Spill Response

What is a spill? : A spill is any release that has the potential to threaten ground or surface water.

1. A spill is site specific, 3,000 gallons applied on an acre of cropland is not the same as
   3,000 gallons applied a few feet from a stream.

2. All employees (from tractor driver to welder (and even office secretary or spouse, as they
   may be the first person a newer employee reaches when a problem occurs)) should
   know what to do when a spill happens.
   a. The best preparation is to have a spill response plan.
   b. Plans should be simple enough to remember, but complete enough to do the job.
   c. Plans should include a listing of relevant cell phone numbers.

Spill Response Steps: (Your employer may have a specific set that should be followed)

1. Stop application and turn off the pumps
   a. Other crew members should stop and help, if needed.

2. Determine the best way to stop the spill and take action
   a. For drag lines, clamp the hose or park the tractor on the hose, turn off any valves
   b. If manure is moving off site, work up ground ahead of the flow. If in a road ditch,
      ravine or stream; create a set of earthen dams.

3. Begin the cleanup
   a. If in a ditch, pump out the manure and remove solids. You may need to flush with
      approximately 3 times as much water as the volume of the spill--Whatever it takes to
      remove manure solids.
   b. Land apply all spilled manure in a proper way
   c. Remove soil that is soaked with manure and land apply.

4. Call the DNR or appropriate agency
   a. Spill reporting is mandatory by state law.
   b. DNR Spill response hotline (1-800-943-0003)
   c. County DNR warden, DNR Animal Waste Specialists
   d. County Sheriff’s office (911) acceptable. Ask them to notify the DNR warden on duty.

   NOTE: Depending on the situation, step 3 and 4 may be reversed.

5. Fill out documentation and paperwork (protect yourself)
   a. What you did when, who you called and when, etc
   b. Take pictures with a disposable camera.
Nutrient Management

Nutrient management plans are written to:
1. Ensure adequate nutrients for the crop to be grown
2. Reduce the potential for surface and groundwater contamination

What's in a Plan?
A nutrient management plan is an annual plan that contains the crop rotation, soils information, and nutrient needs for each field. The two items you need from the plan are:

1. Manure rates to be applied to each field.
2. Maps showing the type and size of setbacks, field boundaries, and the reason for the restriction (developed by either the agronomist or the NRCS or LCD agency staff)

If you do not get a copy of the farm's nutrient management plan you should remember the following 590 application restrictions anyway.

a. Areas where manure should not be applied any time of year are:
   - Do not apply in established concentrated flow channels (grassed waterways), sinkholes, surface water, non-harvested cropland or buffers
   - Do not apply within 50 feet of drinking water wells
   - No applications are allowed on saturated soils
   - Within 200' upslope of direct conduits to groundwater (wells, sinkholes, etc.) unless incorporated within 3 days.

b. Typical winter setbacks are:
   - 300 feet setback from perennial streams Surface Water Quality Management Area (SWQMA)
   - 1,000 feet setback from lake and ponds (SWQMA)
   - 200 feet setback from wells, sinkholes, fractured bedrock at the surface because nutrient applications must be incorporated within 72 hours
   - Do not apply on fields with slopes greater than 9% (12% if contoured) or to fields that have 1/3 or more of their acreage in waterways or concentrated flow
   - Do not exceed 7,000 gallons per acre where you can apply
c. For all nutrient applications on non-frozen soil within (SWQMA), use at least one of the following practices:
   - Install/maintain permanent vegetative buffers.
   - Maintain greater than 30% crop residue or vegetative cover on the soil surface after nutrient application.
   - Incorporate nutrients within 72 hours leaving adequate residue to meet tolerable soil losses.
   - Establish cover crops promptly following application.

When unincorporated liquid manure applications (less than 12% solids) occur, use Table 1 to determine maximum acceptable rates. No applications are allowed on saturated soils. Sequential applications may be made to meet the desired nutrient additions consistent with the nutrient management plan. Prior to subsequent applications soils shall be evaluated using Table 1 or wait a minimum of 7 days.

Table 1

<table>
<thead>
<tr>
<th>Surface Texture Class¹</th>
<th>Max Application Rate gal/acre</th>
<th>Allowable Soil Moisture Description for Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine clay, silty clay, silty clay loam, clay loam</td>
<td>3000 5000</td>
<td>&lt; 30%* Easily ribbons out between fingers, has a slick feel.</td>
</tr>
<tr>
<td>Medium sandy clay, sandy clay loam, loam, silt loam, silt</td>
<td>5000 7500</td>
<td>≥ 30%* Forms a ball, is very pliable, slicks readily with clay.</td>
</tr>
</tbody>
</table>
| Coarse loamy sand, sandy loam, sand, peat, and muck | 7000 10000 | |* Crop residue or vegetative cover on the soil surface after manure application.

Who’s required to have a plan?

Depending on the farm’s particular situation, implementing the plan may be voluntary or mandatory. Under existing DNR and DATCP rules, all farmers who mechanically apply manure or commercial fertilizer to cropland must have a nutrient management plan by 2008. Where Wisconsin law makes enforcement contingent on an offer of cost sharing, local governments can make an offer of cost share and require nutrient management. The cost-share offer must cover at least 70% of the farmer’s annual cost to implement nutrient management (90% if there is an economic hardship). The farmer may accept an alternative flat payment of $7 per acre per year for a four year period. Additional cost sharing is not required by a local government for farmers to continue this practice.

You should expect the following farms to have a plan:
   - Farms over 1,000 animal units of livestock (WPDES permit)
   - Farms that have received cost sharing for nutrient management or manure storage
   - Farms under a local ordinance requiring a plan ([http://www.wimanuremgt.org](http://www.wimanuremgt.org) and next page)
   - Farms who voluntarily continue participation in the farmland preservation tax credit program
State law notes that farms in target areas (303d watersheds, Outstanding/Exceptional Resource Waters and wellhead protection zones) must have a plan in place by January 1, 2005. All other farms in the state must have a plan by January 1, 2008. This requirement can not be enforced unless the farmer either

1. Makes a major change to the operation
2. Is offered cost sharing for a minimum of 3 years.

Farms that have a plan in place (voluntary or required) by the target dates must maintain the plan on those acres permanently.
Conflict between Plan and Farmer-Requested Rate

Who can write and approve a nutrient management plan?
A qualified nutrient management planner must prepare or approve each nutrient management plan. Persons holding one of the following are presumptively qualified nutrient management planners:

1. Certified as crop consultant by the National Alliance of Independent Crop Consultants (NAICC)
2. Certified as crop advisor (CCA) by the American Society of Agronomy, Wisconsin Certified Crop Advisor Board
3. Certified as a professional agronomist (CPAg) by the American Society of Agronomy
4. Certified as a soil scientist by the Soil Science Society of America
5. A farmer is presumptively qualified to prepare their own nutrient management plan if the farmer has completed a DATCP-approved training course and the instructor approves the first annual plan within the preceding 4 years. WPDES permit farms and plans submitted as part of local livestock siting ordinances (under ATCP 51) are not allowed to write their own plans.

The proposed rule (January 2007) presumes a farmer complies with the nutrient management requirements of ATCP 50 if the nutrient management plan is prepared or approved by a qualified planner other than the farmer.

What if the farmer wants higher rates?
Your responsibility is to follow the written plan. If the farmer is requesting a higher rate, you should contact the person who wrote the plan. This removes the responsibility from you and places it with the trained individual (whom the farmer paid to make rate recommendations).

Rates are too high for soil conditions: As plans are often months before you arrive on site, they are not able to take into account weather factors (field freezes before your arrival, early snow, two weeks of rain, etc). As professional manure applicators you have the authority to apply less than what the plan shows. Applications can also be split (½ today, ½ three days from now) if in your judgment, the recommended rate is too high for field conditions. You can always call the plan writer for their advice on the situation as well.

WPDES permitted farms however are not allowed the 20% adjustment.
WPDES Permitted Farms (≥ 1,000 animal units)

- Size Requirements:
  - 700 milking head dairy
  - 1,000 beef steers
  - 2,500 swine (55 lbs to market weight)
  - 10,000 swine (<55 lbs)
  - 100,000 chickens (layers)

- Must maintain daily records of manure land application for 5 years.

- Fields that receive manure must meet tolerable soil loss or less.

- Professional nutrient applicators must be aware of specific conditions contained in WPDES permits for a given operation. (these vary from permit to permit and are revised every 5 years)

- Professional nutrient applicators can be held responsible in instances of negligent application on a case-by-case base.

- Manure spills must be reported to the DNR immediately.

- WPDES requires documentation of periodical inspections and calibration of application equipment.

- WPDES permitted farms in the near future will be required to follow new EPA regulations. While these regulations are currently being updated for Wisconsin, they will likely include:
  
  1. 100 foot set back or 35 foot vegetated buffer from navigable water (even for injected manure). Different practices in lieu the 100 foot setback may be allowed, but would need to spelled out in the operation’s permit or nutrient management plan.
  
  2. Assessment and control of nitrogen and phosphorous delivery to navigable waters.
  
  3. Increased restrictions on the application of manure on frozen or snow-covered ground.
  
  4. Record weather 24 hours before and after application

- WPDES permitted farms must specify methods for sampling and analyzing manure.

- Process wastewaters (including milking center wastes, feed storage leachate, some digester wastes), may need to meet different land applications requirements then manure

- Chemicals may not be disposed of in manure storage or containment structures
Regulations Summary

- It is illegal for manure to run off the intended application site
- Manure spills must be reported immediately.
- Some farms are under tighter regulations than others

- WPDES Farms (>1,000 animal units)
  - These farms need a permit from DNR. Each permit spells out how manure is to be applied on their acres.

- Farms under nutrient management plans
  - Manure rates can not exceed pre-determined levels.
  - Field specific applications based on soil tests
  - Rates are lowest the year after alfalfa, highest on continuous corn.
  - Regulating authority may be county, township, or USDA.
  - Setbacks required year-round
    - No manure within 50 feet of wells
    - Incorporation required within 200 ft upslope of wells, sinkholes, tile inlets and other direct conduits to groundwater
    - 300 ft upslope of a stream/1000 ft of a lake or pond, Rates are limited based on soil moisture content. Also, ONE of the following must be present:
      - Permanent buffer
      - 30% crop residue
      - Fall cover crop after fall application
      - Incorporate/inject, BUT must meet conservation plan crop residue requirements
  - Setbacks required WHEN FROZEN or SNOW COVERED
    - No manure 300 ft upslope of a stream/1000 ft of a lake or pond
    - No manure on slopes >9% (12% if contour farmed)
    - Rates limited to next crop’s P removal or 7,000 gal, whichever is lower

Contact Information:
- County Conservation department: http://wlwca.org/Pages/LCDWeb.html
- DNR animal waste specialists: http://www.dnr.state.wi.us/org/water/wm/nps/ag/agcontacts.htm
- DNR local wardens: http://dnr.wi.gov/org/caer/cs/ServiceCenter/locations.htm
- DATCP Nutrient Management program: http://www.datcp.state.wi.us/arm/agriculture/land-water/conservation/nutrient-mngmt/planning.jsp

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