

WELLHEAD PROTECTION ORDINANCE

FOR NORWAY, MAINE

July, 1993

The purpose of this Ordinance is to provide protection for the municipal water supply for Norway. Specifically, the Norway Water District is served by a well located in the northern part of the Town of Oxford, adjacent to Norway. The wellhead protection area, the area from which Norway's municipal well draws its water, is centered around the well in Oxford, but includes a small portion of the Town of Norway (see map). The well-being of the citizens of Norway, particularly those who live within the Water District, and the viability of economic development within the area, depend upon a safe, reliable drinking water supply. The goal of this Ordinance is to help insure the safety and reliability of the current Norway municipal well by seeking to manage new and existing land uses or other activities which might pose a potential threat to the Norway well. A recent gasoline leak at a business located within the wellhead protection zone of the Norway well necessitated Norway's purchasing water from Paris for 16 months, costing the taxpayers of Maine over \$500,000, and illustrating the vulnerability of the Norway well if preventative measures are not taken. This Ordinance represents just such a protective measure.

The Towns of Paris, Oxford and Norway are closely linked economically and by the fact that the Little Androscoggin River Valley Aquifer runs through all three towns. Each Town has a municipal well in this aquifer, and Norway's well has a wellhead protection area which includes all three Towns. Thus, to protect Norway's water supply and those of the other two towns, cooperation among the three towns is essential. The present Ordinance is the result of such a cooperative effort, and has been developed by a Committee of citizens and town officials for each of the three towns, with consulting assistance, under the funding of a Federal grant.

The present Ordinance would regulate just a small portion of land which lies in the wellhead protection area for the Norway well (see map.) Since the Town of Norway does not have an overall zoning ordinance, the present Ordinance is meant to stand alone, and draws largely on existing ordinances and regulations, including Norway's site plan review ordinance, standard appeal and variance procedures, and various already existing State of Maine laws and regulations. This Ordinance is consistent with Norway's Comprehensive Plan (1988) which states: "...it is the policy of the Town to protect and preserve groundwater resources from activities which could limit their drinking quality or quantity." State Law (Title 22) gives towns broad powers to protect drinking water supplies, and enables Norway to consider the present Ordinance without a broader zoning or land use planning ordinance. Impetus for wellhead protection at the Federal and State levels resulted from 1986 amendments to the Federal Safe Drinking Water Act.

A. PURPOSE

The purpose of the Wellhead Protection Ordinance is to protect the public municipal water supply for the Town of Norway from land uses which pose a threat to the quality and quantity of the groundwater being extracted from the Norway Municipal Well(s).

B. APPLICABILITY

This Ordinance applies to all land uses and activities located or proposed within the area delineated as the Wellhead Protection Area in Norway on a map available for inspection at the office of the Norway Water District and as defined in the definitions section of this Ordinance. The Wellhead Protection Area consists of WHPA 1, WHPA 2, and WHPA 3, described below, for the Norway municipal well(s).

C. ESTABLISHMENT OF WELLHEAD PROTECTION AREAS 1, 2, AND 3

For wells serving more than five hundred (500) persons and located in a unconsolidated (sand and gravel) aquifers, the Wellhead Protection Area (WHPA) consists of three (3) areas (WHPA 1, WHPA 2, and WHPA 3) which are listed and their hydrologic characteristics described below:

1. WHPA 1

WHPA 1 extends from the wellhead to the 200-day groundwater Time of Travel boundary.

2. WHPA 2

WHPA 2 extends from the outer boundary of WHPA 1 to the 1000-day Time of Travel boundary.

3. WHPA 3

WHPA 3 extends from the outer boundary of WHPA 2 to the watershed's groundwater divide or Zone of Contribution if delineated based on technical criteria more stringent than watershed determination.

D. LAND USES

1a. Within the Wellhead Protection Area, certain new land uses that may have the potential to contaminate groundwater are either permitted, not permitted, or conditionally permitted. The latter category of land uses/activities are permitted subject to a Site Plan Review and use of Best Management Practices (see Sections F, G and I). The following Wellhead Protection Area Table lists land uses and potential sources of contamination and indicates whether new instances of such uses are permitted, not permitted, or conditionally permitted.

1b. Expansion of up to 25% of land uses or activities previously existing at the time of adoption of the Ordinance, and which do not conform to the Wellhead Protection Area Table is allowed, provided that:

- Best Management Practices (Section 1 of this Ordinance) are followed
- The addition or expansion does not increase the non-conformity of the use or activity;
- The expansion of the non-conforming use may not be for the purpose of changing that use to another non-conforming use unless the applicant can demonstrate that the new use poses a lesser threat to groundwater than the current use.

Expansion of greater than 25% of such existing uses is treated as a new use, i.e., it is permitted, prohibited or subject to Site Plan Review as per the Wellhead Protection Area Table.

1c. Many of the “Applicable Land Uses or Activities” in the Wellhead Protection Table are defined in Section K of this Ordinance. Where a certain volume, weight or other quantity or a particular substance is involved, but not defined in Section K, the minimum quantity regulated by existing local, State or Federal regulations shall apply.

1d. Household activities which are normal in volume and scope are exempt from this Ordinance.

2. KEY:

y = permitted

n = not permitted

SP = permitted subject to Site Plan Review and use of Best Management Practices.

WELLHEAD PROTECTION AREA TABLE

Applicable Land Uses or Activities

Uses	WHPA 1	WHPA 2	WHPA 3
1. Use, storage, or manufacture of hazardous materials or waste. (1)	n	n	SP
2. Use or storage of hazardous materials or waste – small quantities. (2)	n (3)	n (3)	SP
3. Use, storage or manufacture of petroleum products	n	n (4)	SP
4. Storage, handling and processing of solid waste, including sludge and ash utilization.	n	SP	SP
5. Disposal of solid waste, sludge and ash	n	n	n
6. Storage, maintenance, and refueling of commercial vehicles and equipment.	n	SP	SP
7. Discharge of commercial or industrial wastewater or washwater to a septic system. (6)	n	n	SP
8. Bulk storage of leachable material, including concrete, asphalt, tar, coal and salt.	n	n	SP (7)
9. Discharge and impoundment of wastewater and stormwater	n	n (8)	SP (7)
10. Transportation and utility corridors	n (9)	SP	SP
11. Demolition of uses in this table	SP	SP	SP
12. Sand and gravel mining; other mining	SP	SP	SP
13. Wells, abandoned or new (10)	SP (10)	SP (10)	y (10)
14. Parking lots (11)	n	SP	y

(1) Refers to large quantities used, stored, or manufactured, e.g., 1 Kg/month (2.2 lb/month) or greater.

(2) Less than 1 Kg/month (2.2 lb/month).

(3) Allowed only if facility is connected to a municipal sewer system and hazardous materials are legally stored and disposed of.

(4) Storage of petroleum products in underground storage tanks is allowed in WHPA 2 only if tanks are dual-walled, with alarm systems as per State of Maine underground storage tank regulations.

(5) Storage of a vehicle is defined as storage without use for more than thirty (30) consecutive days.

(6) Includes any discharge which could enter the ground.

(7) Subject to Best Management Practices. Specifically salt and sand/salt mixtures must be covered so that protection cannot reach them during storage or loading.

(8) Stormwater, but not wastewater, discharges and impoundments in WHPA 2 may be considered, subject to Site Plan Review and Best Management Practices.

(9) Municipal water and sewer lines are allowed if constructed and tested according to all regulations and codes, including Norway's Sewer Ordinance.

(10) Abandoned wells must be filled with inert, compact natural soil material or as stipulated by National Groundwater Association regulations. Wells must be abandoned according to such regulations, and all piping must be removed. New wells must be constructed and secured so that contamination cannot enter groundwater via either the inside or the outside of the well. Wells must be constructed according to State of Maine regulations. Properly constructed new wells with withdrawals of less than 1000 gallons per day are exempt from this regulation. All properly constructed new wells are allowed in WHPA 3.

(11) Lots designed or used for the short or long-term parking of vehicles, when such lots are 1/2 acre in size or greater. (See also Section E, Part 2.)

E. LOT SPECIFICATION

1. The lot size shall be as required by other existing Norway Ordinances, including Norway's Subdivision Regulation, or State of Maine laws and regulations.
2. The percentage of the lot which can be covered by impermeable surfaces, including parking areas, shall be limited as presented in the following table:

WHPA	Maximum Lot Coverage
1	30.00%
2	50.00%
3	50.00%

F. APPLICATION REQUIREMENTS FOR SITE PLAN REVIEW

For new activities located in WHPA 1, WHPA 2, or WHPA 3 and regulated by the above “Applicable Land Uses or Activities” Table, the applicant for a Site Plan Review has the burden of proof that the proposed activity will not adversely affect groundwater. All applications shall be prepared and considered as per Norway's existing Site Plan Review Ordinance and shall include written information and plan (map) information. In addition, certain land uses or activities may require Site Plan Reviews with additional information as described in Part G of this Ordinance and/or as required by the Planning Board. (See Part G.)

G. ADDITIONAL APPLICATION REQUIREMENTS FOR SITE PLAN REVIEW FOR CERTAIN ACTIVITIES WITHIN THE WELLHEAD PROTECTION AREA

Sections G. 1 - G. 5 present additional information needed for applications for site plan review for certain types of activities within the wellhead protection areas (WHPA 1, WHPA 2, WHPA 3). These Sections include categories which apply to the land uses (“Applicable Land Uses or Activities” Table) in Section D. Uses are grouped by category. More than one of the categories may apply to a particular use. (Applicants should request assistance from the Planning Board should there be questions as to which categories apply.) In addition to standard information required under Norway's Site Plan Review Ordinance (See Part F, Wellhead Protection Ordinance), the Planning Board has the authority to request that the applicant include the following items:

- On-site sewage disposal report from licensed site evaluation or information from local sewer district indicating capacity;
- Special Reports, if relevant;
 - soils
 - engineering design

- erosion and sediment control plan
 - stormwater management plan
 - long-term maintenance provisions
 - hydrogeologic assessment
- Add existing water bodies, water courses, wetlands, and other significant natural features to plan (map)
 - Add WHPA boundaries to plan (map)
 - Add location and design of existing and proposed culverts, drains, and other stormwater control structures to plan (map)
 - Add location and design of proposed sewer and water lines to plan (map)
 - Add engineering plans, profiles and cross-sections
 - Add locations, dimensions and profiles of underground utilities to plan (map)

The level of effort and detail requested by the Planning Board for such additional submissions shall depend upon the size and potential impact to groundwater of the proposed land use or activity.

1. Construction/Demolition Activity (This category applies to the majority of applications. Even though construction activity is generally permitted, the Board needs additional information for construction or demolition of the uses listed.) On “Applicable Land Uses or Activities” table, these activities include #6 and #11. Additional land uses may also fall under this category.

- Provisions for solid waste handling, storage and disposal
- Provisions for sanitary facility
- a report which provides:
 - information concerning storage and disposal of waste materials
 - provisions for fuel storage and refueling
 - provisions for storage of any liquid chemicals used in the construction process
 - provisions for storage of any bulk chemicals used in the construction process

2. Stormwater Management (This category included item #9 from the table in Part D, but may also be associated with several additional items on the table or with activities not included on the table.)

- Engineering calculations and plans which provide:
 - design and capacity of subsurface collection facilities
 - design of dry wells, storage, retention or detention facilities and other surface water impoundments
 - stormwater system outlets
- delineation of post-development drainage areas
- plans for ice control, use of road salt, and snow removal

3. Other Impoundments

- Engineering calculations and plans which provide:
 - design and capacity of subsurface collection facilities
 - design of dry wells, storage, retention or detention facilities and other surface water impoundments
 - stormwater system outlets
- delineation of post development drainage areas
- plans for ice control, use of road salt, and snow removal
- description of source of water, use of water and final water quality (water quality parameters to be specified by applicant)
- amount of consumptive water usefulness

4. Hazardous Materials and Other Chemicals: Handling and Storage

(This section pertains to any commercial site where chemical compounds are handled and/or stored.) These activities may include #1, 2, 4, and 8 from the table in Part D and others.

- Type and volume of chemical compounds handled and/or stored.
- Site plan showing all storage, handling and use areas for raw materials and wastes.
- For outside areas, details to contain spills, including:
 - drainage and contour information to prevent the flow of runoff from entering the storage area and which keep leaks or spills for flowing off site.
 - provisions to collect chemicals should they enter the drainage system
 - provisions to segregate underground systems to insure that there are no cross connections.
 - statement of emergency measures which can be implemented for surface drainage systems.
- For inside areas, details to contain spills including the:
 - design of dikes around rooms;
 - the location of floor drains and floor drain outlets;
 - the location of separators, holding tanks and/or drain outlets;
 - the specific location and design of underground storage structures;
 - the location and design of piping systems for wash waters and other waste liquids to insure that inappropriate wastes are discharged and that wastes are discharged to appropriate sewers or treatment systems.
- A spill prevention and control and countermeasure (SPCC) plan, detailing:
 - materials and equipment to be available;
 - a training plan and schedule;
 - a list of contacts (EPA/DEP/local fire officials) with phone numbers;
 - an inspection schedule
- A report by an industrial engineer or other competent professional detailing:

- steps which have been taken to reduce the use of hazardous materials;
- actions which have been taken to control the amount of wastes generated;
- any reports to provide information on the design theory or methodology for the above features.

5. Petroleum Handling and Storage

This section pertains to sites where petroleum products (fuels, solvents and lubricants) are handled in bulk quantities of over 1,000 gallons.) These activities may include #3, 6, and others from the table in Part D. For the use of petroleum products for machinery or equipment maintenance, or for quantities stored in smaller receptacles such as 55 gallon drums, reference should be made to the Chemical Storage and Handling category.

- Site plan showing storage, handling and use areas for all petroleum products;
- Provisions for heating oil storage;
- For outside areas, details which provide drainage and contour information to prevent the flow of runoff from entering the storage area and to prevent leaks or spills from flowing into surface waters or to areas where they could leach into groundwater;
- Provisions to contain and clean up petroleum products should they enter the drainage system;
 - separators for underground piping systems;
 - emergency measures which can be implemented for open drainage systems;
- Exact location of tanks, piping and separators so that inspection, detection, clean-up or other emergency measures can be accomplished in a timely efficient manner;
- A SPCC plan detailing:
 - materials and equipment to be available;
 - a training plan and schedule;
 - a list of contacts (local fire officials, DEP) with phone numbers; and
 - the inventory recording method and an inspection schedule.

6. Sewage Disposal and Subsurface Injection

This section pertains to subsurface injection activities as defined by State regulations and including septic systems and other on-site sewage disposal. These may include Item #5, 7, and others from the Table in Section D.

- Provisions for sewage disposal, including:
 - soil evaluator's report and septic system design;
 - in WHPA 1 and WHPA 2, for sites/uses producing more than 1,000 gallons per day of sewage, a hydrogeologic analysis of nitrate concentrations at the property line;
 - in WHPA 3, for sites/uses producing more than 2,000 gallons per day of sewage, a hydrogeologic analysis of nitrate concentrations at the property line;
 - in WHPA 1 and WHPA 2, evaluation of public/private sewer system capacity and integrity of sewer lines serving the development by a Registered Engineer or the sewer system superintendent;

- Provisions and designs for all floor drains, grease traps, and holding tanks.

7. Other Water Supplies

This Section pertains to all surface water or groundwater supplies other than domestic wells. This Section may apply to item #13 from Section D. Other water uses (except domestic) may also be included in this category.

- Hydrogeologic report identical to that required for State approval of new water supply.

8. Installation of Monitoring Wells

This Section pertains to all monitoring or observation wells. This Section may apply to #13 and others from Section D. Other activities may also include monitoring wells.

- Location and construction specifications;
- Intended purpose;
- Sampling schedule;
- Provisions for informing appropriate Town body of sampling results.

H. CONTROL OF EXISTING CONTAMINANT THREATS

1. The Code Enforcement Officer shall have the right to enter, during reasonable hours after reasonable notice, and inspect all premises which carry on the uses listed in the preceding table (Section D) and requiring site review on premises located in one of the Wellhead Protection Areas (WHPA 1, WHPA 2, or WHPA 3). The Code Enforcement Officer may be accompanied by a representative of the Water District or Water Department including a consultant employed by them. If the Code Enforcement Officer is denied the right to enter and inspect the premises, the Code Enforcement Officer may seek an administrative warrant for entry and inspection.

Further, the Code Enforcement Officer shall have the right, upon 24 hour notice, to conduct such testing as the municipality and water district may deem appropriate to determine that Management Practices and groundwater pollution control devices are in good condition and are working properly. Such testing shall be at the owner's expense. Also, if contamination is present, the owner shall reimburse the municipality or water district for the initial testing.

2. When the municipality or district can clearly show that groundwater monitoring in the wellhead protection area will serve to protect the public water supply from existing or potential threats from uses requiring a Site Plan Review in the Table, (Section D), the municipality and the water district shall have the right to install groundwater monitoring wells on premises within the wellhead protection areas which carry on the land uses listed. The municipality and water district shall further maintain the right to sample such wells.

Such well installation and sampling shall be at the municipality's or water district's expense. Should initial testing reveal groundwater contamination, subsequent testing shall be at the owner's expense. Also, if contamination is present, the owner shall reimburse the municipality or water district for the well installation, the initial testing, and all other associated expenses.

3. Facilities within the wellhead protection districts which conduct activities listed in the Table

(Section D) which require a Site Plan Review, shall incorporate the Best Management Practices (BMPs) required in Section I of this Ordinance, according to the schedule listed in Section I. For each BMP listed in Section I, a time for implementation is given. This time is generally a certain number of months or years after the adoption of this Ordinance.

I. BEST MANAGEMENT PRACTICES FOR WELLHEAD PROTECTION AREA

1. All development located within the Wellhead Protection Area (WHPA 1, 2, and 3) shall comply with the Best Management Practices contained in Section I, Parts 4 – 11. Best Management Practices, as applied in the State of Maine, are management practices which will minimize the impacts of the activity on water and quantity. In some instances, there may be more than one management practice which could be chosen to accomplish the same result. In other instances, depending on the site location and on-site conditions, more than one management practice may be needed to mitigate the problem fully.

2. The Planning Board may adopt, by reference, as a part of this section, additional Best Management Practices which have been published by or in conjunction with the Maine Department of Environmental Protection.

In so doing, the Planning Board shall hold a public hearing which shall be posted in the Town Office and advertised in a paper of general circulation at least twice with the first notice being at least seven days prior to the date of the hearing.

3. For existing facilities, see Section H3. For new facilities within the Wellhead Protection Area, the BMPs shall be put into effect immediately.

4. Chemicals, petroleum and waste handling on construction sites:

a. The collection and disposal of petroleum products, chemicals and wastes used in construction shall conform to the following:

(1). Collect and store in closed, clearly marked water-tight containers, which are on raised pallets and protected from the weather.

Implement within:

upon adoption

(2). Fertilizers and landscaping chemicals such as herbicides and pesticides shall be applied following appropriate Best Management Practices developed by the Maine Department of Agriculture in conjunction with the Maine Department of Environmental Protection.

Implement within:

upon adoption

5. Storm Water Runoff/Snow and Ice Control

a. Drainage systems, including detention basins, drainage ways, and storm sewer systems, shall be maintained in order to insure that they function properly, including cleaning storm drains twice a year.

Implement within:

6 months

b. Chemicals and wastes shall be stored in such a manner to prevent rainfall from

contacting them.

Implement within 1 year

c. Runoff from parking lots should be diverted to storm water drains if present.

Implement within next parking lot reconstruction

d. Reduced amounts of sand/salt should be used.

Implement within 1 year

e. Snow melt from parking lots should be diverted to storm water drains if present.

Implement within 2 years

f. Parking lots should be maintained on a yearly basis, including cleaning catch basins and sweeping the parking lots on a semi-annual basis. Cracks should be sealed on a yearly basis.

Implement within upon adoption

6. Industrial and Maintenance Operations

a. A plan detailing the reuse, recycling, or proper disposal of waste chemicals shall be maintained, and updated as needed. Provisions shall be made to implement the plan.

Implement within 1 year

b. Buildings, rooms and areas where potential pollutants are used, handled or stored shall be designed to contain spills or leaks. Specifically, floor drains shall not be used except as required by fire regulations. A waterproof dike shall be placed around areas where potential pollutants are used, handled or stored to contain accidental spills. The dike shall have an equivalent volume to the amount of material stored or used in the room.

Implement within 2 years

c. Spill/leakage prevention and detection programs shall be maintained and updated.

1. Plans shall insure the regular collection and transport of chemicals;

2. Plans shall provide for inspection of containers and storage areas on a regular basis.

Implement within 1 year

d. A spill clean-up plan shall be maintained and updated annually.
The plan shall:

1. Insure adequate materials and equipment are available;

2. Insure that personnel are trained;

3. Insure that the local fire department is knowledgeable of clean-up procedures.

Implement within 1 year

e. Wash waters and other dilute wastes shall be treated in accordance with State Law.

1. Wastes shall be discharged to sewer systems where possible;

2. Grease traps and oil separators shall be installed where necessary.

Implement within 1 year

7. Septic/Sewage Disposal

a. Sewer/septic systems and on-site sewage disposal shall be designed by competent professionals using sound engineering practices, per existing ordinances or plumbing code, whichever is more stringent.

Implement within upon system replacement

b. Construction of sewers and septic systems shall be carefully inspected to insure proper installation per existing ordinances or plumbing code, whichever is more stringent.

Implement within upon system replacement

c. Sewer systems shall be tested for leakage, according to State standards, Norway's Sewer Ordinance, or district regulation, whichever is more stringent.

Implement within 2 years

d. Provisions shall be made to maintain sewer and septic systems.

Implement within upon adoption

e. Sewers and drainage systems shall be designed to insure that storm water does not enter sanitary sewers.

Implement within upon system reconstruction

f. For cluster systems, 1,000 gallon septic tank capacity shall be provided for each 300 gallons of flow. Design flows for leachfields shall be less than 2,500 gallons per day.

Implement within 10 years, or upon replacement, whichever is earlier

g. Chemicals and industrial wastes shall not be discharged to septic systems.

Implement within upon adoption

h. Floor drains and storm water drains shall not be discharged to septic systems.

Implement within 2 years

8. Waste Disposal/Handling Facilities

a. Inert Fill

1. For WHPA 1 and WHPA 2, disposal areas shall be set back 75 feet from wetlands as defined in the Natural Resources Protection Act (NRPA) and located a minimum of 2 feet above the seasonal high groundwater table.

Implement within 1 year

2. For wastes other than concrete, stone and brick, the Board shall be provided documentation from a U.S. EPA-Certified laboratory that wastes are inert.

Implement within 1 year

b. Transfer Station/Recycling Facilities

1. All facilities and storage areas shall be located such as to have a minimum of 5 feet above the seasonal high groundwater table.

Implement within 1 year

2. Sanitary wastes shall be disposed into a public sewer or in accordance with State Plumbing Code.

Implement within upon adoption

3. If water clean-up of facilities is used, the water shall be discharged to a public sanitary sewer. If no public sanitary sewer is available, dry clean-up procedures shall be used.

Implement within upon adoption

4. Gravel, asphalt, or concrete pads, and steel or aluminum containers shall be used for storage facilities for white goods and tires.

Implement within upon adoption

5. Facilities shall not be located in a 100 year floodplain.

Implement within upon adoption

6. An Operating Manual shall insure that only non-hazardous municipal solid waste is accepted.

Implement within upon adoption

7. For Recycling Facilities, an Operating Manual shall insure that only clean, marketable recyclables are collected.

Implement within upon adoption

8. For Recycling Facilities, storage of residuals shall be accomplished to prevent spillage and leaking.

Implement within upon adoption

c. Municipal, Commercial, Industrial and other special wastes

1. All handling, storage and transfer shall comply with Department of Environmental Protection rules.

Implement within upon adoption

d. Hazardous Wastes shall be limited to small quantity generators, as defined by the State Hazardous Waste Rules.

Implement within 10 years

e. Junkyards/Metal Processing

1. Fluids shall be removed in a secure area and stored for appropriate disposal, as per State Hazardous Waste Rules.

Implement within **upon adoption**

2. Fluids shall be disposed in accordance with state and federal laws.

Implement within **upon adoption**

3. Records shall be maintained to indicate the quantities of fluids handled.

Implement within **upon adoption**

9. Chemical and Petroleum Handling and Storage

a. Nonhazardous chemicals shall be substituted for hazardous varieties whenever possible.

Implement within **2 years**

b. A detailed inventory shall be maintained.

Implement within **upon adoption**

c. Provisions shall be made to clean up all spills immediately with an absorbent material or other methods and dispose of them properly.

Implement within **upon adoption**

d. Hazardous materials shall be stored in secure, corrosion resistant containers.

Implement within **upon adoption**

e. Bulk storage shall comply with all State laws and regulations or within the provisions below, whichever is more stringent.

Implement within **upon adoption**

f. Bulk storage shall be in above-ground, corrosion resistant tanks in WHPA 1 or WHPA 2. Additionally, where feasible, above-ground storage should also be used in WHPA 3. The following provisions shall be complied with:

1. A diked area shall be provided around tanks to contain spills. The volume of diked area shall equal 150% of the volume of product stored.

2. A roof shall be provided over containment areas to prevent collection of rainwater.

3. Drains shall not be installed in containment areas.

Implement within **10 years**

g. If underground storage is necessary in WHPA 3, corrosion resistant double walled tanks with alarm systems shall be provided and records shall be kept. The system including piping shall be tested prior to use. Underground piping and transmission lines

shall be inspected and tested upon installation and on an annual basis, thereafter.

Implement within **10 years, or upon replacement, whichever is sooner**

h. All floors shall be concrete or an impermeable, hardened material.

Implement within **10 years**

i. In WHPA 1 and WHPA 2, non-bulk chemicals shall be stored inside. Such storage areas shall comply with the following:

1. floor drains shall not be used in WHPA 1 and WHPA 2 and shall only be used in WHPA 3 when required by fire regulations.

2. storage and handling areas shall have waterproof dikes around perimeter so as to contain spills.

Implement within **10 years**

j. Spill and leak detection programs shall be maintained and updated annually.

Implement within **upon adoption**

k. If floor drains are required by fire regulations, they shall be discharged to a holding tank. Tanks shall be pumped by a licensed oil or hazardous waste hauler, as appropriate. Tanks shall be equipped with gauges to determine used capacity.

Implement within **upon adoption**

l. Tanks shall be equipped with automatic shutoffs or high level alarms.

Implement within **5 years**

m. Oil and water separators shall not be used to remove dissolved compounds or oil and greases which had been subjected to detergents.

Implement within **5 years**

n. In WHPA 1 and WHPA 2, loading areas shall be covered to prevent the mixing of storm water and spilled chemicals. Concrete or other impermeable pads shall be provided under transfer and handling areas.

Implement within **5 years**

o. Procedures shall be established to catch and store chemicals spilled at loading docks and other transfer areas.

Implement within **upon adoption**

p. Provisions shall be made to periodically inspect and test tanks and lines for leaks.

Implement within **1 year**

q. The facility and equipment shall be designed to:

1. prevent tank overflows; and

2. prevent line breakage due to collision.

Implement within **upon adoption**

r. Provisions shall be made to have:

1. emergency diking materials available;
2. emergency spill cleanup materials available.

Implement within **upon adoption**

s. Exterior transfer and handling areas shall be sloped as to prevent runoff from other areas from entering the handling area, but to contain small quantities of spilled product

Implement within **5 years**

t. Residential storage tanks shall be located in cellars or on a concrete slab above-ground if outside.

10. Mining, Including Sand and Gravel

a. Limit depth of excavation

1. In WHPA 1 and WHPA 2, excavation shall be limited to 5 feet above the seasonal high water table.

Implement within **upon adoption**

2. In WHPA 3, if excavation is proposed such that there will be less than 5 feet separation between excavation limits and the groundwater table, a hydrogeologic investigation at the owner's expense must be done to assess the potential adverse impact including potential contamination and reduction in recharge of this proposed excavation.

Implement within **2 years**

3. If water supply wells are present within 500 feet of the proposed excavation, groundwater monitoring wells shall be installed at the owner's expense.

Implement within **2 years**

b. If dust control is needed for haul roads, water shall be used. Salting and oiling of roads is prohibited.

Implement within **upon adoption**

c. Petroleum Storage

1. WHPA 1 and WHPA 2, petroleum products shall not be stored in the pit. Refueling shall not occur within the pit unless the refueling occurs on an impervious surface with a berm sufficient to contain a spill.

Implement within **upon adoption**

2. In WHPA 3, if petroleum storage is proposed, provide above ground fully contained storage and refueling area. Provisions must be made for rain falling in the containment area. A roof is preferable. For large operations, a covered,

impermeable refueling/maintenance area shall be provided.

Implement within 2 years

3. A spill prevention plan shall be maintained and updated.

Implement within upon adoption

4. A reclamation plan shall be provided, maintained and used.

Implement within upon adoption

11. Intensive Open Space Uses (These provisions shall apply to WHPA 1 and WHPA 2 only).

- a. Soil tests shall be used to determine proper amount of nutrients and limestone (pH adjustment) to be applied.
- b. Nutrients shall be applied uniformly and only at levels required.
- c. Split fertilizer applications should be used for new planting, where possible.
- d. A slow release form of fertilizer should be used, where possible.
- e. Nutrients shall not be applied to very shallow soils.
- f. Chemical fertilizer application equipment shall be calibrated.
- g. Irrigation shall be scheduled to minimize leaching potential.
- h. Limit applications of nitrogen fertilizers to the spring or fall (prior to June 5 or after August 15.)
- i. Nutrients shall not be applied during winter months when ground is frozen or snow covered.
- j. Fertilizers and manure shall be stored in properly located and constructed facilities.
- k. All federal and state laws regulating pesticides and herbicides shall be followed.
- l. Material safety data sheets shall be kept accessible.
- m. Application of fertilizers and pesticides shall be accomplished by certified applicators.
- n. Secure, safe storage shall be provided for used pesticide containers and disposal of containers shall be in accordance with federal and state law.
- o. Records of fertilizer, pesticide and herbicide use shall be kept.

Implement within 1 year

J. APPEAL AND VARIANCE PROCEDURES

1. Types of Appeal and Appeal Procedures

Any landowner or other citizen who believes that he or she is adversely affected by the Wellhead Protection Ordinance or by a decision deriving from that Ordinance may make an appeal to the Board of Appeals, Town of Norway. Such an appeal shall follow established rules and procedures of the Norway Board of Appeals. Further appeals to the Superior Court shall follow established procedures of local and State laws. Two types of appeals may be considered: Administrative Appeals and Variance Appeals. Administrative Appeals shall be handled as per current Norway Board of Appeals rules and procedures. Variance Appeals are discussed in Part 2. Also, for existing land uses and activities, delays in the implementation of Best Management Practices may be granted under the conditions outlined in Part 3.

2. Variance Appeals

Variance Appeals shall be granted only when the applicant can show, by means of one or more of the criteria listed below, that his proposed activities or land uses will not adversely affect the groundwater quality for the Norway municipal well. The burden of proof is with the applicant. Criteria are listed below:

- A. Demonstration of a confining layer in the subsurface but above the water table sufficient to prevent any activity proposed by the applicant from contaminating the groundwater beneath the confining layer.
- B. Demonstration that the activities or land uses proposed by the applicant will have no measurable effect on water table levels or recharge to the aquifer and will cause no contamination to groundwater or will cause contamination of such minute quantities as to be undetectable at the wellhead for the municipal well.
- C. The applicant proposes an activity or land use in WHPA 3 and can demonstrate the technical and financial capabilities to both detect and remediate any groundwater contamination above the MCLs current at the time (the stricter of State, local or Federal MCLs), before such contamination can reach the outer boundary of WHPA 2.
- D. The applicant can demonstrate that groundwater beneath his site flows away from the Norway municipal well even under the maximum realistically expected pumping rate for the well during a time of drought.

3. Deadline Extension for Best Management Practices, Existing Uses.

The Board of Appeals may double the time given for implementation of Best Management Practices in Section 1 of this Ordinance if any one of the following conditions can be met by the applicant. Only one (1) such extension may be granted. If the Best Management Practice in Section 1 is to be implemented "upon adoption" of this Ordinance, the Board of Appeals may grant a one-time extension of one year from the time of application or two years from the time of adoption of the Ordinance, whichever occurs first. Criteria for deadline extension are listed below. (Any one must be met):

- A. The applicant meets any one of criteria A – D in Part 2, Section J;
- B. The applicant demonstrates that meeting the deadline stipulated necessarily jeopardizes employment levels;
- C. The applicant demonstrates that he/she has made all reasonable efforts, in good faith, to make or finance the necessary changes for Best Management Practices and that these efforts have been or will be unsuccessful within the prescribed deadline, but that these efforts would be successful within the extended deadline.
- D. The strict application of the terms of this Ordinance would result in undue hardship. The term “undue hardship” shall mean:
 - 1) That the land in question cannot yield a reasonable return unless a variance is granted;
 - 2) That the need for a variance is due to the unique circumstances of the property and not to the general conditions in the neighborhood;
 - 3) That the granting of a variance will not alter the essential character of the locality; and
 - 4) That the hardship is not the result of action taken by the applicant or a prior owner.

K. DEFINITIONS

1. Construction of Language

In the interpretation and enforcement of this Ordinance, all words other than those specifically defined in the Ordinance shall have the meaning implied by their context in the Ordinance or their ordinarily accepted meaning. In the case of any difference of meaning or implication between the text of this Ordinance and any map, illustration or table, the text shall control.

The words “shall” and “will” are mandatory, the word “may” is permissive.

The word “lot” includes the words “plot” and “parcel”.

The word “building” includes the word “structure”.

The words “Town” or “Municipality” means the Town of Norway, Maine.

2. DEFINITIONS

Aquifer

A permeable geologic formation, either rock or sediment, that when saturated with groundwater is capable of transporting water through the formation.

Best Management Practices

Operational procedures for handling, storage and disposal of regulated substances and procedures which are designed to minimize the impact of certain activities or land uses on groundwater quality and quantity.

Chemical Bulk Storage

Storage of a chemical or chemicals in a container or containers larger than those intended for normal homeowner or retailer purposes. Proper, non-commercial, homeowner use of chemicals is not included.

Code Enforcement Officer

A person appointed by the municipal officers to administer and enforce this Ordinance.

Conforming

A building, structure, activity or land use which complies with the provisions of this Ordinance.

Construction

Includes building, erecting, moving or any physical operations on the premises which area required for construction. Excavation, fill, paving and the like shall be considered part of construction.

Construction and Commercial Equipment and Vehicle Storage

Storage of construction equipment or other commercial vehicles in excess of 30 consecutive days in which the equipment is not used.

Demolition of Uses Listed in This Table

Demolition of facilities, buildings, etc. associated with the land uses or activities listed in the Wellhead Protection Area Table by a contractor or commercial operation. Expansion of existing land uses, activities, or structures is defined and governed by part 1b of Section D of this Ordinance.

Dump

(see "landfill")

Floor Drain

An opening in the floor that leads to the ground and/or is not permitted under other State, Federal or local regulations; work sinks which lead to such drains are included.

Fuel Oil Distributor; Fuel Oil Storage

The storage of fuel for distribution or sale. Storage of fuel oil not for domestic use, i.e., not in tanks directly connected to burners.

Gas Station, Service Station

Any place of business at which gasoline, other motor fuels or motor oil are sold to the public for use in a motor vehicle, regardless of any other business on the premises.

Groundwater

The water contained within the interconnected pores, cracks or fractures located below the water table of a confined or unconfined aquifer.

Groundwater Contamination

Presence of any substance, designated by the U.S. EPA or the State of Maine as a primary or secondary water quality parameter, in excess of the maximum allowable contaminant level (MCL).

Hazardous Material

Any gaseous, liquid or solid materials or substances designated as hazardous by the U.S. Environmental Protection Agency and/or the Maine Department of Environmental Protection.

Hazardous Waste

Any substance identified under chapter 850, Identification of Hazardous Wastes, of the rules of the State of Maine, Department of Environmental Protection, effective date July 1, 1980, including revisions or amendments thereto, and any radioactive waste material which means any solid, liquid or gas residue, including but not limited to spent fuel assemblies prior to processing, remaining after the primary usefulness of the radioactive material has been exhausted and containing nuclides that spontaneously disintegrate or exhibit ionizing radiations.

Heating Oil Storage (Consumptive Use)

Storage for heating oil in excess of 660 gallons. (Tanks with capacity between 50 gallons and 660 gallons are regulated by the Oil and Solid Fuel Board).

Industrial

Any activity which includes the assembling, fabrication, servicing, manufacturing, storage, packaging, processing or shipping of goods, or the extraction of minerals.

Industrial Waste

Wastes resulting from the processes employed in industrial manufacturing, trade, or business establishments.

Intensive Open Space Uses

Uses of open space, such as golf courses and power lines, which have the potential, because of their duration, frequency or nature to significantly alter the environment, particularly the groundwater quality and quantity, associated with the open space.

Junk/Salvage Yard

A yard, field or other area used as a place of storage for:

1. Discarded, worn-out or junked plumbing, heating supplies, household appliances and furniture;
2. Discarded scrap and junked lumber;
3. Old or scrap copper, brass, rope, rags, batteries, paper trash, rubber or plastic debris, waste and all scrap iron, steel and other scrap or ferrous or non-ferrous material;

4. Used tires, discarded tires, or worn-out tires which may or may not be usable now or in the future;
5. Town garbage dumps, waste dumps and sanitary fills will not be considered junkyards for the purpose of this Ordinance;
6. Three or more unserviceable, worn-out vehicles.

Landfill

An area used for the placement of solid waste, liquid waste or other discarded material on or in the ground.

Leachable Material

Material, including salt and certain components of concrete, asphalt, tar, coal, etc., which is readily soluble in water and thus easily removed and transported in solution by meteoric and/or groundwater.

Mining or Mineral Extraction

The removal of geologic materials such as soil, topsoil, loam, sand, gravel, clay, metallic ores, rock, peat, or other like material from its natural location, and transportation of the product removed away from the extraction site.

Nonconforming Use

A building, structure, use of land or portion thereof, existing at the effective date of adoption or amendment of this Ordinance, which does not conform to all applicable provisions of this Ordinance.

Open Space

Land that is largely free of buildings or other permanent structures.

Parking Lot

Lot designed or used for the short or long term parking of vehicles, when such lots are 1/2 acre in size or greater.

Pesticide, Herbicide Bulk Storage

Storage of herbicides or pesticides intended for sale or intended for application on commercial premises or intended for application on cash crops. Homeowner storage or storage related to non-commercial gardeners is not included.

Road

A route or track consisting of a bed of exposed mineral soil, gravel, asphalt, or other surfacing material constructed for or created by the repeated passage of motorized vehicles.

Salt or Sand/Salt Piles (covered)

Storage of salt or sand/salt mix intended for municipal, commercial or other use except for homeowner sidewalks, steps or driveways beneath a roof or other structure capable of preventing precipitation from reaching the salt or sand/salt.

Salt or Sand/Salt Piles (uncovered)

Storage of any amount of salt or sand/salt, for any purpose, without a roof or other structure capable of preventing precipitation from reaching the salt or sand/salt.

Site Plan Review

An applicant-prepared document and associated procedure for certain proposed new or expanded developments as per Norway's existing Site Plan Review Ordinance.

Sludge

Residual material produced by water or sewer treatment processes, industrial processes or domestic septic tanks.

Sludge Utilization

The spreading of sludge on the ground or other use of sludge which might expose surface or groundwater to the sludge.

Snow Dump

A location to which snow is transported and dumped by commercial, municipal, or State snow-plowing operations.

Solid Waste

Discarded solid material with insufficient liquid content to be free-flowing. This includes but is not limited to rubbish, garbage, scrap materials, junk, refuse, inert fill materials and landscape refuse. For the purposes of this Ordinance, solid waste includes recyclable materials.

SPCC Plan

Spill Prevention Control and Countermeasure Plan as described in 40 CFR, Part 112 of Federal Oil Pollution Prevention Regulations.

Storm Water Drainage

A sewer or other system for conveying surface runoff due to storm events and unpolluted ground or surface water, including that collected by cellar drains, but excluding sanitary sewage and industrial waste.

Stormwater Impoundment

Any structure designed and constructed to contain stormwater runoff.

Subdivision

A subdivision shall mean the division of a tract or parcel of land as defined in Title 30, M.R.S.A., section 4401 and subsequent. The term "subdivision" shall also include such developments as mobile home parks, multiple family dwelling(s), shopping centers, condominiums, and industrial parks where there are three or more units involved.

Subsurface Disposal System

A collection of treatment tank(s), disposal area(s), holding tank(s), and pond(s), surface spray system(s), cesspool(s), well(s), surface ditch(es), alternative toilet(s), or other devices and associated piping designed to function as a unit for the purpose of disposing of wastes or

wastewater on or beneath the surface of the earth. The term shall not include any wastewater discharge system licensed under 38 M.R.S.A. Section 414, any surface wastewater disposal system licensed under 38 M.R.S.A. Section 413, Subsection 1-A, or any public sewer.

Time of Travel Boundary

A boundary, beyond which, groundwater will take more than a set period of time, (i.e., 200 days) to travel to a given point (i.e., a pumping well). Pumping conditions for defining a time of travel boundary are defined in the proposed Maine Wellhead Protection Program. (November, 1991)

Transfer Station; Recycling Facility

Facility designed for temporary storage of discarded material intended for transfer to another location for disposal or re-use; facility which processes discarded material for re-use.

Utility Corridor

Right-of-way, easement, or other corridor for transmission wires, pipes or other facilities for conveying energy, communication signals, fuel, water, wastewater, etc. Municipal water supply distribution mains, operational or maintenance facilities are excluded from restrictions in the Wellhead Protection Table.

Underground Storage Tank

As defined by State of Maine regulations.

Waste Disposal, Industrial/Commercial – see “Industrial Waste”

Wastewater

Any combination of water-carried wastes from institutional, commercial and industrial establishments, and residences together with any storm, surface or groundwater as may be present.

Wastewater Treatment Plant

Any arrangement of devices and structures used for treating wastewater.

Watershed

Land lying adjacent to water courses and surface water bodies which creates the catchment or drainage area of such water courses and bodies; the watershed boundary is determined by connecting topographic high points surrounding such catchment or drainage areas.

Wellhead

The specific location of a well (a hole or shaft dug or drilled to obtain water) and/or any structure built over or extending from a well.

Wellhead Protection Area (Map)

An area, consisting of 3 portions, WHPA 1, WHPA 2, and WHPA 3, delineated according to Section C of this Ordinance. WHPA 1, WHPA 2, and WHPA 3 are shown on a map at the Norway Water District office.

Well, New

A shaft or pipe placed in the ground for extraction or monitoring of groundwater. Extractions of less than one thousand (1000) gallons per day are exempt.

Zone of Contribution

The area from which groundwater flows to a pumping well.

Given under our hands, this day of October 1993

orddsk:July93.#2

Enacted: November 2, 1993

**Supplementary Materials: Image/Photo of Map(s), Diagram(s),
and/or Selectboard Signatures included in Image Files Folder on this disk.
For this Ordinance, See Item Number(s) listed below:**

Item # 97 (Map)