



---

# Management, Policy Options, and Guidance for Water Supply and Decentralized Waste Water

---





Maine towns that lack funds to build centralized sewer systems have found it difficult to encourage traditional village-type growth. Current zoning regulations tend to promote low-density development in areas where higher densities are desired (such as village growth centers). The Maine State Planning Office (SPO) hired Stone Environmental to determine if decentralized wastewater infrastructure could support higher densities in Maine's villages without compromising the quality of the state's watersheds.

Stone studied the state's environmental laws and regulations, and the characteristics of its soils, groundwater, and bedrock. We analyzed decentralized wastewater technologies and the options for managing decentralized infrastructures. We then compared our findings with Maine's growth goals to determine whether the use of decentralized wastewater systems is desirable and feasible in the state. Finally, we summarized our findings in a set of handouts and technical papers to educate local decision makers and real estate developers.

- An eight-page brochure, *Partners in Building Maine's Future: What Subdividers and Planners Need to Know about Septic System Options in Local "Growth" Areas*. It provides a comprehensive look at the issues surrounding decentralized water and wastewater infrastructure.
- Four two-page handouts that provide an overview of decentralized infrastructure from four angles.
  - *Technology Choices for Developers and Subdividers in Non-Sewered Areas*
  - *Management of Decentralized Wastewater Systems in Maine*
  - *Creating Communities with Decentralized Wastewater Solutions*
  - *Partners in Building Maine's Future: Decentralized Wastewater and Smart Growth.*
- Four technical assistance bulletins (TABs) that describe in detail the scientific basis for our findings.
  - *Decentralized Wastewater and Water Supply Technologies and Performance (TAB #9)*
  - *Management, Policy Options and Guidance for Water Supply and Decentralized Waste Water (TAB #10)*
  - *How to Make Growth Areas Work Without Sewers: Three Approaches Plus None of the Above (TAB #11)*
  - *Decentralized Wastewater and Water Supply: Further Reading (TAB #12)*

We conducted our work for the Maine SPO between May and December 2003.

Stone Environmental was founded in 1992 and quickly established itself as one of the top US firms evaluating the environmental effects of agrochemical use. Since then, we have grown into a successful multidisciplinary team of more than 25 scientists and 40 employees, and added services in the areas of water resources and wastewater, site investigation, and information for sustainable development. Stone is based in Montpelier, Vermont, an area admired for its quality of life and strong environmental values.

For further information, please contact Scott Johnstone, leader of Stone's Water Resources and Wastewater Group, at 802.229.6432 or [sjohnstone@stone-env.com](mailto:sjohnstone@stone-env.com).

# TECHNICAL ASSISTANCE BULLETINS

# Management, Policy Options, and Guidance for Water Supply and Decentralized Waste Water

A technical assistance series prepared by:

Maine State Planning Office

Maine Department of  
Environmental Protection

Maine Department of Human  
Services, Division of Health  
Engineering

Stone Environmental, Inc.  
Evan D. Richert

With input from a number of  
professional and citizen plan-  
ners

## Inside

- Background Information
- Legal Management Options
- The Role of Comprehensive Planning
- Appendix: Ordinance Language

## TA Bulletin # 10

This TA Bulletin is one in a series of documents intended to provide guidance to volunteer board and committee members on specific planning topics.

Financial assistance for the development of this document was provided by the National Oceanic and Atmospheric Administration.

**December, 2003**

Decentralized management of waste water treatment systems can be set up in existing communities and in areas of new development that use onsite and clustered systems of any size for residential and commercial waste water treatment and disposal. Onsite and clustered systems can be protective of public health, drinking water supplies, and the quality of water resources if they are properly planned, installed, operated, and maintained. When they are managed properly, these systems can also protect property values, preserve tax bases, and result in life-cycle cost savings.

Small communities across the United States are implementing programs designed to better manage their decentralized water and waste water resources. Many guides and electronic resources such as management handbooks, model programs, and tracking databases are readily available to groups beginning this process. In Maine, much of the legal authority needed for municipal departments, quasi-municipal agencies (such as water or sewer utilities), or private organizations (such as homeowners' associations) to begin successful management programs is already in place.



Septic systems that use alternative technology, such as this textile filter system, generally require regular maintenance that can be included in a management program.

## Background Information

### General Waste Water Management / Definitions

Communities have many alternatives to consider for waste water collection and treatment. Generally, the options include onsite, cluster, centralized, and decentralized alternatives.

- Onsite systems treat waste water generated by a single home or by one business. In this case, the waste water is treated and returned to the environment within the property boundaries of the home or business.
- Cluster systems are cooperative waste water treatment systems serving groups of homes or businesses that are within close enough proximity to jointly handle their waste water.
- Centralized systems usually involve a central treatment plant that discharges to surface waters, handling waste water collected in gravity sewers with pump stations as needed.
- Decentralized systems are actually centralized in the sense that they have a central coordinated administration or management structure, but they may contain centralized systems, cluster systems, onsite systems, or a combination of system types and technologies.

Decentralized systems “can protect public health and the environment, typically have lower capital and maintenance costs for low-density communities, are appropriate for varying site conditions, and are suitable for ecologically sensitive areas when adequately managed” (U.S. Environmental Protection Agency (USEPA) Response to Congress, 1997).

The elements comprising a comprehensive decentralized waste water management program, regardless of its intensity, include sets of activities focused within three functional categories: program planning and administration; treatment system installation and operation oversight; and compliance assistance and assurance.

The management model a particular community or service area selects should be based on environmental sensitivity, public health risks, the complexities

<i>Category</i>	<i>Management program elements</i>
Program planning and administration	Public education and participation Planning Establishment of performance requirements Record keeping, inventories, and reporting Financial assistance and funding
System installation and operation oversight	Site evaluation System design Construction or installation Operation and maintenance Residuals management
Compliance assistance and assurance	Training and certification/licensing of service providers Inspections and monitoring Corrective actions and enforcement
<b>Functional categories of management and program elements.</b>	

of the waste water treatment technologies that might or should be implemented, and the size or density of development.

### General Water Supply Management / Definitions

Communities also have multiple strategies to consider for the extraction, purification (if needed), and distribution of potable water in the context of a wider management plan. These strategies can be easily categorized in the same terms that were applied earlier to waste water treatment systems:

- Onsite water supplies may consist of individual springs, dug wells, or drilled wells that supply drinking water to a single home or to one business.
- Cluster water supplies are cooperative water supply systems serving groups of homes or businesses that are within close enough proximity to share a water supply and distribution network.
- Centralized water supply systems usually involve multiple source waters and can include surface waters as potential sources. These systems usually consist of a central plant or plants that purify and/or chlorinate the drinking water before it is distributed to a large number of homes and businesses. “Town water” is usually provided using a centralized water supply system.

- Decentralized water supply systems are actually centralized in the sense that they have a central coordinated administration or management structure, but they may contain individual onsite wells, small cluster water supplies, a centralized water supply system, or a combination of system types and technologies.

The Maine State Planning Office’s Technical Assistance Bulletin #1, “Groundwater” gives a good overview of groundwater resource issues, and offers policies and strategies for incorporating groundwater and drinking water concerns into comprehensive planning processes. This document may be found online at <http://www.state.me.us/spo/landuse/docs/Groundwater-TABulletin.pdf>.

### **Why Manage Water Supplies and Waste Water Treatment?**

Although it is often difficult to measure and document specific cause-and-effect relationships between onsite waste water treatment systems and the quality of water resources, it is widely accepted that improperly managed systems are contributors to major water quality problems. In the National Water Quality Inventory, 1996 Report to Congress, state agencies designated the top 10 potential contaminant sources that threaten their ground water resources. The second most frequently cited contamination source was improperly functioning septic systems. The 1996 Report to Congress also notes that onsite systems in Maine directly discharge the largest volume of nonpoint source pollution into the subsurface environment, including contaminants such as nitrates, bacteria, viruses, and toxic chemicals from household products.

Improperly managed onsite systems can also adversely impact the water quality of surface waters such as rivers, lakes, and coastal waters. Inadequate waste water treatment facilities were cited in the 1996 Maine Water Quality Assessment (Maine Department of Environmental Protection) as a significant reason that some reaches of main stem rivers have not yet achieved fishable/swimmable water quality targets. The same report cited added phosphorus from onsite systems as a cause of cultural eutrophication in Maine’s lakes. Eutrophication is a natural process of nutrient enrichment in

**“Adequately managed decentralized waste water treatment systems are a cost-effective and long-term option for meeting public health and water quality goals, particularly in less densely populated areas” (USEPA, 1997)**

aquatic systems, but it can be speeded by “cultural” inputs from human activities including agricultural practices, stormwater runoff, and waste water disposal using onsite or centralized systems. The availability of additional nutrients can result in the growth of undesirable algae blooms and in the development of hypoxic (low dissolved oxygen) zones in aquatic systems. Bacterial contamination from failing onsite systems is also discussed in the report as a significant cause for impairment of Maine’s marine and estuarine waters. Although the reasons for onsite system failure can include shortcomings in siting, design, construction, operation, or maintenance, it is ultimately the absence of a comprehensive management program addressing each of these issues that prevents onsite and clustered systems from reaching their potential as effective and reliable waste water treatment strategies.

### **USEPA’s Voluntary Management Program Models**

The Guidelines for decentralized waste water management programs recently published by the USEPA consist of five models that are structured to reflect an increasing need for more comprehensive management as the sensitivity of the environment or the degree of technological complexity increases. The five model management programs are described in more detail in the box on the next page. An individual program may easily include elements of several management models. These combination programs may be appropriate where site conditions vary within the community. Different levels of management may also be established in communities where both centralized and decentralized treatment systems are present. In some cases, it may be feasible for the entity that manages the centralized waste water treatment facility to manage the decentralized systems as well.

### **Operation and Maintenance (O/M) Requirements**

Operation and maintenance needs of different onsite technologies vary considerably. Conventional onsite systems usually require only a tank pump-out once every few years with an accompanying system inspection. Mechanical systems such as activated sludge-based units require servicing three to four times per year to assure that aeration tank solids concentrations do not increase to the point that they are “belched” out with the effluent and cause infiltrative surface clogging or receiving water quality problems. Other mechanical/electrical systems also require more frequent (usually annual) inspection to assure proper operation of electro-mechanical components. Newer modem or internet-

## US Environmental Protection Agency's Voluntary Management Models

### Model 1: The Homeowner Awareness Model

Ensures systems are sited, designed, and constructed in compliance with prevailing rules.  
Includes inventory and documentation of all systems by regulatory authority with voluntary maintenance.  
Appropriate for conventional systems in areas of low environmental sensitivity.

### Model 2: The Maintenance Contract Model

Builds on Model 1 by ensuring that property owners maintain maintenance contracts with trained operators.  
Includes tracking and reporting functions to ensure that requirements of maintenance contracts are fulfilled.  
Appropriate for more complex waste water treatment systems, small clusters, or restrictive site conditions.

### Model 3: The Operating Permit Model

Builds on Model 2 by issuing limited-term renewable operating permits to individual system owners.  
Provides continued oversight of system performance (may include scheduled inspections).  
Appropriate where large-capacity onsite systems or systems treating high-strength waste waters exist, and in areas of heightened environmental concern (lakes, estuaries, or drinking water supplies).

### Model 4: The Responsible Management Entity (RME) Operation and Maintenance Model

Similar to Model 3, except that after systems are constructed, operating permits are issued to a management entity that performs operation and maintenance activities.  
Appropriate where large numbers of onsite and clustered systems must meet specific water quality requirements because environmental sensitivity is high (e.g., shellfish waters or wellhead protection areas).

### Model 5: The Responsible Management Entity (RME) Ownership Model

Similar to Model 4, except that the RME owns, operates, and manages the decentralized waste water treatment systems in a manner analogous to central sewerage.  
Appropriate where new or existing high-density development is proposed or exists near sensitive receiving waters.

based packages can monitor and control many of these mechanical components, thus reducing the frequency of inspection and keeping labor costs affordable.

Well-conceived O/M programs as part of a wider management program are facilitated by better design (e.g., risers that are easily accessible from the surface), real-

time accessibility to system records by field personnel, and automated monitoring that can warn or even adjust operational sequences to avoid imminent problems in pretreatment systems. Many states do not allow alternative onsite treatment technologies because they cannot require the increased O/M required to keep them performing as designed. Currently, Maine's Subsurface Waste Water Disposal Rules (144A CMR 241) allow treatment system designs that include alternative waste water treatment technologies, such as peat filters and sand filters, and alternative disposal technologies, such as subsurface drip irrigation. However, these rules do not specifically mandate maintenance requirements for conventional or alternative systems, for annual system inspections, or for documentation of the performance of maintenance activities (such as septic tank pumping or backflushing of subsurface drip irrigation disposal systems).

In preparing a management program, the planning committee or management entity should include an O/M component to ensure that systems under the entity's purview continue to operate properly and meet any established performance standards. A variety of people or service providers will play a part in successful O/M efforts. For example, the homeowner or a management entity may hire licensed septage haulers to perform regular septic tank pumpouts. Licensed system designers or engineers may perform regularly scheduled inspections, especially for larger systems or for systems using alternative technologies. If a system is large or complex enough, it may be necessary to hire a part- or full-time licensed waste water system operator to watch over the system. Town clerks, or staff hired by a homeowner's association or management entity, can perform important record-keeping functions such as recording inspection results or sending out maintenance reminders.

The homeowner is very important in most O/M efforts, particularly in the lower level management programs. In all management programs the homeowner must be aware of the damage that can be caused to soil-based disposal systems by driving heavy vehicles over the ground surface or by paving. Owners must also be aware of the effects of adding strong acids or bases, toxic compounds, oils, and greases on the performance of these systems and on the receiving waters. The system owners and service providers should also know about the effects of water conservation, garbage grinders, and water softeners.

## Electronic Tools for Management Assistance

A variety of public and private entities have devel-

oped databases to track waste water system inventory, maintenance, and other information. Minimum data elements for system inventories include owner contact information, exact (GPS) location, installation date, technology type, and design flow. Optional data elements include site characterization information, designer, installer, management entity (if applicable), date of last service (pumping, inspection, repair), service provider, and operational status. Additional potential database functions include automated reporting for sending maintenance, inspection, or permit renewal reminders, tracking and reporting of performance data, and Web-based reporting for homeowners, inspectors, maintenance providers, or regulators. The following public/private database systems provide useful examples of existing inventory and management options, and are presented for further research only:

- SepTrack, developed by the Buzzards Bay

- National Estuary Program in Massachusetts (<http://www.buzzardsbay.org/septrfct.htm>)
- SepticPlanner, developed by Pamlico County, North Carolina (<http://www.landplot.com/septic2.html>)
- IWIMS (Integrated Wastewater Information Management System), developed by Stone Environmental, Inc. in Vermont (<http://www.stone-env.com>)
- CASST (Computer Aided Septic System Tracking), developed by AppliTech, Inc. (<http://www.casst.com>)
- Carmody Waste Recording Services, developed by Carmody Data Systems Inc., (<http://www.carmodydata.com>)
- Purdue University Onsite Wastewater Disposal Permit Database (<http://danpatch.ecn.purdue.edu/~epados/onsiteOnline/database.htm>)

---

## Legal Management Options

---

Chapter 12 of Maine’s Subsurface Waste Water Disposal Rules (10 CMR 241) defines a “multi-user (common) disposal system” as a system “designed to serve three or more parcels with structures under individual and separate ownerships, and when the disposal system is not owned by one party of entity.” The rules require that ownership of all parts of the system beyond the building’s backflow valve - that is, all parts from the point of discharge to a septic tank and disposal field (or other point of disposal) - “shall be vested in a single and independent, legally established entity under Maine law.” This entity has the authority and responsibility to operate, maintain, repair, and if necessary replace the system beyond the individual building’s plumbing. It has the authority to charge maintenance and other fees to assure sufficient capitalization to meet its responsibility; is provided an access easement recorded against the properties associated with or necessary for the system; and is granted a right of entry to the properties for the purpose of maintaining, repairing, or replacing any portion of the common system.

Given this rule, there are three broad options for legal entities to manage a community waste water disposal system:

1. A municipal department pursuant to the municipality’s home rule powers;
2. A quasi-municipal agency -
  - a. If the agency is newly formed for the purpose of managing one or more community systems, it must be organized as a sanitary district pursuant to the Maine Sanitary District Enabling Act (Title 38 MRSA Ch. 11);
  - b. If the agency already exists and its jurisdiction is extended to one or more community

3. A private organization representing the owners of the community system -
  - a. If the development is a condominium, it is governed by the Maine Condominium Act (Title 33 MRSA Ch. 31), and the unit owners’ association authorized under the act is empowered to maintain, repair, and replace the common elements of the condominium (see Title 33 MRSA sec. 1603-102);
  - b. If the development is a development with common elements but is not a condominium, the organization of the governing body is not specifically regulated under state law. However, local zoning and subdivision ordinances typically require the formation of a homeowners’ association and, to comply with the state’s subsurface waste water disposal rule, it would need to be a legal entity under Maine law (a non-profit corporation, a cooperative, etc.) with the power and liability to own and maintain the common system.

### Suggested Standard Provisions for Zoning and Subdivision Ordinances

The legal framework to accommodate community or common subsurface waste water disposal systems is largely in place in Maine:

- As explained above, the Department of Human

Services' rules governing "multi-user" disposal systems spell out the key institutional requirements for managing the system, namely: ownership of the system from the end of the building sewer outward by an independent legal entity empowered to maintain the system, to charge fees for maintenance, repairs, and replacement of the system, and to enter upon private property as necessary to carry out its responsibilities.

- The Subdivision Model Ordinance (Maine State Planning Office) most widely used in Maine generally requires compliance with the state's pollution control laws, including the Maine Subsurface Waste Water Disposal Rules and, if a discharge license is required pursuant to Section 203 of the Rules, the regulations of the Maine Department of Environmental Protection (see Section 11.1 and Section 11.6 of the model ordinance). The model ordinance also explicitly recognizes the option for cluster developments, which, as it notes, are normally also regulated by local zoning ordinances (Section 12.10 of the model ordinance).

The model subdivision ordinance and most zoning ordinances in Maine tend not to anticipate the possibility of a "multi-user" or "common" or "community" subsurface waste water disposal system and are not explicit about the institutional requirements in such a situation. The assumption, understandable based on history and past available technology, is that if a development will be served by a "multi-user" waste disposal system, it will be a system already in place and owned

The following towns, sanitary districts, and utilities in Maine already are involved in managing decentralized waste water systems:

- Town of Bridgton
- Town of Brownville
- Town of Cornish
- Eagle Lake Water and Sewer District
- Town of Kingfield
- City of Lewiston
- Monson Utilities District

and operated by the municipality or a public sewer district—that is, it will likely be a public centralized sewer system, or a multi-user system where a development will be in single ownership (e.g., a mobile home park or a condominium). The ordinances do not prohibit private multi-user or common systems serving developments in which the lots are individually owned - they would fall under the catch-all of compliance with state pollution control laws - but the void may suggest that they are not really an option in the municipality. By adding a specific reference to this option, developers are alerted to the possibility of this approach, and local planners are alerted to the requirements that make a potentially difficult scenario (multiple private individuals and properties using a shared private system) feasible and responsible. A suggested provision to be added to Section 11.6 of the Subdivision Model Ordinance is provided in the Appendix to this paper.

### **Town of Brownville, Maine**

The Town of Brownville constructed 11 subsurface systems in 1989 to treat and disperse waste water from residential and commercial properties in the Villages of Brownville and Brownville Junction. Industrial waste water is not treated by these systems, as they are situated above a sand and gravel aquifer that is also the water supply for the Villages. Before the systems were constructed, waste water was discharged to the Pleasant River untreated. The Town owns and operates each of these systems, which have design flows ranging from 300 gallons per day to 65,000 gallons per day and a total design flow of approximately 100,000 gallons per day. All 11 systems are regulated under a single Waste Discharge License issued by the Maine Department of Environmental Protection. The construction project was funded primarily by loans from the Clean Water State Revolving Fund.

Brownville's systems are operated by the Water and Sewer Department. A chief operator takes care of the systems, including conducting a visual inspection and collecting flow information from each system on a weekly basis. The systems are self-financed, and service rates are determined by adding operating cost and capital improvements. All customers are currently charged at a flat rate of \$75.45 per quarter (or about \$25 a month).

"Systems are low-maintenance and easy to operate." -Sophia Wilson, Town Manager

## The Role of Comprehensive Planning in Decentralized Waste Water and Water Supply Management

---

There are two types of planning related to decentralized waste water and water supply management entities. The first type is the planning that is integral to the development of the management entity. The second type is participation in the comprehensive land use planning of the potential growth scenarios for a growth center, community, or region. Comprehensive land use planning can provide valuable information and support for decentralized management and regulatory programs and should serve as the basis for managing existing systems and permitting future installations.

Comprehensive planning provides one of the best vehicles available for ensuring that decentralized waste water and water supply management issues are seamlessly integrated into future growth and development scenarios. Comprehensive planning sets overall guidance for the municipality, as well as goals, policies, and implementation strategies. Land use ordinances, zoning, building permits, subdivision ordinances, and other regulatory and nonregulatory approaches can be key strategies for implementing the comprehensive plan. For example, strategies in a locally adopted comprehensive plan that addresses environmental protection can be implemented through land use regulations that:

- Specify performance requirements for onsite or clustered systems, preferably related to each surface and ground water resource in the area;
- Limit development on sensitive natural resource lands and critical areas;
- Encourage development within designated growth areas serviced by cluster or sewer systems, if adequate capacity exists;
- Require consideration of factors such as system densities, hydraulic and pollutant output, proximity to water bodies, soil and hydrogeological conditions, and water quality for

all new development or system repairs;

- Encourage or mandate nutrient reduction and water reuse strategies for existing and new development in environmentally sensitive areas; and
- Integrate requirements for source water protection.

One of the responsibilities of the comprehensive planning committee is to evaluate both current and future water supply and waste water treatment needs and siting options in the plan. During this process, a town should also make decisions about the best uses of their identified natural resources. For example, is the 'significant sand & gravel aquifer' in town a good source of town water that should be protected from development? Or has this resource been used in the past for a landfill so that it cannot be used for drinking water, but is still a good source of extracted gravel?

Even relatively simple planning approaches can consider existing and potential public health and water quality problems and combine them with the physical characteristics of the problem area and input from regulators and the public in developing management strategies. A specific example of value added to planning would be development of an evaluation protocol for new development proposals that can be used to determine if the development is best served by clustered or individual systems, or some combination of the two, in the context of performance requirements that must be met. The performance requirements would ensure environmental and public health protection and may include expectations for land use patterns. Such a protocol could be shared with developers to assist them in planning new developments, knowing that they will be judged accordingly.

---

## Definitions

---

**Centralized system:** A large-scale waste water treatment system or water supply system that includes a central treatment plant and a complex distribution or collection network.

**Comprehensive planning:** An ongoing process undertaken by local governments to address long range community needs, accommodate economic development, and to guide the future growth of the community. Components of the long-range planning process include land use and transportation planning, community infrastructure planning, and capital budgeting.

**Cluster system:** A cooperative waste water treatment system or water supply system serving groups of homes or businesses that are within close enough proximity to jointly handle their waste water, or to share a water supply and distribution system.

**Decentralized system:** A waste water treatment system or water supply system that may combine a variety of system types, sizes, and technologies under the authority of a single management entity.

**Management program:** A set of life-cycle activities relating to waste water treatment systems and water supplies, coordinated by a single management entity, that includes program planning and administration, treatment system installation and operation oversight, and compliance assistance and assurance.

**Onsite system:** A waste water treatment system or water supply that serves a single home or one business.

### Bibliography

Kansas Department of Health and Environment, Watershed Management Section, *Assessing Wastewater Options for Small Communities in Kansas*, November 1999. Available by calling 1-785-296-4195.

Maine Department of Environmental Protection. *The Quality of Maine Waters — A Condensed Version of the 1996 Maine Water Quality Assessment*. Accessed online at <http://www.state.me.us/dep/blwq/docmonitoring/spiral.htm>, June 16, 2003.

Maine State Planning Office. *Model Subdivision Ordinance*. Accessed online at <http://www.smrpc.org/Subdivision/landusesubdivision.htm>, June 16, 2003.

Purdue Extension Service, *Small Community Wastewater Cluster Systems*, ID-265, 2001. Accessed online at <http://www.agcom.purdue.edu/AgCom/Pubs/AE/ID-265.pdf>, June 16, 2003.

U.S. Environmental Protection Agency, *National Water Quality Inventory: 1996 Report to Congress*, EPA 841-R-97-008, 1998.

U.S. Environmental Protection Agency, *Response to Congress on Use of Decentralized Wastewater Treatment Systems*, EPA 832-R-97-001b, April 1997.

U.S. Environmental Protection Agency, *Draft Handbook for Management of Onsite and Clustered (Decentralized) Wastewater Treatment Systems*, EPA 832-D-03-001, February 2003.

U.S. Environmental Protection Agency, *Voluntary National Guidelines for Management of Onsite and Clustered (Decentralized) Wastewater Treatment Systems*, EPA 832-B-03-001, March 2003.

Venhuizen, David, *Winfield Township Wastewater Facility Plan: Overview of Options for Management Strategies and Technologies*, 2001. Accessed online at [http://www.venhuizen-ww.com/html/papers/dc\\_winfield.html](http://www.venhuizen-ww.com/html/papers/dc_winfield.html), June 16, 2003.

### Other documents in this series:

#### Summaries:

- Technology Choices for Developers and Subdividers in Non-Sewered Areas
- Management of Decentralized Waste Water Systems in Maine
- Creating Communities With Decentralized Wastewater Solutions
- Partners in Building Maine's Future: Decentralized Waste Water and Smart Growth

#### Handbook:

Partners in Building Maine's Future: What Subdividers and Planners Need to Know About Septic System Options in Local "Growth" Areas

#### TA Bulletins:

- TA Bulletin # 9: Decentralized Waste Water and Water Supply Technologies and Performance
- TA Bulletin # 11: How to Make Growth Areas Work Without Public Sewers: Three Approaches Plus "None of the Above"
- TA Bulletin # 12: Decentralized Waste Water and Water Supply—Further Reading

### For Further Information Contact:

Maine State Planning Office  
(207) 287-3261  
Web Address: <http://www.maine.gov/spo/>

Maine Department of Environmental Protection  
(207) 287-2111  
Web Address: <http://www.maine.gov/dep/index.shtml>

Maine Department of Human Services, Wastewater & Plumbing Control Program  
(207) 287-5689  
Web Address: <http://www.maine.gov/dhs/eng/plumb/index.html>

Copies of this report are available from the Maine State Planning Office, 38 State House Station, Augusta, ME, 04333-0038. Request the appropriate subject document from the Land Use Technical Assistance Series, or view and download this document from the SPO website (<http://www.state.me.us/spo/>).

This document was printed by the Maine Coastal Program / State Planning Office with financial assistance provided by the Coastal Zone Management Act of 1972, as amended, administered by the Office of Oceanic and Coastal Resource Management, National Oceanic and Atmospheric Administration, under Award # NA17OZ2336.

## Appendix: Additional Language for Subdivision Model Ordinance

The model subdivision ordinance and most zoning ordinances in Maine tend not to anticipate the possibility of a “multi-user” or “common” or “community” subsurface waste water disposal system and are not explicit about the institutional requirements in such a situation. By adding a specific reference including this option, developers are alerted to the possibility of this approach, and local planners are alerted to the requirements that make a potentially difficult scenario (multiple private individuals and properties using a shared private system) feasible and responsible.

It is suggested that the following provision be added to Section 11.6 of the Subdivision Model Ordinance (the full section is given for context, with proposed new language underlined):

### 11.6 Sewage Disposal

#### A. Public System.

1. Any subdivision within the area designated in the comprehensive plan for future public sewage disposal service shall be connected to the public system.
2. When a subdivision is proposed to be served by the public sewage system, the complete collection system within the subdivision, including manholes and pump station, shall be installed at the expense of the applicant.
3. The sewer district shall certify that providing service to the proposed subdivision is within the capacity of the system’s existing collection and treatment system or improvements planned to be complete prior to the construction of the subdivision.
4. The sewer district shall review and approve the construction drawings for the sewerage system. The size and location of laterals, collectors, manholes, and pump stations shall be reviewed and approved in writing by the servicing sewer district or department.

#### B. Private Systems.

1. When a proposed subdivision is not within the area designated for public sewage disposal service in the comprehensive plan, connection to the public system shall not be permitted. Sewage disposal shall be private subsurface waste water disposal systems or a private treatment facility with surface discharge.
2. The applicant shall submit evidence of site suitability for subsurface sewage disposal prepared by a Maine Licensed Site Evaluator in full compliance with the requirements of the Maine Subsurface Wastewater Disposal Rules.
  - a. The site evaluator shall certify in writing that all test pits which meet the requirements for a new system represent an area large enough for a disposal area on soils which meet the Disposal Rules.
  - b. On lots in which the limiting factor has been identified as being within 24 inches of the surface, a second site with suitable soils shall be shown as a reserve area for future replacement of the disposal area. The reserve area shall be shown on the plan and restricted so as not to be built upon.
  - c. In no instance shall a disposal area be on a site which requires a New System Variance

from the Subsurface Wastewater Disposal Rules.

3. When a privately owned multi-user subsurface disposal system, as defined by the Maine Subsurface Waste Disposal Rules (chapter 12 of 10 CMR 241), is proposed, the applicant shall file proof of incorporation of an association of homeowners or other property owners that complies with the ownership and maintenance requirements for multi-user disposal systems, including:
  - a. The ownership of all parts of the system beyond the building sewer, as defined by the Disposal Rules;
  - b. The authority to charge a maintenance or other fee to assure sufficient capitalization to meet its responsibility to maintain the multi-user system;
  - c. The liability for operation, maintenance, repair, or replacement of all parts of the system beyond the individual building sewers and for keeping the system free of any nuisance or threat to public health or contamination of the environment;
  - d. The right by easement, including an access easement recorded against the properties associated with or necessary for the system, to enter upon properties that are tied to the system for the purpose of servicing, maintaining, repairing, or replacing all parts of the system, and for the purpose of enlarging or replacing the system should such enlargement or replacement be deemed necessary or if the local plumbing inspector orders such action for the purpose of abating a public nuisance; and
  - e. All other requirements of the Disposal Rules governing multi-user disposal systems.