices and Floodable Areas - Details

### DEFINITIONS

2.18 **Flood Hazard Area** means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year (a.k.a. 100-yr flood). The term has the same meaning as “area of special flood hazard” under 44 C.F.R. § 59.1. The area may be designated as Zone A or AE on the National Flood Insurance Program maps.

2.19 **Floodplain** means any land area susceptible to being inundated by water from any source.

2.20 **Floodway** means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base (one percent annual chance) flood without cumulatively increasing the water surface elevation more than one foot at any point. Flood hazard areas and floodways may be shown on separate National Flood Insurance Program map panels.

### FIELD STACKING

(e) Field stacking of manure or other agricultural wastes on sites not approved consistent with USDA NRCS standards, or otherwise approved by the Secretary:

(2) shall be prohibited on lands in a floodway or subject to annual flooding;

(4) shall not be sited within:

(A) 200 feet of the top of bank of surface water;

(f) The Secretary may authorize site-specific standards other than those listed in Section 6.02(e)(4)(A)-(F) when the Secretary determines that a manure stacking or piling site, fertilizer storage, or other nutrient storage will not have an adverse impact on groundwater quality or surface water quality but in no case shall unimproved manure stacking sites be located less than 100 feet from a private water supply or the top of the bank of surface water.

### NUTRIENT MANAGEMENT PLANNING

(a) All Certified Small Farm Operations as defined in Section 4 of this rule and all permitted Medium and Large Farm Operations managing manure, agricultural wastes, or fertilizer for use as nutrient sources shall implement a field-by-field nutrient management plan consistent with the requirements of the USDA NRCS Nutrient Management Practice Code 590 or other equivalent standards approved by the Secretary.

(d) Annual croplands subject to frequent flooding from adjacent surface waters, as described in the USDA Soil Survey Flooding Frequency Class, shall be required to be planted to cover crops. Broadcast seeding must be completed by October 1 of each year. Seed planted with drill seeders or otherwise incorporated shall be completed by October 15 of each year. The Secretary may, on a case-by-case basis, approve alternative planting dates due to unusual soil or weather conditions or other specific crop management needs and upon request of the owner or operator of a farm managing annual croplands subject to frequent flooding from adjacent surface waters, as described in the USDA Soil Survey Flooding Frequency Class. If annual crops cannot be harvested prior to October 15, then 30% crop residue, growing directly in the soil, must remain in order to limit soil loss.

## **NUTRIENT APPLICATION**

- (a) Manure or other agricultural wastes shall not be applied between December 15 and April 1. The Secretary may prohibit the application of manure to land in the State following adequate notice to the agricultural community between December 1 and December 15 and between April 1 and April 30 of any calendar year when the Secretary determines that due to weather conditions, soil conditions, or other limitations, application of manure to land would pose a significant potential of runoff to waters of the State.
- (b) Manure or other agricultural wastes shall not be applied to cropland, perennial grass land, small grain cropland, or hay land subject to frequent flooding from adjacent surface waters, as described in the USDA Soil Survey Flooding Frequency Class, after October 16 or before April 14.
- (c) Manure or other agricultural wastes applied to annual cropland subject to frequent flooding, as described in the USDA Soil Survey Flooding Frequency Class, shall be injected or otherwise incorporated within 48 hours of application. This requirement shall not apply to land in no-till management.
- (d) Manure or other agricultural wastes shall not be applied when field conditions are conducive to flooding, runoff, ponding, or other off-site movement, or can be reasonably anticipated to result in flooding, runoff, ponding, or other offsite movement, regardless of NMP recommendations.
- (e) Manure or other agricultural wastes shall not be applied in areas of croplands, perennial grass lands, or hay lands that:
- (1) are saturated with water with the potential to runoff to surface water;
  - (2) are frozen or snow covered, unless the Secretary has approved an exemption consistent with the requirements of Section 6.06; or
- (h) Manure or other agricultural wastes shall not be applied in exceedance of nutrient recommendations such that it ceases to be useful or beneficial for plant uptake.

## **EXEMPTIONS**

- (b) The Secretary may approve a seasonal exemption to the winter spreading ban or the restrictions on frequently flooded fields for manure applications on a case-by-case basis upon written request. Requests for an exemption shall provide:
- (1) the identification and location of specific fields to be used for winter spreading;
  - (2) the proposed rates of application;
  - (3) the location of nearest surface water, mapped wetlands, mapped floodplains, water supply, tile drains, surface inlets or open drains, property boundaries, and ditches;
  - (4) the identification of soil types, depth to groundwater, and slopes;
  - (5) the current soil test results;
  - (6) the annual nutrient application plan for the fields;
  - (7) the Phosphorus Index, or equivalent, results;
  - (8) the RUSLE2, or equivalent, results; and
  - (9) the USDA Soil Survey Flooding Frequency Class, and if applicable to the request, evidence that the flood frequency class is not accurate.

- (c) All approvals for a seasonal exemption shall be in writing and shall prohibit the application of manure:
- (7) to any other area as designated by the Secretary on a case-by-case basis.

### **BUFFERS**

A vegetative buffer zone of perennial vegetation shall be maintained between croplands and the top of the bank of adjoining surface waters and ditches consistent with the criteria in (a) through (i) below:

- (a) Adjacent surface waters shall be buffered from croplands by 25 feet of perennial vegetation.
- (b) Ditches shall be buffered from croplands by 10 feet of perennial vegetation unless determined to potentially transport significant waste or nutrients to surface water consistent with the USDA 590 standard nutrient management requirements.
- (f) Tillage within the perennially vegetated buffer zone is prohibited other than for the establishment and maintenance of the buffer zone.
- (h) Spoils from agricultural ditch maintenance shall not be stored in the buffer zone or in such a manner as to discharge to surface water.
- (i) Exceptions to the required vegetative buffer zone widths, including the requirements of Section 6.05(f), may be considered upon request on a site-specific basis according to standards approved by the Secretary, but in no case shall a buffer zone be less than 10 feet in width. Site-specific buffer zones may be approved based on field characteristics such as a determination that a conveyance has the potential to transport significant wastes or nutrients to surface water, field contours, soil types, slopes, proximity to water, nutrient management plan requirements, and other relevant characteristics when the Secretary determines that the proposed site-specific buffer zones are adequately protective of surface waters.

### **MORTALITY MANAGEMENT**

- (b) Animal mortalities buried on farm property shall be sited so as to be:
  - (5) not located on lands in a floodway or subject to annual flooding.
- (c) Animal mortalities composted or otherwise disposed of on farm property on unimproved sites shall be prohibited on lands in a floodway or subject to annual flooding,

### **COMPOSTING FOOD PROCESSING RESIDUALS**

- (a) All on-farm composting facilities importing less than 1,000 cubic yards per year of food processing residuals shall be sited so as to be at a minimum:
  - (6) not within floodways, areas subject to annual flooding or concentrated runoff; and
- (b) Other site-specific standards may be authorized by the Secretary, but in no case shall unimproved sites be located less than 100 feet from a private water supply, property boundary, or the top of the bank of surface water.

## **STREAMBANK MANAGEMENT**

- (a) The areas from the top of a bank of surface water to the edge of the surface water shall be left in their natural state except as allowed by State statute including, but not limited to, 10 V.S.A. § 1021, and the standards established for the pasturing of livestock consistent with Section 7 of this rule.
- (b) Stabilization of farm field banks of surface waters, when allowed under Section 6.10(a) of this rule, shall be constructed in accordance with the USDA NRCS standards and specifications or other standards approved by the ANR and the Agency that are consistent with policies adopted by the Secretary of Natural Resources to reduce fluvial erosion hazards.
- (d) Livestock shall not have access to surface water in areas outside of production areas that:
- (1) contain unstable banks or where erosion is present; or
  - (2) are areas designated by the Secretary as having actual or potential threat to water quality as a result of livestock access.

## **CONSTRUCTION OF FARM STRUCTURES**

- (1) Prior to construction of farm structures, the farmer must notify the zoning administrator or the town clerk of the town in which the farm structure is proposed, in writing, of the proposed construction activity. The notification must contain a sketch of the proposed structure including the setback distances from adjoining property lines, road rights-of-way, and adjacent surface water.
- (2) Local setbacks and setbacks designed by this rule shall be observed unless the Secretary has approved a farmer's written request for other reasonable setbacks for the specific farm structure being constructed or maintained in accordance with Section 9(b).
- (3) Construction of farm structures in Flood Hazard Areas and River Corridors are required to obtain a Flood Hazard Area and River Corridor permit from the ANR or its designee unless otherwise exempt (refer to Appendix A). Fences through which floodwater may flow are not structures which represent an encroachment in a floodway area.

### **(5) Existing Production Areas**

Farm structures, with the exception of replacement structures built to occupy existing structural footprints, shall be constructed so that a minimum distance of 50 feet is maintained between the top of the bank of adjoining surface waters and the farm structure.

### **(6) New Production Areas**

- (A) Farm structures, excluding waste storage facilities, shall be constructed so that a minimum distance of 50 feet is maintained between the top of the bank of adjoining surface waters and the farm structure
- (B) The following setbacks shall apply to all new waste storage facilities proposed on sites where no waste storage facility or production area previously existed:
- (iii) 200 feet from the top of the bank of any surface water;

### **(b) Setbacks Approved by the Secretary**

Local setbacks or no build areas for wetlands, River Corridors, and other setbacks applicable to all development in a local zoning bylaw established by the municipality shall be maintained, unless upon written request of the person, consistent with the procedures found in Appendix A, the Secretary has approved other reasonable setbacks for the specific farm structure being constructed. The Secretary may authorize the siting of a waste storage facility within 200 feet of a surface water or private water supply if the site is the best available site on the farm for the purposes of protecting ground water quality or surface water quality and the waste storage facility is designed by a licensed engineer to meet USDA NRCS standards and specifications or an equivalent standard. If an equivalent design standard is used, the design and construction shall be certified by the Secretary, or a licensed professional engineer operating within the scope of his or her expertise.

#### Section 11. Site-Specific On-Farm Conservation Practices

When the Secretary determines, after inspection of a farm, that a person engaged in farming is complying with the Required Agricultural Practices Rule but there still exists the potential for agricultural wastes to enter the waters of the State, the Secretary shall require the person to implement additional, site-specific, on-farm conservation practices designed to prevent agricultural wastes from entering the waters of the State. When requiring implementation of a conservation practice, the Secretary shall inform the person engaged in farming of the resources available to assist the person in implementing the conservation practices to comply with the requirements of this rule.

#### ANR Requirements for Farms in Floodable Areas:

**Flood Hazard Area and River Corridor General Permit:** An ANR General Permit for activities exempt from municipal regulation in 44 Flood Hazard Areas and River Corridors may be required. The primary purpose for the General Permit is to fully implement the Vermont Flood Hazard Area & River Corridor Rule (effective 03/01/2015) which requires the Agency to regulate activities exempt from municipal regulation in Flood Hazard Areas and River Corridors. These activities include state-owned and operated institutions and facilities, required agricultural and silvicultural practices, and power generating and transmission facilities regulated under 30 V.S.A. §§ 248 and 248a. More information can be obtained by calling (802) 828-1535.

**Alteration of Streams:** Stream alteration permits regulate activities that take place in or along streams. The permit program is intended to prevent the creation of flood hazards, protect against damage to aquatic life, and protect the rights of neighboring landowners. The types of activities that are regulated include streambank stabilization, road improvements that encroach on streams, bridge construction or repair, and utility crossings under streambeds. More information regarding stream alteration and permitting requirements can be obtained by calling the River Management Division at (802) 828-1535.

**Water Withdrawal and Irrigation:** Farm operations utilizing surface waters for irrigation purposes are advised that water withdrawals above a de minimis rate are required to obtain a permit from the Department of Environmental Conservation consistent with the Procedure for Determining Acceptable Minimum Stream Flows. More information regarding water withdrawals for irrigation purposes and permitting requirements can be obtained by calling the Watershed Management Division at (802) 828-1535.