

PROTECT NATURAL RESOURCES



OVERVIEW

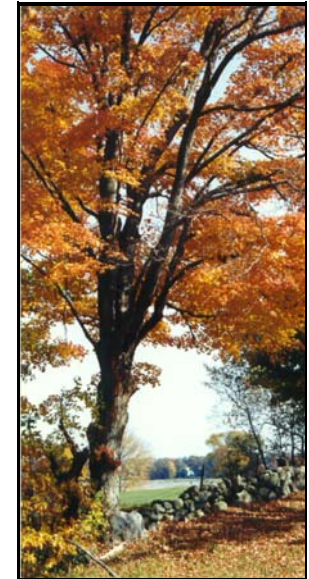
Natural resources are important to community character and the pride and spirit of residents. Protecting natural resources is an important theme of the Plan since such efforts help:

- guide development in harmony with the natural environment,
- preserve vital natural functions, and
- improve the quality of life for existing and future generations.

Significant natural resources in Madison and their rationale for consideration in the Plan include:

Land Resource	Rationale for Conservation
Steep Slopes (25 % or more)	Potential for erosion, structural concerns
Water Resources	
Rivers and Other Watercourses	Support hydrologic cycle and provide drainage
Inland and Tidal Wetlands	Habitat, water quality, and flood storage
Inland and Coastal Floodplains	Periodic flooding, threat to life and property
Water Quality	Protect reservoirs and aquifers from pollution
Water Quantity	Ensure adequate water supply
Other Resources	
Air Quality	Provides healthy environment
Flora / Fauna	Plant and animal habitat and diversity (including shellfish beds)

River Road Scene



Joanne Volage

Madison has a remarkable diversity of natural resources that must be protected ...

Water Quality Protection

For many years, water quality protection focused on eliminating “point” sources of pollution (such as industrial discharges).

With the progress that has been made in reducing or eliminating pollution from these sources, attention has now turned to “non-point” sources. This includes storm drainage discharges, lawn fertilizer, septic systems, agricultural runoff, and similar sources.

Additional information on managing stormwater runoff and “best management practices” (BMPs) is available from the Connecticut Department of Environmental Protection – Office of Long Island Sound Programs (CTDEP-OLISP).

Shellfish Resources

Many people do not realize that Madison has over 6,000 acres of shellfish beds located in the coastal area. These resources depend on a healthy ecosystem in Madison, especially water quality.

Protect Water Quality

Protection of water quality is Madison’s most important natural resource preservation priority.

According to the 1993 Open Space/Recreation Plan, “Madison's obvious water resources include rivers and streams, lakes and ponds, swamps and marshes and Long Island Sound. Not so visible, but equally important, are the wetlands, vernal ponds, aquifers and bedrock fractures. Each of these water resources plays an important role in the ecosystem and in Madison's lifestyle. All of them are interrelated; contamination of one resource can lead to the eventual contamination of others. The causes of contamination are multiple, and the solutions involve all of us.”

That report goes on to state that “Public education and involvement are crucial to the implementation of an effective program to protect our water resources. Educational programs can be of tremendous importance in changing residents' activities that pollute water resources. With proper education, changes can be made in the use and disposal of household hazardous wastes, the reduction or elimination of insecticides and herbicides used for lawns and gardens, sediment runoff, septic maintenance, yard composting, etc. Special programs and events can be held to focus on wetlands, rivers and streams and Long Island Sound. A well-designed public education program should be at the heart of efforts to protect Madison's water resources and can begin to pay dividends almost immediately.”

The Madison Health Department, the Water Pollution Control Authority and the Connecticut Department of Environmental Protection regularly test water quality in order to discern overall trends. Surface water quality is tested at major streams that enter into Long Island Sound, at public and some private beaches, and at the extensive shellfishing beds. Generally, the sanitary quality of the streams that enter Long Island Sound from Madison is fair to good and the quality has improved at some sites and declined at others. For example, the surface water monitoring program indicates an improvement in the sanitary quality of Tuxis Brook over the past ten years or so. Monitoring programs should continue, and be expanded where necessary, in order to detect trends in surface water quality.

Ground water quality is evaluated by testing individual wells at the time of initial construction and again when the house is sold. A database is used to identify any community groundwater issues. While iron, manganese, and acidity can affect wells in Madison, the water is of good sanitary quality and quantity. These monitoring programs should also be continued.

In addition, the Town should continue the very effective septic monitoring program that records when septic tanks in Madison have been pumped and reminds property owners when it is time to have them cleaned again.

Recommendations

Water Quality Protection

1. Continue to monitor water quality in Madison.
2. Continue and expand surface water quality and ground water quality monitoring programs in order to detect trends.
3. Continue current septic system maintenance and inspection requirements in order to protect water quality.
4. Continue to review and strengthen the seasonal conversion ordinance to require septic system upgrade within a specific time frame (such as 12 months).
5. Continue to reduce pollution from storm run-off sources and improve water quality.
6. Continue to maintain and enhance water quality by removing sediment and other possible pollutants from storm drains and trapping sediments at drainage outfalls.
7. Charge the newly-formed Conservation Commission (or other agency) with implementing educational programs for Madison residents about:
 - the nature and value of water resources in Madison (such as Long Island Sound, inland and tidal wetlands, streams and rivers, and aquifers), and
 - programs on how to protect them (such as hazardous waste disposal and septic system maintenance).

Open Space and Coordination

8. Support the preservation of open space to protect water quality and water resource areas.
9. Continue to encourage the significant efforts of the Madison Land Conservation Trust .
10. Coordinate conservation efforts with neighboring towns to create greenbelt corridors which protect common waterways such as the Hammonasset River and the East and Neck Rivers.

Seasonal Conversion

Madison carefully monitors the conversion of seasonal residences to year-round dwelling units.

In particular, careful attention is paid to the adequacy of the septic system to accommodate year-round use. The timing of septic system improvements is a critical part of this effort.

Unique Habitats

The unique habitats and special areas identified on the fold-up map on this page are sites that have been recognized by the State Department of Environmental Protection (CTDEP) for:

- known occurrences of state or federal endangered or threatened species,
- state special concern species, or
- significant natural communities

When development or other activities are proposed in these areas, the applicant and/or the Town should contact CTDEP for additional information.

Natural Resource Conservation Plan
(flip page up)

Preserve or Conserve?

Preserve means:

- to protect from harm,
- to maintain intact or unchanged.

Conserve means:

- to save from loss or depletion,
- to avoid wasting.

Webster's Dictionary

Regulated Buffer Areas

Madison already requires 50 foot building setbacks from critical coastal resources (Section 2.17 of the Zoning Regulations) and from inland wetlands (section 6.4 of the Wetland Regulations).

These regulations can be enhanced by also establishing a non-disturbance area (no fill or construction) around these resources where a conditional use permit or special review would be required by the appropriate commission.

Preserve Important Resources

Several types of resources are so significant for preserving environmental quality or community character that efforts to preserve these resources must continue. The following table identifies natural resources in Madison that should be preserved in their natural state or that the major functions should be conserved in an environmentally sensitive way:

<u>Resources For Preservation</u>	<u>Resources For Conservation</u>
<ul style="list-style-type: none">• Watercourses• Inland and tidal wetlands• Floodplain (100-year, 1.0% probability)• Coastal "V" flood area	<ul style="list-style-type: none">• Slopes exceeding 25 percent• Floodplain (500-year, 0.2% probability)• Coastal "A" flood area• Public water supply watershed areas• Areas of high groundwater availability• Unique or special habitat areas (such as shellfish beds)

Recommendations

1. Continue to protect and preserve:
 - watercourses,
 - inland and tidal wetlands,
 - inland and coastal floodplains, and
 - critical coastal resource areas (such as beaches, dunes, rocky shore fronts, bluffs, and escarpments).
2. Consider increasing the building setbacks (from 50 feet to 100 feet as suggested by CTDEP-OLISP) from inland wetlands, water courses, and critical coastal resources.
3. Consider establishing 50-foot or greater non-disturbance areas from inland wetlands, watercourses, critical coastal resources, and other resources (no clearing or filling allowed without special approval) in all regulations.
4. Conserve steep slopes, public water supply watersheds, areas of high groundwater availability, and unique or special habitat areas.
5. Continue protection and enhancement of shellfish resources.
6. Continue to provide and enhance provisions for local fish and wildlife (such as the fish run recently installed on Bailey Creek).
7. Investigate the possible productive use of natural resources (such as harvesting salt hay in coastal areas).
8. Continue to work with the CTDEP-OLISP and others to rehabilitate Madison salt marshes.
9. Encourage the Madison Beach & Recreation Department to sponsor activities involving natural resources (such as shellfishing, crabbing, hiking, bicycling) to educate residents on the importance of conservation and the resources unique to Madison.