

# **DRINKING WATER**

## **A Summary of Protection Strategies**



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## INTRODUCTION

This document presents an overview of various strategies that address drinking water protection. The focus is on individual wells and steps to prevent problems from occurring. While there are no specific data on the total number of inadequate wells, it is an increasing problem across Hancock County.

### **Part 1: The Regulatory Approach**

It is important to review well and septic tank placement in the subdivision review process. Here are some hints from various subdivision ordinances. Be sure to have any proposed changes to your town's subdivision ordinance reviewed by an attorney with a background in land use law.

#### **a. Water Supply**

HCPC suggests that towns have standards to assure adequate supply. Some ordinances require that wells for individual lots be able to provide at least 300 gallons per day, the average amount used by a family of four. Others require that there be a yield of 10 gallons per minute (gpm) for 1 hour, 6 gpm for 2 hours, and 4 gpm for 4 hours. These amounts can be adjusted if there are low-water use measures proposed such as composting toilets. If such measures are proposed, they should be noted on the conditions of subdivision approval.

The standards could include requirements for test wells. Water should be tested not only for yield but also potential contaminants. These could include, but are not limited to, total coliform bacteria, nitrate, nitrite, iron, manganese, hardness, alkalinity, turbidity, pH, sodium, lead, and volatile organic chemicals. All testing should be in accordance with the standards of the Maine Health and Environmental Testing Laboratory (<http://www.maine.gov/dhhs/mecdc/public-health-systems/health-and-environmental-testing/standard.htm>). One testing standard (from New York state) requires 1 test well for each ten units in the subdivision. These tests are in addition to the tests required by most home mortgage lenders for the well serving the individual dwelling as part of the home loan approval process.

Towns may want to have discretion to require more test wells under certain circumstances. For example, if there is an agricultural or manufacturing use on an adjoining property. Also, more testing may be needed in areas of steep slopes, bedrock outcroppings or near areas of impervious surface.

#### **b. Location of Well on Lot**

State law requires that there be a minimum of 100 feet between a well and a septic system. The Southern Maine Regional Planning Commission model subdivision ordinance prohibits wells within 100 feet of the traveled way of any street, if located downhill from the street, or within 50 feet of the traveled way of any street, if located uphill of the street. HCPC recommends that no

well be constructed within 25 feet of any paved driveway or parking or motorized equipment storage if located downhill from the driveway and parking/storage area. There should be a minimum of 50 feet between wells and the subdivision boundary and 15 feet between the well and lot lines. Here again, the planning board should use its discretion.

**c. Shared Wells**

In some cases, shared wells may be an option. This is particularly the case on small lots, where it may be difficult to meet the setbacks discussed above. The USDA Rural Housing Service (<http://www.rurdev.usda.gov/me/SFH/sfh.htm>) will not guarantee mortgage loans for homes with shared wells unless there is a legally binding agreement to assure maintenance and safe operation of the well. It also requires that the properties sharing the well be unable to be connected to a public or community water system. Up to four dwelling units may share a well per Rural Housing Service standards. If an applicant proposes a shared well, the planning board may want to have its attorney review the legally binding agreement. The cost of this review can be charged to the applicant.

Minimum standards for a shared well agreement include:

- specifying cost sharing arrangements among participating homeowners to provide power to the well pump, repair, test and disinfect the system; replace components, and make improvements to increase the service life of the system;
- requiring that each well user promptly repair any leaks or damage in their part of the service line and replace, when necessary the service line connecting the water system to the residence;
- permitting water testing at any time by a licensed tester at the request of any party to the agreement;
- requiring corrective measures if testing reveals a significant water quality deficiency, but only with the consent of the majority of all parties;
- assuring ongoing water service to all parties even if the supplier has no further need for the shared well;
- prohibiting water usage by any party for “other than bona fide domestic purposes.” This provision is important since conflicts have arisen over matters such as excessive lawn watering;
- requiring that any new connections occur only with the consent of all parties, appropriate amendment of the agreement and compliance with the other terms of the agreement;

- establishing easements for all elements of the system, assuring access and adequate working space for system operation, maintenance, inspection, replacement, and expansion; and
- providing for binding arbitration of major disputes over the water system or the terms of the well sharing agreement.

For a sample shared well agreement, see <http://www.rurdev.usda.gov/Publications/WI-RHS-Shared-Well-Agreement.pdf> . Again, be sure to have any agreement reviewed by an attorney based in Maine. If you are unable to download from this site, contact Tom Martin at the Hancock County Planning Commission.

#### **d. Community Water Systems**

Shared water supplies over a certain user threshold are considered Community Water Systems and are subject to regulation by the Maine Drinking Water Program. They are defined per state law as:

A public water system which serves at least fifteen service connections used by year-round residents or regularly serves at least 25 year-round residents. (Year-round is defined as permanent residence greater than six months.)

Examples of community water systems include those serving apartment buildings, mobile home parks, and restaurants. Each system has a “public water supply source water protection area.” This area is defined as the “area that contributes recharge water to a surface water intake or public water supply well.” Operators of these systems, per state law, must be notified of land use decisions that could affect the source water protection area. This allows the operators to participate in the municipal decision making process and helps reduce the risk of contamination to public water supplies.

A list of existing community water systems in a given town is available from the Maine Drinking Water Program (<http://www.maine.gov/dhhs/mecdc/environmental-health/water/sources.htm>) This site also has information on state requirements for community systems. If an applicant proposes that a development be served by a community or other type of public water system, the system design should be reviewed by the Drinking Water Program.

## **2. Public Education**

Public education on water protection can occur on both a town-wide/watershed and individual household level. There are ample resources on the identification of threats to water quality on a watershed scale. As an example, see <http://cfpub.epa.gov/npstbx/WhereYouLive.cfm?StateID=22>. Further information can be found

at: <http://www.maine.gov/dep/land/watershed/nps/index.html>. The Maine DEP watershed staff can help develop an educational program.

This program can address issues such as lawn care, motor vehicle repair operations, farming, timber harvesting, and road maintenance. There are best management practices for these and other activities that may harm water quality. Wells can be threatened through both general contamination of groundwater and activities that occur in the immediate vicinity of the well. An example of the former would be pesticides from a farming operation that seeped into the water table. Storage of horse manure adjacent to a well head would be an example of the latter.

On the individual household level, educational efforts could focus on proper care and maintenance of both wells and septic systems. Topics could include water conservation techniques, recommendations on periodic testing, and addressing threats posed by radon gas and arsenic. Many people are not aware of the damage to septic systems caused by improper use. There is ample educational material available on both wells and septic systems. Examples can be found at: <http://www.hcpcme.org/environment.html>.

For more information, contact the Hancock County Planning Commission at 667-7131 or e-mail [hcpc@hcpcme.org](mailto:hcpc@hcpcme.org).