HANDBOOK

for

New Hampshire's Municipal Conservation Commissions

New Hampshire Association of Conservation Commissions
by Marjory M. Swope
August 2004

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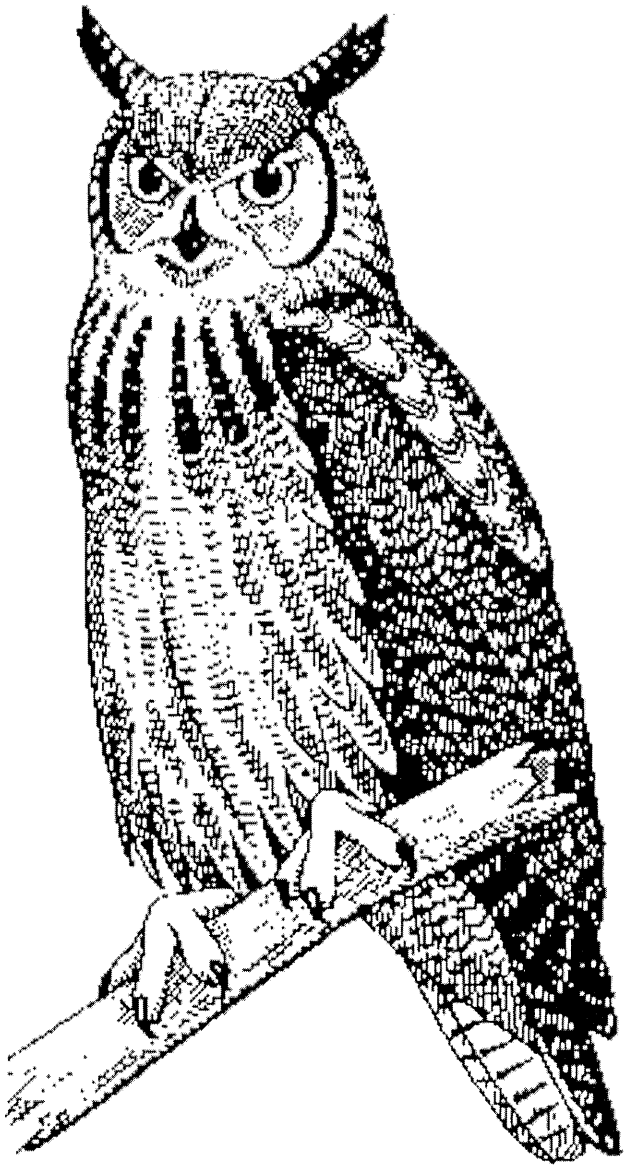

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Foreword

Why a Handbook?

New Hampshire RSA 36-A, which provides for the establishment of municipal conservation commissions, offers little specific direction to commissions on how to achieve the objectives of "...the proper utilization and protection of the natural resources and the protection of the watershed resources..." of a community. The advantage of this approach is the latitude it gives a conservation commission to tailor its activities and projects to the needs and desires of its municipality. The drawback is that a commission may need suggestions and guidance in order to be effective in its community. In addition, most new conservation commission appointees need to understand the options and techniques available to municipalities to achieve desired results.

Although each New Hampshire conservation commission deals with a unique set of natural resources, interests and projects, there is a common body of information of value to all commission members. This handbook is intended to serve as an introduction for new members to the powers, responsibilities, and possibilities of conservation commissions and as a reference for more experienced commissioners. It aims to offer enough information to give readers a general idea of what is involved and where to seek further information and help.

The contents include how a commission should operate within the municipal governmental structure (Chapters 1-4); how to prepare a natural resources inventory and conservation plan (Chapters 5-6); federal and state laws protecting natural resources (Chapter 7); local regulatory options (Chapters 8-9); federal, state and local wetlands regulations (Chapter 10); land acquisition and management techniques (Chapters 11-12); town forests (Chapter 13); examples of commission projects in other areas (Chapter 14); and sources of assistance and information, statutes and sample warrant articles (Appendices).

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Copies of current NH laws (RSAs) can be found online at: www.gencourt.state.nh.us/rsa/html/nhtoc.htm or by contacting the NHACC office.

Chapter 1

Municipal Conservation Commissions: The Basics

Why conservation commissions?

New Hampshire RSA 36-A authorizes a municipality to establish a conservation commission "for the proper utilization and protection of the natural resources and for the protection of watershed resources of said city or town". A commission is the only local body specifically charged with protecting natural resources; it provides a focal point within municipal government for environmental concerns. Without a conservation commission, other boards may or may not be aware of and consider natural resources in carrying out their responsibilities.

A commission is an advisory body: it may offer advice on conservation matters to state and local agencies and boards, such as the Department of Environmental Services (DES) Wetlands Bureau, planning board, or board of selectmen. It is the only local board authorized to "intervene", or request more time, to review applications submitted to DES Wetlands Bureau.

A commission may act directly to protect natural resources by acquiring, with the approval of the selectmen or city council, the fee (full title) or lesser interest (easement) in land or water resources on behalf of the municipality (see Chapter 11). It then may manage these conservation areas (see Chapter 12). If authorized by the local legislative body, it may manage duly designated town forests (RSA 31:110-113, see Chapter 13).

What MUST a commission do?

Municipalities are creations of the State and may act only as authorized by state law, so the New Hampshire Revised Statutes Annotated (RSA) are the authority on powers of conservation commissions. Local ordinances may give additional responsibilities to a commission, but these must be consistent with state statute, that is, they must be advisory only, not regulatory.

RSA 36-A enables towns to establish conservation commissions and lists their specific responsibilities, plus additional activities that commissions may, but need not, undertake. The statute directs every conservation commission to:

"...conduct researches into its local land and water areas..."

This charge is integral to virtually every activity of a conservation commission, since one can hardly make a recommendation on proper use or protection of natural resources without knowing what those resources are.

"...seek to coordinate the activities of unofficial bodies organized for similar purposes..."

An issue is more likely to be resolved or a project undertaken if all concerned can agree on the scope of the problem or project and the desired outcome. A town meeting or city council bombarded with requests from groups of citizens with different proposed solutions to a natural resource concern is less likely to solve a problem than one approached by several groups with one solution in mind. A conservation commission, as part of municipal government, is ideally positioned to assemble group representatives and develop mutually satisfactory goals.

"...keep an index of all open space and natural, aesthetic or ecological areas...all marshlands, swamps and other wetlands..."

"Index" conjures up visions of 3x5 cards – not the best way to organize resources data. The objective is a natural resources inventory; its most useful format is a map locating and text describing resources by category, e.g. bodies of water, topography, etc. Chapter 5 describes how a commission might prepare a natural resources inventory.

"...keep accurate records of its meetings and actions..."

Minutes are required. As a public body, a conservation commission must comply with RSA 91-A, Right-To-Know, which requires meetings open to the public, meeting notices posted, and timely availability of minutes (see Chapter 2).

What MAY a commission do?

RSA 36-A also authorizes a conservation commission to engage in optional activities:

"...may recommend...a program for the protection, development or better utilization of all...areas [in the index]..."

Once a natural resources inventory or "index" is prepared, a conservation commission may prepare plans and recommendations for appropriate use of areas identified and urge their adoption or implementation by the appropriate body.

Plans and recommendations will vary considerably in scope. A proposal might be for use of a single municipally owned parcel; for a use, such as a trail system, involving several parcels; for acquisition of a locally outstanding natural feature; or for regulation of development to protect natural resources such as steep slopes or wetlands.

The form of recommendations will vary as well. If a conservation commission has identified a town-owned parcel suitable for a town forest, its recommendation would be in the form of a warrant article designating the parcel as town forest (see Chapter 13). If the inventory finds valuable wetlands, a commission might draft a zoning amendment to protect them, or undertake to designate the most valuable as prime wetlands under RSA 482-A:15 (See Chapter 10).

Recommendations may involve comments on the municipal master plan or may include preparing the open space or conservation section of the master plan. If the master plan adequately addresses areas of concern, a commission may help the planning board draft an ordinance to implement the recommendations in the plan.

"...may receive gifts of money and property, both real and personal, in the name of the city or town, subject to the approval of the local governing body, such gifts to be managed and controlled by the commission..."

"...may acquire in the name of the town or city, subject to the approval of the local governing body,...the fee in such land or water rights, or any lesser interest...and shall manage and control the same, but the city or town or commission shall not have the right to condemn property for these purposes."

A conservation commission may accept donations and acquire land and easements in the name of the town or city with the approval of the local governing body (see Chapter 11). The municipality then becomes the owner of the property or easement; a conservation commission may not itself "own" property.

Time is often of the essence when land becomes available. In towns, using this power may avoid waiting for town meeting approval to acquire property. It is less important in cities: city councils meet regularly and can accept donations and authorize acquisitions. If a city commission has a conservation fund, it can avoid the need to appropriate new funds to buy land outside the regular budget process.

Although a commission may acquire land with selectmen's approval, neither the commission nor the selectmen may dispose of Town Forest or conservation land without town meeting approval (RSA 31:3, RSA 41:14-a).

"...may advertise, prepare, print and distribute books, maps, charts, plans and pamphlets...necessary for its work."

Informing the public about the nature of and reasons for a conservation commission proposal is as vital to its success as the research and thought behind the proposal. If residents do not understand the need for a proposed action, usually they will not support it. Few New Hampshire municipalities are small enough for commissioners to persuade residents individually of the wisdom of a particular action; most must rely, at least in part, on written material and maps (see Chapter 3).

Other statutory powers

Several other statutes give conservation commissions other optional powers. Using them can increase the scope and influence of a commission's activities.

Town forests

The statute enabling local designation and management of town and city forests, RSA 31:110-113, provides two options for municipal forest managers: a forestry committee created for that purpose, or, by vote of town meeting or city council, a conservation commission (see Chapter 13).

Dredge and fill in wetlands

The NH statute governing Fill and Dredge in Wetlands, RSA 482-A, allows a conservation commission to "intervene", or request time to investigate, a permit application filed with DES Wetlands Bureau. If a commission makes this request within 14 days of the date a standard application is signed by the town or city clerk, the Bureau must delay action on that application until a report is received from the commission or until 40 days from the date of the clerk's signature, whichever comes first. The conservation commission is the *only* municipal body with authority to "intervene" (see Chapter 10).

A conservation commission may also prepare the report and maps for local designation of prime wetlands under RSA 482-A:15 (see Chapter 10).

Sand and gravel excavations

Unlike most NH statutes that allow a municipality to regulate an activity if it chooses to do so, RSA 155-E requires all municipalities to regulate sand and gravel excavations by issuing permits (see Chapter 9). The planning board is responsible for administering this permit system unless the municipality votes to assign responsibility to the zoning board of adjustment or selectmen.

RSA 155-E:3 requires an applicant for an excavation permit to send a copy of the application to the conservation commission. This is an opportunity for a commission to make comments and recommendations on proposed excavation and restoration plans. A commission should see to it that it does in fact receive copies of applications and that its comments are considered in regulatory decisions. Local regulations should require the regulator to consider the commission's comments and prepare written findings if a decision differs from those recommendations.

How is a conservation commission established?

A conservation commission of 3 to 7 members, with or without alternates, may be created only by vote of the local legislative body (town meeting, town council, city council or board of aldermen). In a town, an article establishing a conservation commission must be on the warrant in order to be considered at town meeting. Such an article might be worded:

"To see if the town will vote to establish a conservation commission of ___ (3 to 7) members and ___ alternate members in accordance with RSA 36-A, said members to be appointed within ___ days of the annual meeting by the selectmen, who also shall designate a temporary chairman for the purpose of calling the first meeting of the commission."

Once a municipality has voted to establish a conservation commission, it automatically has the powers and duties described in RSA 36-A and other statutes. The number of members and alternate members on a particular commission is determined by the vote creating it. If the initial vote created a conservation commission of 3 members, but subsequently a larger commission is deemed desirable, then an article must be placed on the warrant (or the ordinance amended) to authorize appointment of more members up to the maximum of 7 allowed by RSA 36-A.

If a municipality has voted to establish a conservation commission, it may not be disbanded except by vote of the local legislative body. Only two NH towns have taken such a step; one later recreated its commission. In a few municipalities, a commission has become dormant due to failure to appoint members. In this case, a commission may be revived at any time by appointment of new members.

Who should serve on a conservation commission?

The membership of a conservation commission is prescribed by RSA 36-A:3. Commission members must be residents appointed by the selectmen or mayor for three-year terms, staggered so that each year approximately one third of the terms expire. In addition, RSA 91:2 requires that anyone holding "elective or appointive" municipal office must be a US citizen; a conservation commission is an appointed municipal "office". Also, common law holds that those authorized to make decisions and expend municipal dollars must be of voting age.

RSA 36-A suggests no further qualifications for commission members, but does permit one member to serve simultaneously on the city or town planning board and one or more members to serve on the heritage or historic district commission. Common members can help to establish and maintain

communications among these bodies, whose interests and activities may overlap but whose perspectives differ.

Mayors and selectmen are responsible for appointing numerous local officials and often welcome suggestions or volunteers for municipal positions. There is no "magic formula" of background or education to ensure that an appointee will be a good conservation commissioner, but there are several factors that should be considered by those appointing or suggesting possible commission members.

The most important characteristics in a commission member are an interest in conservation and a willingness to devote time to the work of the commission. Few New Hampshire commissions have staff; those that do usually have a secretary or the occasional assistance of a municipal employee whose primary responsibility lies elsewhere. What a conservation commission accomplishes is in direct correlation to the time and effort expended by its members.

The potential for conflicts of interest that may result in less than full participation in commission deliberations should be considered. Although the role of conservation commissions in the regulatory process is advisory, a commission member should abstain from discussion and decision on a recommendation if a conflict of interest exists.

Another factor to weigh is the balance of interests and talents among commission members. Conservation is a broad term embracing a number of interests related to natural resources. Hunters, fishermen, canoeists, foresters, farmers, hikers, snowmobilers, botanists, ornithologists, biologists, hydrologists, geologists, soil scientists, educators, and those concerned with pollution prevention and community planning are all interested in natural resources, but their perspectives on what constitutes wise use of those resources may vary considerably. Engineers, attorneys, photographers, and writers have skills that can be useful to a commission.

As a municipal body, a conservation commission should consider as many interests as possible in recommending "proper utilization and protection of the natural resources" for the simple reason that failure to do so is likely to result in unheeded recommendations. One way to ensure consideration of different concerns is to have members with varied interests and knowledge.

Where can a commission find more people to help?

Once a commission is established and involved in numerous projects, members may wish for more people to share the work. Although the number of regular members of a commission cannot exceed the number authorized by local vote (between 3 and 7), RSA 36-A:3 allows for the appointment of an unspecified number of alternate members. Alternates who serve "in the absence or disqualification of a regular member" have full voting powers. A commission should encourage alternates to attend meetings regularly and to participate in commission activities.

In addition, RSA 36-A:2 allows a commission to "appoint such clerks and other employees or subcommittees as it may from time to time require." Conservation commissions use this provision to create subcommittees to expand available manpower and expertise. Potential commission members may be asked to work on a short-term project as members of a committee chaired by a commission member. Others with a particular area of expertise may be willing to assist on occasion but prefer not to be regular members. In some instances, former conservation commission members continue to contribute to the work of the commission as "advisors" or "associate members".

Conservation commissions in New Hampshire have used these techniques to expand participation and capabilities beyond those of appointed commissioners. Those who are neither regular members nor alternates serving in the absence of a regular member may not vote on commission business, but there are many commission activities that do not involve voting.

Chapter 2

Conservation Commission Operations

A conservation commission is an official municipal body whose operations must comply with applicable state statutes, such as RSA 91-A, Right-to-Know. Yet the statutes do not cover every detail. The adoption of a standard set of procedures helps a commission to operate consistently and to avoid lengthy discussions of how the last similar situation was handled. Some sections of this chapter explain statutory requirements with appropriate citations, while others suggest how a commission might proceed.

By-laws or procedures

By-laws or rules of procedure provide a framework for substantive activities. Commission by-laws need not be elaborate but should clearly and explicitly cover:

- Name
- Purpose
  Cite RSA 36-A
- Membership
  Number authorized locally, terms (3 years staggered), alternates, appointing body
- Officers
  At least a chairman and secretary, perhaps a vice chairman
- Duties of officers
  Consult Robert's Rules of Order and assign additional responsibilities, such as preparation of annual report to town, posting notices of meetings, and keeping track of expenditures
- Election of officers
  Annually, immediately after the date for appointment of new members
- Duties of members
  Include RSA 36-A requirements and any local responsibilities
- Committees
  Describe standing committees and provide for ad hoc committees
- Meetings of the Commission
  Time, place, notice, order of business, quorum, voting
- Conduct of hearings and public informational meetings
- Procedure for dredge and fill permit applications (RSA 482-A)
  Include expedited and notification applications; intervention, investigation and report for regular applications
- Procedure for sand and gravel extraction permit applications (RSA 155-E)
- Procedure to handle requests from the planning or zoning board for advice or review, especially if such review is included in local ordinances or regulations
- Procedure for amendment of by-laws

Robert's Rules of Order and a copy of the by-laws or procedures of another municipal body, such as the planning board, may help a commission draft by-laws.

A commission may find it helpful to have written policies in addition to bylaws or procedures to address other situations that arise with some regularity, such as reports from residents of alleged violations of state or local regulations, offers of conservation easements in conjunction with permit applications, and offers of conservation easements on, or outright donation of, real property. Like by-laws or procedures, written policies can help a commission act consistently in similar situations.

Meetings

A conservation commission should meet at least monthly. An active commission with several projects will need to meet more often, either as a whole or in committee(s). The chairman should prepare an agenda for and preside at meetings of the full commission. Each agenda should include reports on continuing projects, such as trail maintenance or town forest management, to keep all members up to date.

A conservation commission is a public body; it and its committees are subject to the open meeting requirements of RSA 91-A, "Access to Public Records", also known as Right-to-Know Law. (For full text, see Appendix 3.)

RSA 91-A:1-a defines "public proceedings" as "... the transaction of any functions affecting any or all citizens of the state by ... [a]ny board, commission, agency or authority, of any county, town, municipal corporation, school district, or other political subdivision, or any committee, subcommittee or subordinate body thereof, or advisory committee thereto." All meetings of a conservation commission, its committees, subcommittees, task forces, and advisory bodies must be open to the public with a few specific exceptions described in RSA 91-A:3 (see below). Votes must be taken in open meeting; secret ballots are not allowed.

RSA 91-A:2 defines meeting as "the convening of a quorum of the membership of a public body ... to discuss or act upon a matter or matters over which the public body has supervision, control, jurisdiction or advisory power." For conservation commissions, this includes such activities as site visits for Wetlands Bureau applications or any other purpose if a quorum is present. In the presence of a quorum, "meeting" also covers trail layout, construction, or maintenance; boundary marking on town land; walks in a town forest with a forester to discuss recommended management, etc. In these examples, a commission would be discussing or acting upon some matter over which the commission "has supervision, control, jurisdiction or advisory power". E-mail discussions of commission business could be considered an attempt to evade the Right-To-Know law and should be avoided.

The requirement that meetings be open to the public does not mean that the public can participate in discussions of the commission or any of its subgroups, but merely that the public must be allowed to attend meetings, site visits, etc. A commission may wish to invite comment from the audience, but it need not do so. Commissioners should be aware that allowing comments on a controversial subject by those attending a commission meeting or site walk may invite criticism from those not present who wish their views known. If a commission is discussing a controversial topic and wants to know what residents think, it should schedule a public hearing.

Nonpublic sessions

Specific exceptions to requirements for public meetings allowed by RSA 91-A:3, II most likely to pertain to conservation commissions are nonpublic sessions to consider "acquisition, sale or lease of property which, if discussed in public, likely would benefit a party or parties whose interests are adverse to those of the general community"; hiring or firing of a public employee; and possibly discussion of pending litigation.

A conservation commission may exclude the public only after a recorded roll call vote on a motion stating the specific statutory exemption for the nonpublic session. Discussion during nonpublic session must be confined to the subject stated in the motion. Decisions made in nonpublic session must be made public within 72 hours of the meeting, "... unless, in the opinion of 2/3 of the members present, divulgence of the information likely would affect adversely the reputation of any person other than a member of the body or agency itself or render the proposed action ineffective." (RSA 91-A:3, III). In that case, immediately after the nonpublic session a commission should take a roll call vote in public session to seal the minutes.

Meeting notices

In order for members of the public to attend a meeting, they must know that it is taking place. RSA 91-A:2, II requires that notice of the time and place of a meeting be "... posted in two appropriate places or ... printed in a newspaper of general circulation in the city or town at least 24 hours, excluding Sundays and legal holidays, ..." before the meeting. Local newspaper, radio, or television announcements may supplement posted notices but are not required.

Some municipalities have a board in town hall listing regular meetings of each town board or commission. Such a board serves as one public posting. Conservation commissioners must remember to alter the listing if the regular meeting date is changed or a special meeting, site visit, or trail workday is scheduled.

Posting a meeting agenda is not required, but there are several advantages in doing so. First, only one document need be prepared, rather than two (agenda and meeting notice). Second, people will be able to identify and attend a meeting or part of it when a topic of interest will be discussed. Third, an agenda provides publicity, however low-key, for commission activities.

Commission members should be notified of scheduled meetings as well, if only as a reminder. The easiest way to do so is for the chairman or secretary to send a copy of the agenda by mail or E-mail before a meeting.

Public hearings

The powers of a conservation commission are largely advisory; its decisions usually are recommendations to other government bodies with decision-making authority. The single instance in which a commission is *required* to hold a public hearing is before using money from the conservation fund to acquire "any interest in real property" (RSA 36-A:5, II). Notice for such a public hearing must conform to RSA 675:7: it must be posted in 2 public places and published in a newspaper "of general circulation in the municipality" at least 10 calendar days before the public hearing, counting neither the day of posting nor the day of the hearing.

The only other statutory mention of conservation commission public hearings is in RSA 482-A:11, III on fill and dredge applications filed with Department of Environmental Services' Wetlands Bureau (see Appendix 3 for RSA 482-A; Chapter 10 for explanation): "In connection with any local investigation, a conservation commission may hold a public informational meeting or a public hearing, the record of which shall be made a part of the record of the department."

One NH municipality holds public hearings on all fill and dredge applications. There town staff, rather than the applicant (who pays for the mailing), sends abutters the notice required by RSA 482-A and includes a note with the date the commission will discuss the application. Abutters can then attend to comment on the application.

A commission may wish to solicit opinions through a public hearing or informational meeting on issues other than land acquisition or dredge and fill applications. An informational meeting is less formal than a public hearing. In the former, a proposal is explained and those present, whether attendees or meeting sponsors, are invited to ask questions and discuss the proposal. The reason to hold such a meeting is to ensure a proposal is completely understood. Modifications may be made in a proposal as a result of the meeting, but its objective is not usually to decide on the merits of the proposal.

The reason for a public hearing is to help members of the body holding it to make a decision based on the most complete information possible. At a public hearing, a proposal is presented, and opponents and proponents state their views. Members of the body holding a hearing may question speakers directly, but others should address questions to the chairman. A public hearing might proceed as described in the outline below, adapted from *The Board of Adjustment in New Hampshire: A Handbook for Local Officials* (Office of State Planning, October 2002, p. 32).

- The chairman opens the hearing and asks the secretary to call the roll of the conservation commission, so that the hearing record will reflect those present.
- The applicant describes the proposal.
- Those in favor of the proposal testify.
- Those opposed to the proposal testify.
- Those neither in favor nor opposed testify.
- The applicant presents a rebuttal to the opponents' arguments.
- If appropriate, an opponent may be invited to offer a rebuttal.
- The chairman may summarize arguments pro and con to clarify issues.
- If a summary is made, those who may dispute its accuracy should have a chance to do so.
- The chairman closes the hearing.

Depending on the subject, this format may need modification. A conservation commission may be asked for a recommendation on an issue, such as local regulation of sod farming. Questions might include: Should it be allowed by right or special exception? If by special exception, should it be granted once, or should there be a new application at intervals, with some evidence presented that the sod farming is properly conducted? If the latter, what interval and what evidence would be appropriate?

In this example, neither a project nor specific regulations are proposed, but opinions may exist for or against various courses of action. A public hearing may be the fastest way to learn all points of view. With no specific proposal, there would be no proponents or opponents. After opening the hearing, the

chairman should state the purpose of the hearing, and then provide an opportunity for all to express their views. During a hearing of this sort, it may clarify issues for the chairman or another commission member to summarize opinions expressed as they relate to questions the commission must answer (e.g., "Mr. Jones, are you suggesting that the commission recommend ...").

Records

Clear, concise, accurate records can be invaluable. Several statutes (RSA 36-A, 91-A, and, by implication, 482-A:11, III) require conservation commissions to keep records of meetings and hearings. Most specific is the Right-To-Know Law, RSA 91-A:2, II: "Minutes of all such meetings, including the names of members, persons appearing before the bodies or agencies, and a brief description of the subject matter discussed and final decisions, shall be promptly recorded and open to public inspection within 144 hours [6 days] of the public meeting ... and shall be treated as permanent record of any body or agency, or any subordinate body thereof, without exception." Minutes are required for nonpublic sessions as well to record any decisions and must be available within 72 hours. Minutes should include:

- Name of the body and the kind of meeting, e.g. regular, special, committee;
- Date, time, and place of the meeting;
- Who attended (i.e. members, staff, others) and presided;
- Approval of minutes of the previous meeting with additions or corrections noted;
- Summary of reports, discussion, and disposition of agenda items;
- Record of each vote, including names of those making and seconding motions;
- Dates of meetings scheduled; and
- Time of adjournment.

For a public hearing, the record should include conservation commission members present, and names of those who testified with a summary of their positions. An attendance sheet can help spell names accurately. Taping a public hearing also can be useful.

Minutes of meetings serve several purposes. They record activities of a conservation commission, assist in preparing annual reports, remind members of tasks they agreed to undertake, and, if sent to other local boards and to conservation commissions in neighboring municipalities, serve to keep recipients abreast of projects. Minutes should contain sufficient detail so that someone will be able to determine 10 years after the meeting not only what was done but why.

The Right-to-Know Law requires that minutes be available "for public inspection" within 144 hours (6 days) of a meeting or 72 hours (3 days) of a nonpublic meeting. In order for the public to "inspect" minutes, they must be accessible. The town clerk may be willing to keep the official commission minutes, or a notebook in another municipal office with its location advertised will suffice.

In addition to minutes, all reports and correspondence to or from a conservation commission are public records and therefore should be available for inspection at an accessible location. This includes electronic communications such as E-mail.

Retaining records

New Hampshire has a Municipal Records Board, established by RSA 33-A:4-a, with rules on how long municipal records must be retained. Approved minutes of boards and committees, including conservation commissions, must be kept *permanently.*

The Board rules require dredge and fill permits (not applications) be kept for 4 years, however a commission may wish to keep them longer, depending on their nature. Permits for waterfront structures may be useful for future reference, as may permits for subdivisions.

Conflict of interest

Many conservation commission votes will be on recommendations to another body with decision-making power. A commission member with a conflict of interest who participates in a discussion or recommendation could impair the credibility of the commission. Also, a court could declare a vote void if a member with a conflict of interest participated in the decision, regardless of whether that person's vote affected the result (*Winslow v. Holderness Planning Board,* 125 NH).

Town meeting or city council may adopt an ordinance "defining and regulating conflicts of interest for local officers and employees, whether elected or appointed." (RSA

31:39-a) If such a local ordinance exists, a conservation commission must comply with it. If no local ordinance exists, a commission might use as guidelines the standards for jurors contained in RSA 500-A:12. A juror is not regarded as neutral if he or she would gain or lose as a result of the outcome of the case, is related to anyone involved, has advised or assisted either party, or has given or formed an opinion.

Finances

RSA 36-A:5, I authorizes a municipality to appropriate funds for a conservation commission "as deemed necessary ... The whole or any part of money so appropriated in any year and any gifts of money ... may be placed in a conservation fund and allowed to accumulate from year to year."

Money may be appropriated by vote of town meeting or city council to a commission for operating expenses, capital expenditures, the conservation fund (see below), or the forest management fund (see Chapter 13). The town or city treasurer has custody of all commission funds.

When a local legislative body votes to establish a conservation commission, it may also appropriate operating expenses. Such an initial appropriation is more likely when the reason for creating a commission is a local crisis in which immediate action is deemed necessary. Many New Hampshire commissions have been established without municipal funding for the first year.

Once a conservation commission is established, appropriations for the commission should be in the municipal budget considered by town meeting or city council. In order to have funding included in the proposed budget, a commission must find out who is responsible for preparing the budget, when budget requests should be submitted, and what information and supporting data should be included. In a town, the budget committee or selectmen usually are responsible for preparing the proposed budget; in a city or larger town it may be municipal staff.

Operating expenses

To determine the amount to request for operating funds, a conservation commission needs to consider activities planned for the next year. Operating expenses include costs for stationery, copying, and postage for commission meeting notices, minutes and correspondence; costs of items such as maps, aerial photos or publications to assist the commission in its work; funds to enable commission members to attend educational meetings during the year; and funds for membership in the New Hampshire Association of Conservation Commissions. If a commission anticipates producing a report on a completed study, printing costs should be included as well as costs for contracted services such as preparing maps. The procedures of some municipalities allow such expenditures to be grouped in a single item as "administrative expenses", while others require more detail.

A conservation commission should find out in advance how much flexibility exists to transfer appropriated funds between budget items. If there is a general line item for administrative expenses, it should be possible to expend some dollars budgeted for postage on copies provided expenditures do not exceed the total budgeted for administrative expenses. If copies and postage are separate line items and the town is under the Municipal Budget Act (RSA 32), selectmen must approve transfers between line items. A general line item clearly provides greater flexibility.

If a commission wishes to hire personnel (a secretary, consultant, or intern for example) as authorized by RSA 36-A:2, funds should be in the requested budget. Some municipalities require personnel expenses to be separated from administrative expenses, regardless of whether the personnel will be part-time or temporary municipal employees or consultants contracted for a specific task, such as a natural resources or wetlands inventory.

If a conservation commission intends to undertake a project for which it will seek donations, grants, or funds from sources other than local tax revenues, both anticipated income from other sources and total expenditures should be in the commission budget. A municipality may spend only those funds that are appropriated. Even if income from other sources is not a firm figure when town meeting or city council adopts the budget, including anticipated revenues and expenditures avoids the need for a subsequent vote to transfer donated money from the general fund to the commission's account.

Regardless of municipal budget preparers' requirements, funds for a special com-

mission project should be separated from routine operating expenses. Then, if town meeting or city council decides not to fund a special project, it can be cut or reduced without endangering operating expenses.

Authority to spend money appropriated by a municipality lasts only to the end of the fiscal year. A commission should plan its budget and expenditures accordingly. It may be possible to encumber part of an annual appropriation to pay in the next fiscal year expenses incurred prior to the close of the current fiscal year, but a commission should be absolutely sure of requirements and procedures prior to making commitments of this sort. Such problems can be avoided if a municipality votes to establish a conservation fund and to deposit in it any unexpended money appropriated to the commission (see below).

Proper preparation and timely submission of estimated expenditures by a conservation commission do not ensure that items or amounts will be in the budget presented to the local legislative body for a vote. A commission should be prepared to argue for funding as the budget is prepared, at the budget hearing, and, in a town, at the time of the final vote on the budget at town meeting.

Conservation fund

The provision that the "whole or any part of money so appropriated in any year and any gifts of money ... may be placed in a conservation fund and allowed to accumulate from year to year" permits accrual of funds that "may be expended ... by the conservation commission for the purpose of this chapter without further approval of the town meeting." (RSA 36-A:5, I). As noted above, the authority to expend municipal appropriations normally lapses at the end of a fiscal year; remaining balances become part of the general fund surplus for that fiscal year. A conservation fund is an exception to this rule.

The local legislative body must vote to create a conservation fund and to place unexpended appropriations therein. It is not created automatically by a vote to establish a commission, unless the article or resolution also establishes a conservation fund. Many NH municipalities have established such a fund and made the first appropriation to it by voting to place in it the unexpended balance of the commission's annual appropriation.

A town meeting or city council may vote to place the unexpended portion of the commission's appropriation for a particular year in the conservation fund, with the year specified in the warrant article or motion. Such a warrant article might be worded:

"To see if the town will vote to authorize the conservation commission to retain the unexpended portion of its _____(year) appropriation as authorized by RSA 36-A:5, said funds to be placed in a conservation fund account held by the municipal treasurer (RSA 41:29)."

A vote to place unexpended appropriations in a conservation fund is valid only for that year, and must be voted on annually because RSA 36-A:5 contains no language saying the allocation will continue until rescinded. For many years, the Department of Revenue Administration (DRA) treated a one-time vote to place unexpended operating budget appropriations in the conservation fund as a continuing allocation in subsequent years, but DRA no longer does so. Commissions will need to submit this warrant article annually.

RSA 79-A and RSA 36-A allow a municipality to vote to allocate a percentage and/or amount of the use change tax to the conservation fund. (See Chapter 11 and Appendix 3 for the text of RSA 79-A:25 and RSA 36-A:5, III.) Once a town meeting or city council has voted to allocate some or all of these receipts to the conservation fund, the voted percentage and/or amount of the tax will be deposited in the conservation fund *at the time it is received* by the municipality until a vote of the legislative body changes the percentage and/or amount or rescinds the allocation. A warrant article allocating the use change tax to the conservation fund might be worded:

"To see if the town will vote to deposit _____ [percentage and/or amount] of the revenues collected pursuant to RSA 79-A (the land use change tax) in the conservation fund in accordance with RSA 36-A:5, III as authorized by RSA 79-A:25, II."

In addition, "any gifts of money received pursuant to RSA 36-A:4 [that is, with the approval of the local governing body] may be placed in a conservation fund ..." A conservation fund must be established by vote of the legislative body before funds can be put in it (see above).

Money in a conservation fund may be spent for any activity authorized by RSA 36-A but most often is used for land acquisition and associated costs. Some municipalities regularly appropriate money to the fund to provide for future purchase of unspecified parcels for conservation purposes. No further town meeting vote is needed to spend money from a conservation fund, but a majority of a conservation commission must authorize expenditures (RSA 36-A:5, I & II). If money from the fund is to be used to purchase any interest in land, a commission must hold a public hearing (see Public Hearings above) and the acquisition must be approved by the selectmen or city council (RSA 36-A:4).

Capital expenditures

Appropriations

In addition to operating expenses and a conservation fund, a conservation commission may ask for an appropriation for a capital expenditure, such as the purchase or improvement of a particular piece of land. By far the simplest route is to ask for an appropriation to the conservation fund.

If an appropriation to the conservation fund is not feasible, an appropriation may be part of the municipal capital budget. The disadvantage of a capital budget appropriation is that money must be encumbered prior to the end of the fiscal year or it will lapse.

Another option is to create a capital reserve fund for land acquisition as authorized by RSA 35:1 or a trust fund as authorized by RSA 31:19-a. Money appropriated to such a funds will not lapse at the end of the fiscal year.

In towns, there are two ways to use capital reserve funds to buy land: the legislative body must vote to expend money from a capital reserve fund or the legislative body must appoint the selectmen as agents for a capital reserve fund by adopting RSA 41:14-a. A drawback to a town meeting vote is that sellers are not always willing or able to wait for town meeting.

If the selectmen are appointed agents, then they must seek recommendations from the conservation commission and planning board and hold two public hearings on a proposed acquisition before voting to purchase land. And if, prior to the selectmen's vote, 50 registered voters present a petition requesting the proposed acquisition be placed on the warrant for town meeting, the selectmen must do so.

If a trust fund has been created, RSA 31:19-a authorizes the legislative body to appoint agents to spend funds for the purposes of the trust. A potential disadvantage to both capital reserve and trust funds is that the legislative body may vote to dissolve them and place any remaining funds in the general fund.

Bonds

Recently some municipalities, particularly in southeastern NH where land prices have escalated, have chosen to fund conservation land acquisition by issuing bonds, either to buy a specific parcel or to have funds available for future purchases. In some instances, the vote to authorize bonds is accompanied by a condition that town meeting (either special or annual) vote on the specific parcels to be acquired. Most authorize the selectmen to issue the bonds; most authorize the conservation commission, with the approval of the selectmen to acquire land, but some put the choice of properties to acquire in the hands of an "open space" or similar committee; and some put a time limit on the bond authorization. Although examples of warrant articles for bonds are available from NHACC and the Center for Land Conservation Assistance, a commission contemplating a warrant article for a bond should confer with legal and bond counsel to ensure correct wording.

Donations and grants

A commission is authorized under RSA 36-A:4 to receive gifts of "money ... in the name of the city or town subject to the approval of the local governing body, such gifts to be managed and controlled by the commission for the purposes of this section." Normally, a vote of the legislative body is needed to accept and to expend funds for any purpose. RSA 36-A:4 and 5 make an exception to this requirement for a conservation commission, with approval of the local governing body, to accept donated money, deposit it in the conservation fund, and expend it from the fund.

If a conservation commission either expects or hopes to receive funds from sources other than tax revenues, the best approach is to include estimated amounts and proposed expenditures in the commission's budget. If a commission is raising funds for a project for

which expenditures are anticipated in a future fiscal year and a conservation fund has been established, the budget could include the amount of anticipated donations as income to the conservation fund.

If a commission wishes to apply for a grant, the approval of the governing body should be sought prior to the application.

Custody and expenditure of funds

Although RSA 36-A authorizes appropriating funds for a conservation commission, establishing a conservation fund in which funds may accrue from year to year, and accepting gifts by a commission with the governing body's approval, nowhere does RSA 36-A authorize a conservation commission to have custody of those funds. In fact, RSA 36-A:5, II specifies that "The town treasurer, pursuant to RSA 41:29, shall have custody of all moneys in the conservation fund and shall pay out same only upon order of the conservation commission."

RSA 41:29 also applies to a commission's operating expenses appropriated from the general fund. It states: "The town treasurer shall have custody of all moneys belonging to the town, and shall pay out the same only upon orders of the selectmen, or, in the case of a conservation fund established pursuant to RSA 36-A:5, upon order of the conservation commission."

The two statutes make clear that the town treasurer must keep any and all commission funds along with other town funds. A commission must submit a request to the selectmen to expend general fund appropriations and a request to the treasurer for conservation fund money.

A conservation commission should keep track of its expenditures. If the municipality has a system of regular distribution of financial reports to various town boards and commissions, this should suffice. If not, a member of the commission should be asked to keep an eye on expenses.

Resources

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Chapter 3

Relations with Municipal Officials and the Public

A conservation commission is advisory and therefore must rely on persuasion to accomplish its goals. Once a commission decides on an objective, the way to achieve it often involves urging another local body to act on commission recommendations. To be effective a commission needs to establish and maintain good relations with other municipal boards and officials.

Good relationships do not happen of their own accord; they must be developed and cultivated. A conservation commission bears most of the responsibility for cultivation because it is more likely to be asking other municipal bodies to adopt a commission proposal than receiving recommendations from them.

Members of other boards and residents may view commission members as tree-huggers with impractical ideas. A commission must establish credibility in the eyes of municipal officials and citizens to dispel such misconceptions. This can be achieved by ensuring that proposals presented are carefully researched and solutions thoughtfully developed in advance, that suggestions are offered in a helpful rather than accusatory manner, and that the commission's voice is always heard when public policy issues dealing with natural resources are discussed. As a conservation commission increases its visibility and respect, other boards may begin to seek its assistance and advice.

The powers and duties of selected municipal boards show how their responsibilities relate to those of a conservation commission.

Governing body

In most towns, a board of selectmen is the governing body, officials responsible for the daily administration of municipal affairs as directed by town meeting, which is the legislative body of a town. Town meeting adopts the municipal budget; selectmen supervise the expenditure of the funds appropriated. Town meeting adopts most town ordinances; selectmen enforce those ordinances. Selectmen administer the zoning ordinance and certain local building regulations, unless the town has a building inspector or code enforcement officer to do so. The selectmen and town health officer are the board of health; the health officer enforces public health laws and rules. Selectmen lay out new roads and decide whether to authorize building permits on Class VI roads (RSA 674:41). Town meeting votes to establish a conservation commission; selectmen appoint its members. As head of the administrative branch of local government, selectmen oversee gathering financial information and budget requests for the budget committee or to prepare the budget themselves in the absence of a budget committee.

NH city governments vary because city charters differ. In a city with a strong mayor form of government, the mayor's responsibilities parallel those of selectmen. The city or town manager fills that role in a city or town with a council, though the power to make appointments to boards and commissions may remain with the council. The board of aldermen, city council, or town council is the legislative body that adopts ordinances and budgets, unless a town charter provides for official ballots or budgetary town meeting.

Since the effectiveness of a conservation commission depends on its members, those with power to appoint should be carefully cultivated. A commission should keep selectmen or city/town council informed of its activities and should seek advice and support as appropriate. Commission members should not design activities solely to win favor with the appointing body but should bear in mind the effects of failure to reappoint valuable members and make a special effort to ensure that projects are explained to and understood by selectmen or city/town council.

Budget committee

In towns that have adopted the Municipal Budget Act (RSA 32), a budget committee prepares the proposed budget for town meeting to consider. Because budget committee recommendations affect appropriations for

conservation commission activities, a commission should seek committee support for projects (see Chapter 2). While a budget committee does not have final say on municipal appropriations, projects recommended in the proposed budget are more often adopted than those that are not.

Planning board

The selectmen or town/city council and budget committee are important for their control over the human and financial resources available to a conservation commission. The planning board is important because its responsibilities affect natural resources a commission is charged to protect.

Responsibilities of a conservation commission and those of a planning board are complementary; a cooperative approach in areas of mutual concern is important. As noted in Chapter 1, a conservation commission and planning board may have one common member (RSA 36-A and RSA 673:7). Sharing a member should enhance communications and help ensure mutual understanding and cooperation.

In cities and larger towns, professional planning staff may help build a relationship between planning board and conservation commission, encouraging exchange of ideas, information and expertise. Although the planning board is the primary responsibility of a staff planner, he or she may also be able to advise the commission on procedures, sources of information, and strategies for reaching commission goals.

Planning responsibilities

New Hampshire statutes permit planning boards to exercise a broad range of powers in land use planning, some of which must be specifically authorized by the local legislative body. One responsibility is not optional: preparation and periodic revision (every 5-10 years) of a municipal master plan.

The master plan, described in RSA 674:2, III, must address future land use; it may include sections on recreation; and natural resources, including water resources management and protection. When the Legislature completely revised RSA 674:2 in 2002, it eliminated the optional conservation open space section but included in the purposes of a master plan "wise resource protection" (RSA 674:2, I) and added an optional natural resources section:

> "A natural resources section which identifies and inventories any critical or sensitive areas or resources, not only those in the local community, but also those shared with abutting communities. This section provides a factual basis for any land development regulations that may be enacted to protect natural areas. A key component in preparing this section is to identify any conflicts between other elements of the master plan and natural resources, as well as conflicts with plans of abutting communities. The natural resources section of the master plan should include a local water resources management and protection plan as specified in RSA 4-C:22." (RSA 674:2, III(d))

A commission should ensure that master plan recommendations for future land use adequately consider protection of natural resources and provide for "passive" or low impact recreational activities such as cross-country skiing and hiking.

When a master plan is being prepared or revised, a commission has a golden opportunity to make recommendations. Often a master plan committee is created to help the planning board. Such a committee can provide a forum for community discussion and a base of support for subsequent implementation measures. A conservation commissioner should serve either as a member of or a liaison with the master plan committee.

If the master plan has been adopted, a commission should review it to be sure that natural resources receive proper consideration. Should master plan additions or revisions be needed, the commission should recommend proposed changes to the planning board.

Implementation responsibilities

The master plan adopted by a planning board is not enforceable as is an ordinance: it is the plan or guide for future development of a municipality. To be effective it must be implemented by adopting or modifying zoning ordinances, and perhaps subdivision or site plan review regulations. Many conservation commissions have found that local regulation is needed to ensure wise use of natural resources, such as wetlands or shores of rivers, streams or lakes.

A planning board is responsible for preparing, and in towns holding hearings on, proposals to adopt or revise a zoning ordi-

nance. A commission may draft a zoning amendment as a recommendation to the planning board. Or a commission may petition for a zoning amendment. If a petition complies with the requirements of RSA 675:4, it will appear on the town meeting ballot with a statement of the planning board's position for or against it.

The procedure for local designation of prime wetlands authorizes a conservation commission to prepare the recommendation, maps and report (RSA 482-A:15; Wt Chapter 700). Actual designation is by vote of the local legislative body following the procedure required for adoption or amendment of a zoning ordinance (see Chapters 8 and 10).

Finally, a planning board may prepare a capital improvements program covering at least six years to assist in preparing annual municipal budgets (RSA 674:5-8). If a master plan envisions municipal acquisition of specific areas for conservation, the capital improvements plan could include costs of land purchase and, if appropriate, its development. While most other capital improvement projects seem unrelated to conservation, commissioners might consider that where infrastructure (water, sewer and roads) leads, development will follow.

Regulatory responsibilities

Town meeting or city council may authorize a planning board to regulate subdivision of land (RSA 674:35), but before a board may do so, it must adopt regulations. A commission could recommend provisions to protect potential natural resources, such as erosion controls to avoid sedimentation in surface waters.

On individual subdivision applications some planning boards routinely seek conservation commission views; other commissions offer recommendations unasked. Some planning boards have included an advisory role for the commission in subdivision regulations. These may require commission comments during the review process, particularly for subdivisions in previously identified areas of concern. In some cases, modifications to a proposed subdivision may avoid the need to alter wetlands or natural drainage systems, for example, as lots are developed.

In a municipality that has adopted a zoning ordinance and authorized its planning board to regulate subdivisions, a planning board may be further authorized, by vote of town meeting or city council, to review site plans for non-residential and multi-family housing development, whether or not it involves a subdivision. As with subdivisions, a planning board must adopt regulations before exercising site plan review power. A conservation commission may make recommendations to the planning board on its regulations or on a particular proposal.

A planning board has regulatory power in one more area, excavation of "...sand, gravel rock, soil or construction aggregate..." (RSA 155-E). The statute provides for a planning board to adopt local regulations and to issue permits, but allows a local legislative body to transfer this responsibility to the selectmen or board of adjustment.

The requirement that an applicant send a copy of an excavation permit application to the conservation commission (RSA 155-E:3) gives a commission a foot in this regulatory door. A commission should ensure that local regulations are adopted and that they include consideration of commission recommendations on permit requests. This should be followed up by review of and recommendations on each application (see Chapter 9).

Zoning board of adjustment

Every New Hampshire municipality that adopts a zoning ordinance must establish a zoning board of adjustment (ZBA). The board is a requirement because it is impossible to write a zoning ordinance that provides for every unusual condition or special circumstance that might occur. A ZBA functions as a quasi-judicial body for a zoning ordinance. A ZBA hears and decides requests for special exceptions to and variances from the ordinance and appeals from decisions of the zoning administrator (local official or board of selectmen responsible for enforcing the zoning ordinance).

Any appeal or request to the ZBA requires a public hearing. The board hears a description of the proposed course of action, arguments for and against, and then makes a decision. A ZBA cannot alter provisions of a zoning ordinance, but it can interpret those provisions, decide whether a proposal complies with stated requirements for a special exception to the ordinance, and grant a variance from the provisions of the ordinance in certain circumstances.

A conservation commission should make every effort to ensure that zoning designed to protect natural resources includes clear definitions and precise statements that accurately reflect intended restrictions, whether or not the commission actually drafts the proposed ordinance. A zoning ordinance may require commission comment in specific areas, such as a wetlands district, before ZBA action. A commission also may express its opinion on any case before the ZBA. Oral testimony with written back-up is most effective and ensures that commission comments are part of the ZBA's record.

Recreation and parks

RSA 35-B, "Public Recreation and Parks", authorizes a municipality to provide public recreational land, facilities, and programs in various ways that include: establishing a recreation or park commission, assigning the responsibility to any existing board or commission or combination thereof, or contracting with one or more public or private agencies. However a particular municipality chooses to provide recreation, it will probably need to acquire more recreation land as population increases.

Although the statutes do not define activities envisioned as "recreation", recreation and parks commissions usually provide for sports such as baseball, basketball, swimming, and tennis, and for urban parks and playgrounds. A conservation commission also may provide recreational opportunities, such as nature, cross-country skiing, or hiking trails, through multiple use management of land acquired for conservation or town forest purposes. A commission should avoid operating sports programs such as basketball and baseball for two reasons: first, it may duplicate or infringe on responsibilities of other groups; and second, it will reduce time available for the purposes for which a commission was established.

Public recreation is a use of land that may dovetail with conservation commission objectives. Recreation and conservation plans, especially for land acquisition, should be complementary; periodic communications or joint meetings can ensure coordination.

Heritage commission

The powers of heritage commissions for local cultural and historic resources are similar to those of conservation commissions for natural resources, except that a local legislative body also may vote to give a heritage commission regulatory responsibility for historic districts. The purpose of a heritage commission is "proper recognition, use, and protection of resources...primarily man-made ...valued for their historic, cultural, aesthetic, or community significance within their *natural*, built or cultural contexts." (RSA 674:44-a, emphasis added).

Conservation, heritage and historic district commissions may have common members (RSA 36-A:3; 673:4, III; 673:4-a, III). Their interests may overlap: for example, preserving an archaeological site or natural backdrop for an historic building. Periodic communications or joint meetings can ensure coordination.

Town or city clerk

A good working relationship with the town or city clerk is vital to conservation commission participation in the wetlands permit process. An applicant for a permit from Department of Environmental Services' Wetlands Bureau starts by getting the town or city clerk to sign and date five copies of an application. Four copies remain with the clerk for immediate distribution: one to the selectmen, mayor or city/town manager; one to the planning board; one to the conservation commission; and one for the clerk's file (RSA 482-A:3).

If a commission wishes to investigate a standard application ("intervene"), a member must notify the Wetlands Bureau in writing within 14 days of the date of the town or city clerk's signature. If what is filed is a notification permit, a commission is presumed to have intervened, but must submit any and all comments within 21 days of the clerk's signature. Because of the limited time for notifying the Bureau, a commission must establish a reliable system with the town or city clerk to ensure the chairman or another member is notified at once when an application is filed for a permit under RSA 482-A (see Chapter 10).

Other local officials

Activities and interests of a conservation commission may involve other local officials. A zoning administrator (building inspector, board of selectmen, or other local official) is responsible for fair and impartial enforcement of a zoning ordinance and building code

through issuance of building permits. A commission should ensure that the administrator requires appropriate state permits before issuing a building permit.

A commission interested in protecting groundwater quality should work with the water department or board to ensure protection of aquifers supplying public wells (see Chapter 9). The health officer enforces public health laws and rules (RSA 128) and may propose stricter septic system requirements than those imposed by the state for adoption by the selectmen (RSA 147:10).

A fire chief is concerned about adequate access for fire trucks in subdivisions and is involved in regulating underground fuel storage tanks and registering hazardous materials in the workplace. The police are concerned about traffic circulation and entrances to public roads; the road agent or public works department is concerned with construction standards for and drainage near roads to avoid future maintenance problems. Appendices 1 and 2 also may help identify those responsible for an area of concern.

Local legislative body and the public

The local legislative body (town meeting or city/town council) makes final decisions on municipal appropriations and many local ordinances; conservation commission projects frequently involve one or the other. Persuading town meeting of the merits of a proposal amounts to gaining support of a majority of local citizens; efforts to do so should begin well in advance of town meeting day.

A commission needs to persuade fewer voters if the local legislative body is a city or town council. However, city commissions have learned that a council is more likely to act favorably on a proposal actively supported by other residents than on one advocated by the commission alone.

Unfamiliar or poorly understood ideas are often greeted with suspicion and negative votes. A successful conservation commission must work to ensure public understanding of its concerns and projects. The minute a commission embarks on a project is the time to start informal discussions with friends, neighbors and municipal officials. Even before commission members decide how to approach a problem, talking about reasons for concern is useful. People are unlikely to take steps to address a problem if they fail to see that there is a problem.

Once a project is underway a conservation commission should seize every opportunity for publicity. Members might:

- offer to speak to local clubs and organizations;
- sponsor walks or canoe trips to areas of interest or concern;
- take slides and show them at the drop of a hat;
- get school children involved;
- create a display for town meeting, schools, or store windows;
- invite local officials to accompany a field team;
- volunteer to appear on a radio or television talk show;
- write an article or letter to the editor for the local paper;
- offer information on a website;
- arrange for an expert to conduct a workshop;
- hold a public meeting; or
- publish a commission newsletter or flier.

How a commission spreads the word will vary with the issue and community. If an issue is a "hot" one, people may be willing to attend a meeting; if not, a commission must seek out an audience. The methods selected to reach the public should be ones that work best locally. Even if a problem is widely recognized, a commission should never assume that its solution, whatever its merits, will be adopted without thorough public discussion and comprehension.

Resources

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Chapter 4

Effective Conservation Commissions

The three previous chapters describe the nuts and bolts of conservation commission operations: statutory authority, general organization, and how a commission fits into municipal government. This chapter will look at some of the techniques used by successful conservation commissions, drawn in part from a study of New Hampshire and Vermont conservation commissions by Christine Negra of University of Vermont Extension in 1998 and reported in *Identifying Factors Leading to Effective Local Conservation Commissions.*

Members

What a conservation commission accomplishes is directly related to the ideas and efforts of its members, who are appointed by the local governing body. The selectmen or mayor are responsible for appointing many local officials and often welcome suggestions.

Two important characteristics for a potential conservation commissioner are interest in conservation and willingness to work on commission projects. To these should be added willingness to learn, since commission activities can involve areas with which the most ardent conservationist will be unfamiliar; patience, since municipal projects often take an inordinately long time; and leadership potential, since commission members may chair subcommittees and eventually the commission itself.

Finding members

To attract new members, a commission needs to let residents know what it is doing, using whatever techniques work best locally: articles in the town newsletter; informal conversations with friends and neighbors; displays at town meeting, election day or old home day; speaking at local club meetings, etc. Another approach might be to invite residents on guided walks on commission trails or tours of conservation land by foot or canoe. Residents who show interest can be invited to attend a commission meeting and to consider whether they wish to be appointed. If a commission would like a member with expertise in a particular area, residents with that expertise could be approached directly and asked if they would like to serve.

However potential members are identified, current members should explain clearly what is involved in serving on a commission: time commitment, current activities, committee work, and opportunities for involvement in existing or new projects.

Member training

Once a new member is appointed, other members should provide orientation on the role of a commission, commission procedures and projects. Some conservation commissions provide each member with a notebook to ensure everyone has access to common information. Such a notebook might include:

- Commission by-laws and policies,
- List of commission members,
- Local natural resources inventory,
- Local conservation plan and master plan
- Local capital improvements plan,
- List of land managed and easements monitored by the commission,
- List of scenic roads,
- List of officially designated prime wetlands,
- Local ordinances related to conservation,
- Commission publications (maps, reports),
- Local procedures for applications to the Wetlands Bureau,
- Wetlands Bureau rules, or at least the project classification section and the web address for the full set of rules,
- DES fact sheets covering topics the commission is working on, and
- This handbook.

A more experienced member should go over the material with a new member, explaining what is included and why and offering to answer questions.

When new or potential members attend a commission meeting, it can be helpful to explain briefly what the commission is doing and why, so people are not discouraged by unfamiliar topics and procedures. Also, a commission should encourage new members to take advantage of meetings and workshops, such as the NHACC Annual Meeting, that offer training or informational sessions.

Training is not just for new members. As a commission addresses issues and undertakes projects, more experienced members may find themselves in areas in which they have had little experience and only superficial knowledge. They will have to learn by reading, consulting experts, talking to conservation commissions that have dealt with similar situations, or attending meetings, workshops, seminars, and conferences. A commission's budget should include funds for continuing education for members.

Keeping members

Once new members are familiar with commission responsibilities and procedures, they should be encouraged to participate in discussions and decision-making. If possible, ask them to take on a part of an ongoing project that is going well so their first experience will be positive. Choose a task they enjoy. If they like outdoor work, perhaps building a trail loop; if they're computer whizzes, perhaps working on a commission's web page.

Some conservation commissioners will have more time or be willing to take on more responsibility than others. Chairmen should try to ensure that this outcome is natural, and not because one or two members dominate the discussions, decisions, and tasks. There should be room on every conservation commission's agenda for individual initiative.

Running a commission

There is no one "correct" way for conservation commissions to operate. Each will vary depending on the community, members and chairman, and may change over time. Some will be more formal than others, but a few general rules should apply to all.

Commissions are not required to adopt by-laws or operating procedures and written policies, but doing so may help to ensure a commission behaves consistently. Whether or not a commission has formal by-laws or procedural guides, commission members should discuss and agree upon such items as the degree of formality of meetings, when the chairman will be elected, which issues will be resolved by consensus and which will require motions and votes, how Wetlands Bureau applications will be handled, and the like.

Meetings should start and end on time and have an agenda, preferably distributed prior to the meeting. The chairman should see that the meeting follows the agenda and that all commission members are encouraged to participate in discussions and activities. There should be an opportunity to raise issues not on the agenda under "other business", but it will help with time allocation if the chairman asks members to identify "other" topics at the beginning of each meeting.

A commission chairman needs to learn to delegate and avoid, by design or default, trying to do everything. Certainly some commission members are more experienced than others, but they became experienced by doing. A chairman who doesn't get other members involved by asking them to take responsibility for some activity runs the risk of burnt-out, exhaustion, and commission disintegration when he/she leaves. Members accustomed to having a chairman who does everything are unlikely to want to become chairman or active participants.

Getting things done

There are many more conservation issues than there is commission time and energy to address them. A commission needs to focus its efforts on a few projects at a time rather than adopting a scattershot approach.

Where to begin?

Start with the conservation commission enabling legislation (RSA 36-A) and review the reason commissions exist: to protect natural resources within a municipality. Issues such as whether or not to drill for oil in the Arctic Wildlife Refuge are important, but not for a municipal conservation commission. This is not to say that commissions should not look beyond their municipalities: natural resources do not respect political boundaries, and working with commissions in neighboring towns on protecting a common resource, such as a river, or a project,

such as connected open space or trails, is entirely appropriate. But a conservation commission's focus should be primarily on local, not national or statewide, issues.

If a commission has not prepared a natural resources inventory (see Chapter 5), that is the place to start. How can a commission protect its local natural resources without knowing what they are?

If a commission has a natural resources inventory, has it developed a plan to protect those resources? If not, that is step two. A conservation plan will provide a framework for commission activities (see Chapter 6). A conservation plan is likely to have numerous recommended actions: land and easements to be acquired, trails constructed, town forests designated or managed, zoning ordinances to be amended or written, etc. No commission can undertake all these at once.

Setting priorities

A commission will need to choose among numerous potential activities in the conservation plan and others not in the plan, but important for other reasons, such as dealing with an unforeseen crisis or enhancing local visibility of a commission.

Some commissions set priorities formally and systematically by devoting a meeting to discussing and adopting an annual work plan, complete with goals, timelines, and assigned responsibilities. Some do so more informally during regular meetings. Others do not discuss priorities specifically. Before a commission discusses priorities, it will help to decide on criteria to be used in setting priorities, and put them in writing.

However a commission chooses to do it, setting goals or deciding which projects to undertake and when is a good idea. By focusing its efforts, a commission stands a better chance of actually completing a project. This not only gives members a sense of accomplishment, it also demonstrates to residents that a commission is effective and worthy of support.

While for many conservation commissions land and easement acquisition is a priority, the process of acquiring a single parcel or easement can be lengthy and is unlikely to involve all members of a commission. Ideally a commission should have several projects in the works: one that can be quickly and easily completed; one that will take longer, up to about a year; and a long-range project that may take several years. Examples in the first category might be a roadside cleanup day, Arbor Day tree planting, a fishing derby, a canoe trip, or a hike. Intermediate projects might be publishing a trails map, proposing a zoning amendment, developing an interpretive trail, or designing, manufacturing, and erecting signs for conservation areas. Long-range projects might include a natural resources inventory, a conservation plan, a prime wetlands study, expanding and maintaining trail systems, and land or easement acquisition to implement the conservation plan.

Selecting projects

Recommendations in a conservation plan need to be implemented, but it is only too likely that issues or needs not covered by the plan will arise. A commission should take a hard look at each as it arises, and make a conscious decision about whether to become involved, and if so, how deeply.

One consideration is whether there is another group willing and able to cope with the problem or issue, or perhaps is already doing so. If there is, and a conservation commission is happy with the group's approach, a commission might offer support if it is needed, or might ask a member to serve as a liaison with the group to keep the commission abreast of its progress.

If no one else has stepped forward, consider the appropriate role for the commission. Remember to factor in the time needed for a successful outcome.

If, for example, the issue is inadequate local recycling, a commission might research options for presentation to the community or might select one option and promote it. But beware of becoming so involved that the commission finds itself running a local recycling (or recreation or river monitoring) program. That will take all of the time members have to devote to the commission and then some, leaving no energy to address other important issues such as acquisition of land and easements.

Leadership is another factor: is a commission member willing to take charge? What resources besides time and leadership will be needed? Finally, what are chances of success?

Routine activities

Some commission activities will be recurring, for example reviewing applications to the Wetlands Bureau or development proposals, maintaining trails, or monitoring easements. A commission ought to agree on how to deal with each most efficiently, write down the policy or procedure, and then follow it.

Completing projects

Ideally a natural leader whose infectious enthusiasm inspires others to get involved and leap tall obstacles with a single bound should lead every commission project. The rest of us mere mortals will need to be organized in approaching projects.

Once a project or goal is selected, the first order of business is to identify the desired result; the second is to determine what steps or tasks are needed to reach that result. If how to achieve the goal is unclear, perhaps research can identify others who have undertaken the same or a similar project. The NHACC office is a good place to start. Reinventing the wheel is not a good use of time, but strategies used by others may be improved upon.

When the "how" is clear, it may help to break the project into steps or tasks to be accomplished with a rough time-line. Then consider who should undertake each task: do they all need to be done by the same people or could other individuals or groups accomplish some of them? If others could do part of the work, should they be members of the commission or would the project benefit by involving others in the community?

The answer to the last question should include an assessment of current activities of commission members as well as the skills and background needed to accomplish the step and the support needed for the eventual success of the project. For example, if a successful outcome will need community support, it may be wise to get people outside the commission involved at an early stage, even if commission members could do all the work themselves. Perhaps students and residents could help collect data, thereby developing a sense of ownership in the project.

If a project is divided into tasks shared by others, the project leader, who need not be the commission chairman, should make clear to each group what is expected and when, and then keep tabs on progress. A little organization and delegation of responsibilities can go a long way toward ensuring a successful project.

Relationships

Much of what a conservation commission does involves dealing with people, either in groups or as individuals. The people may be town residents at town meeting; board of selectmen; planning board; state agency employees; developers, their engineers or other consultants; abutters concerned about a proposed development; or landowners who wish to undertake a project, who own land on which there is an easement, or from whom the commission wishes to acquire an easement or property. Commissions may find themselves dealing with the same individuals wearing different "hats": a selectman may be an abutter to a proposed development for example. A few suggestions:

- Consider in advance who is likely to oppose an initiative and why, and figure out how to respond to their arguments or allay their concerns.
- Try to look at the issue from the potential opponent's point of view. For example, a developer may want the maximum return from developing a parcel; a landowner may worry that a proposed ordinance will reduce the value of his/her property; a selectman may be concerned with keeping local property taxes low; a fellow conservation commissioner may want to preserve all undeveloped land. Understanding the other person's interest in a topic can help determine how to approach it and them.
- Listen carefully to what is being said and why.
- Be pleasant, polite and positive. Approaching a person, board, or agency employee with a negative or angry attitude, either in words or demeanor, is likely to evoke a similar reaction – and unlikely to achieve the desired result.
- Do not assume opponents or those who make adverse decisions are malevolent; they may not be aware of all facts or may have misunderstood arguments.
- Do not criticize other boards, groups, or individuals; criticize their ideas or posi-

tions. Practice the art of disagreeing without being disagreeable: adversaries in one fight may be allies in the next one.

- When a project succeeds, always credit those who assisted; they will be more likely to help next time.

Public image

How the public, particularly town residents, view a conservation commission will affect what that commission can accomplish. While public image might not be the only reason for undertaking an activity, it should be considered.

A commission needs to let residents know it exists and cultivate positive feelings toward it. Routes to this end might include writing a regular column in the town newsletter, holding a spring roadside cleanup, setting up an information shelf at the library, running a big tree contest, leading nature walks, planting trees, etc. (see Chapter 14). Although some may view these as merely "feel-good" activities unrelated to commission objectives, they can be important in building respect and credibility for a commission and its members and pay off later in support when the commission is struggling with a difficult or controversial issue.

Keep people informed

It is *always* a good idea to inform other local officials (selectmen, city or town council, planning board) and the public before, during and after a commission undertakes a project. People kept up to date on activities are more likely to become supporters than those who learn of a project only when recommendations are made.

When a commission embarks on a project, explain to other boards the problem to be addressed, the reason to do something about it, and the proposed procedures. Ask for suggestions and comments, and, if appropriate, incorporate them into the plan of attack. Depending on the project, the public might be informed through a meeting, articles in a town newsletter, or an explanation in the commission's annual report.

Periodic status reports as a project progresses will remind people about the project, and likely inform others who may not have been paying attention at the outset.

Enforcement issues

Review of RSA 36-A will show that conservation commissions are not regulatory bodies and have no enforcement power. Yet commissions are charged with protecting local natural resources, and residents may report perceived environmental violations to commission members.

How should a commission respond? There is no "correct" approach; this question is one that each commission needs to discuss and decide itself, preferably before such a situation arises, and put the policy in writing.

A commission might decide simply to tell the resident whom to call to report a violation, although a commission may learn that the resident has done so only to be told to call the commission. Or a commission might write the alleged violator, explaining that someone has complained and what is alleged to be the problem. Or a commission might talk to the alleged violator, preferably on site, and if an apparent violation exists, explain the problem. Then if the problem is not rectified, the commission itself might report the violation to the appropriate authority.

How a commission chooses to treat reports of environmental infractions is less important than that members agree on procedures, write them down, and apply them consistently.

A final thought

Successful commissions are patient; not only does government move slowly, but commission initiatives may take years to bear fruit. A lot of what a commission accomplishes is due to establishing and maintaining good relationships with residents, landowners, and other town officials; these take time and patience to cultivate.

Chapter 5

Natural Resources Inventory or Index

In enabling a municipality to establish a conservation commission, the New Hampshire Legislature provided room for a commission to adapt its activities to the needs and desires of its community but imposed a basic requirement in RSA 36-A:2:

> *"Such commission shall conduct researches into its local land and water areas [and] ... shall keep an index of all open space and natural, aesthetic or ecological areas within the city or town ... with the plan of obtaining information pertinent to the proper utilization of such areas, including lands owned by the state or lands owned by a town or city. It shall keep an index of all marshlands, swamps and all other wetlands in a like manner ..."*

One of Webster's definitions of "index" is "list describing the items of a collection and where they may be found". A natural resources index is in fact a natural resources inventory.

Why prepare a natural resources inventory?

RSA 36-A has since 1963 required commissions to identify local natural resources – the logical starting point for protecting and ensuring proper use of local natural resources. Yet 40 years later many commissions have yet to complete an inventory.

There are good reasons to prepare a natural resources inventory besides the statutory requirement. In order to protect local natural resources, a commission must know what they are. Then a commission needs to consider *how* to protect and ensure proper use of those resources (see Chapter 6, Developing a Conservation Plan).

A natural resources inventory can inform other local boards and residents of special features of their municipality. When people understand what a commission is trying to protect and why, they are more likely to support measures to do so. An inventory can help guide a municipal master plan and its implementing zoning ordinance.

By documenting wildlife habitats, a natural resources inventory can show the value of riparian buffers along streams and ponds. Soils data may reveal highly erodible steep slopes from which there should be construction setbacks and on which disturbances should be limited. An inventory might identify an area suitable for a public water supply well where a municipality may wish to acquire land or limit potentially polluting uses.

An inventory can be used as a guide in setting priorities for land and easement acquisition. Are there, for example, two or more conservation areas that could be connected to improve wildlife habitat or opportunities for recreational or educational pursuits such as cross-country skiing or nature trails? Have habitats of rare species or exemplary natural communities been identified that should be preserved by acquisition?

An inventory also may identify areas for future commission activities, such as town-owned land with potential for a town forest or water bodies without public access.

In short, a natural resource inventory, while a substantial project, is not an end in itself but an important tool for commissions to use in efforts to protect natural resources. An inventory will need periodic revision as more information becomes available and conditions change; therefore it is important to cite the date and source of data included.

Before beginning

A natural resources inventory consists of information on the natural landscape and some of its uses, organized in a report. A conservation commission should think about the final product before starting an inventory because this can determine costs, tasks and expertise needed. A typical inventory includes maps, information on the features shown on the maps, and a report summarizing findings and documenting sources and dates of data. Most information for a municipal natural resources inventory exists somewhere; the task is to find and compile it in a useful form, perhaps refining it by adding more data.

Commissions' natural resources inventories vary considerably, from reports with maps entirely by commission members to ones prepared by planners and consultants. Costs vary just as widely. In some instances, commissions have enlisted the help of college or graduate students; in others, commission members have collected data and written the report while regional planning commissions have provided maps.

Considering how the inventory will be used can help determine what is included and how it may best be conducted. If its principle use will be as part of the master plan, the planning board should be consulted; perhaps the inventory could be a joint project of the commission and board.

A commission should review two guides designed to assist with natural resource inventories: *Natural Resource Inventories: A Guide for New Hampshire Communities and Conservation Groups* and *Identifying and Protecting New Hampshire's Significant Wildlife Habitat: A Guide for Towns and Conservation Groups* (see Resources at the end of this chapter). The NHACC office has a few inventories on file; some municipalities have natural resource inventories on their websites.

After a commission has looked over the guides and what others have done, talking with the regional planning commission, UNH Cooperative Extension's Community Conservation Assistance Program, or a planning consultant may help members estimate costs and decide how to proceed.

Seek compiled information

Municipal files are the first place to look for compiled natural resources data. An inventory was the first project of some NH conservation commissions; it may have been filed and forgotten. If current members are unaware of an inventory, a concerted search of files, town reports and memories of former commission members is in order. An inventory prepared some years ago should be reviewed. Does it include up to date information, all natural resources of current concern, such as sand and gravel aquifers and habitats of rare species of plants or animals?

Some conservation commissions did not do a comprehensive inventory but prepared some components, such as maps and descriptions of municipally-owned land or wetlands. Reports and maps prepared for other purposes may contain useful information.

A commission then should check with the planning board. A planning board will be able to advise on the best base map to use and is likely to have adopted a master plan with a land use section based in part upon a study of natural resources (RSA 674:2, II.(b)). The study may not be a comprehensive inventory of natural resources but is a starting point.

A master plan may have natural resources section that "should include a local water resources management and protection plan..." (RSA 674:2, III.(d)). If a master plan has a recreation section, it may include areas appropriate for "passive" or low-impact recreation, such as beaches or trails. A section on public utilities may include existing and future water supplies. In addition to the master plan itself, planning board files may yield studies prepared for, but not included in, the master plan or ones made for other purposes that involve natural resources.

The next place to look for compiled material is the regional planning commission. A number of regional planning commissions have prepared studies or maps of various natural resources for the region or for municipalities within the region. Studies and maps for a region will be less detailed than those for a single town, but should identify natural resources of regional importance.

Maps

Maps are important, since the purpose of the project is to identify and locate resources. Since a map can contain only so much information without becoming cluttered and confusing, a reproducible overlay of each resource mapped at the scale of the municipal base map is ideal. Separate overlays enable a commission to use them individually or in various other combinations for developing the inventory maps, report and subsequent conservation plan. A Geographic Information System (GIS) consists of mapped data layers in a computer database that can be printed separately or combined - a computer version of reproducible overlays.

A commission should consider whether to prepare maps by computer using GIS or by hand. Regional Planning Commissions have GIS capabilities as do increasing numbers of municipalities, consultants, and individuals.

NH's GIS database, GRANIT, contains much of the data needed for a natural resources inventory; more information is being added as time and funding allow. The GRANIT GIS database is developed and maintained by the Office of Energy and Planning (formerly the Office of State Planning) and the Complex Systems Research Center at UNH. GRANIT data are mapped at a scale of 1:24,000, the same as that of USGS topographic maps. Changing the scale of mapped data affects accuracy: what is accurately mapped at 1:24,000 is less accurate when enlarged to 1:1000.

Maps produced from GRANIT are adequate for general planning purposes, but additional investigation is needed when it comes to pinpointing the location of a particular feature or property. Some information in GRANIT is inaccurate because the source from which it was digitized was inaccurate, and a commission may want to add data not in GRANIT. Therefore should a commission choose to use GRANIT GIS maps, it would help to have someone capable of tweaking the data to correct errors and make additions. If this is not possible, the written report can cite inaccuracies and omissions.

Mapped information from other sources may be at different scales and will need to be adjusted to the scale of the base map. There are numerous ways to do this, such as using a grid, stat camera, pantograph, light table, slides, opaque projector, copy machine, consultant, or GIS. Because changing the scale at which data are displayed affects accuracy, a commission should use the most precise method available to adjust map scales.

Data for some parts of the inventory may not be mapped at all. If this is the case, a commission will have to decide what to add to existing maps and what to describe but not map.

Get organized

The organization of the tasks involved in an inventory will depend on the product desired and the expertise available. An extensive written report might include sections describing the values, functions, and development limitations of each category of resource mapped. A conservation commission might appoint a subcommittee for each resource and recruit other residents with expertise to locate and expand existing data, help prepare maps and write that section of the inventory. A commission could pay for part of the work, such as preparing maps, or hire a consultant to do most or all of the inventory.

A less elaborate inventory could concentrate on a few maps with a brief description of the resources depicted. A basic inventory might include maps showing roads, water resources and major wetlands, areas of particular importance such as prime farm soils, rare species, exemplary natural communities, conservation lands, and large unfragmented areas. In this case, the work might be divided simply into the three tasks involved in any natural resources inventory: gathering information, preparing the map(s), and writing the description.

Once a commission identifies available data, what further information is needed, and who will be doing the actual work, the next task is preparing an outline for the contents of the inventory and assigning responsibility for each aspect. Then prepare a budget, remembering to include printing costs, and a timeline for the project. Unless a consultant is to do all the work, an inventory is likely to take longer than anticipated. However, it can be done in phases, starting with a basic inventory and adding or refining data over time.

Contents of an inventory

The "index" that RSA 36-A:2 directs a commission to keep is described sweepingly as "...all open space and natural, aesthetic or ecological areas...including lands owned by the state or...by a town or city...all marshlands, swamps and all other wetlands..." A conservation commission, whether starting from scratch, using studies made for other purposes, or evaluating an existing inventory, should consider the elements that together will produce a complete picture of the natural resources of a municipality.

The rest of this chapter describes what might be included in a comprehensive natural resources inventory and suggests sources of information. Much of the information is available in digital form on GRANIT. The sources listed for each resource do not include GRANIT because its data are constantly expanding and should be checked routinely.

Other state and federal government agencies, such as NH Department of Environ-

mental Services (DES), USDA Natural Resources Conservation Service (NRCS), and the US and NH Geological Surveys, have developed GIS databases for the information they collect. In addition, more and more maps, fact sheets, etc., are available on the web. DES' Public Information and Permitting Office (PIP) has a free booklet, *Publications of the NH Department of Environmental Services*, that is updated regularly and lists all DES publications, including fact sheets. Appendix 2 contains addresses and telephone numbers for the agencies and organizations mentioned.

All data in a natural resources inventory should have source and date noted to help with future inventory updates. The contents below assume the inventory will be a separate document; if it is a master plan chapter, some items may appear elsewhere and need not be duplicated.

I. Introduction

The introduction should include general information about the municipality, such as its location, land and water area in acres or square miles, population, general description of present land uses (urban, residential, farming, mining, forestry, etc.), and the purpose and organization of inventory.

II. Land

A. Topography

Topography is the shape of the land, the physical features that form the landscape of a municipality. Topographic maps are two-dimensional representations of three-dimensional landscape, showing both vertical and horizontal distances. Height and depth are depicted by contour lines joining points of equal elevation. The patterns of contour lines and the distances between them indicate the shape and slope of the land and the resulting drainage patterns. Topography is slowly becoming available digitally.

The US Geological Survey (USGS) has topographic maps at two scales: the 15 minute series at a scale of 1:62,500 (1"=c. 1 mile), and the 7.5 minute series at a scale of 1:24,000 (1"=2000'). These topographic maps, often called quadrangle maps, may be purchased at book and stationery stores. The maps show wooded areas in green, open fields in white and urban areas in pink. Elevation is expressed in brown contour lines; surface waters, rivers, intermittent streams and larger wetlands appear in blue. Quadrangle maps include roads and, outside the pink urban areas, the location of buildings. Periodically USGS publishes revised maps with changes shown in purple.

USGS topographic maps are useful for conservation commission activities beyond the natural resources inventory, such as field orientation and site location. Even if adequate topographic data for an inventory is found in local or regional publications, a commission should have the appropriate USGS quadrangle map(s) for reference.

For the inventory, contour lines showing elevations and steep slopes are particularly valuable. Steep slopes are easily identified on USGS topographic maps: close contour lines look like brown shading. The 15-minute series uses 20-foot contour lines; the 7.5-minute shows 10' to 40' contours.

Slopes are usually considered steep when the gradient is 25% or more (that is, when the land rises 25 feet in a horizontal distance of 100 feet), although moderately steep slopes of 15%-25% may pose problems for development. The gradient is the ratio of vertical feet to horizontal feet (vertical feet divided by horizontal feet—"rise over reach"); it can be calculated on a topographic map by measuring the distance between contour lines and dividing the increase in elevation by the distance measured. Calculating slope from USGS topographic maps may be a bit misleading for some uses, such as determining conditions on a specific lot. For example, two areas may have a 25% increase in elevation over 100 feet, but in one the increase is a gradual over the entire 100 feet while the other may have a slight slope for 90 feet, then a cliff.

USGS topographic maps are best used to identify broad areas of steep slopes for potential inclusion in a natural resources inventory. Before adding them to an inventory, a conservation commission should determine their character. Steep slopes might be scenic cliffs or a ravine, highly erodible sand banks or a relatively stable wooded incline.

High elevations, such as peaks and ridgelines, are shown on topographic maps. Here too, some additional assessment will be needed prior to including such areas in a natural resource inventory. Is there a view of or from the hilltop? Is only the highest ridge-

line worthy of mention, or should some or all of the lower ones be included too?

B. Geology

Bedrock is the foundation of land and is commonly considered a solid, unbroken mass, although in fact it may have numerous cracks and fissures. Its notable features for a natural resources inventory are mineral deposits; areas of calcareous rock (likely habitat for rare plants); areas of exposed bedrock, such as mountain tops, cliffs, and rock outcrops; and areas in which bedrock lies close to the surface, making building construction and subsurface waste disposal more difficult.

Above the bedrock and below the soil usually is a layer of unconsolidated earth material called by soil scientists the "c horizon" or "parent material" of the overlying soil and by geologists "surficial deposits". Maps of surficial geology identify bedrock outcrops, swamp deposits, permeability and drainage characteristics, and sand and gravel deposits. Of primary concern for an inventory are the ability of the surficial layer to transmit water and the location and depth of sand and gravel deposits, which may indicate the presence of substantial amounts of accessible groundwater. Gravel is New Hampshire's most valuable mineral resource, not in dollars per ton but in quantity available.

A map of NH's bedrock geology at a scale of 1:250,000 was published in 1997. A statewide surficial geological map at a similar scale exists, but needs updating. Larger scale maps of bedrock or surficial geology based on USGS quadrangles are available for some areas of New Hampshire.

A 1993 report, *New Hampshire Sand and Gravel Resources,* consists of 3 maps covering the entire state and the calculated acreage and probable volume of deposits after deducting areas unavailable for extraction because of existing land uses. If a commission wishes to include sand and gravel in its inventory, this report and maps can be used in conjunction with surficial geologic maps and sand and gravel aquifer maps prepared by USGS and DES Water Division to estimate the location and extent of local deposits. The report is available from PIP.

Existing mines, quarries and gravel pits also help to identify geologic resources; town histories, historical societies, and longtime residents may know of some no longer in production. Commission members may know of unusual geological formations. If not, local science teachers or the NH Geologic Survey may be able to identify special features.

C. Soils

The Natural Resources Conservation Service (NRCS) of the US Department of Agriculture has completed modern soil surveys, using the standards of the National Cooperative Soil Survey, for most of NH. Much of these data are on the NH NRCS website.

The published county surveys include a wealth of written material and tables describing characteristics of soils and their suitability for various uses, as well as maps with the approximate boundary of each soil drawn on aerial photographs. Each conservation district office has copies of its county survey; district personnel can assist with interpretation and use. A district also may have county-specific publications to supplement the soil surveys.

Conservation commissions can use soil survey maps to locate areas of very poorly drained soils, which are almost always wetlands, and poorly drained soils, which are often wetlands. The survey describes the erosion potential of each type of soil. The location of erodible soils can be matched with slopes with a gradient of 15% or more to identify areas particularly susceptible to erosion. A soil survey shows prime agricultural soils and the productivity and management limitations of various soils for forestry. Suitability for recreational development and wildlife habitat also is assessed.

Soil maps identify areas with limitations for the construction of septic systems, such as soils with a hardpan layer or bedrock close to the surface and excessively drained soils that inadequately filter effluent. Excessively drained sand and gravel deposits may be able to provide substantial quantities of groundwater, although additional information is needed to confirm this possibility.

As with the USGS topographic maps, soil maps should be used to determine general characteristics of an area but not for a specific lot without on site examination. A soil map delineates an area in which one soil type is dominant, but it is almost impossible to draw a boundary at the scale of a county soil survey that does not include small areas of different soils, called "inclusions". Often inclusions have characteristics similar to those

of the dominant soil, but some have very different characteristics.

III. Water

The Office of Energy and Planning has a Technical Bulletin on its web site (#9, *Formulating a Water Resources Management and Protection Plan*) on preparing the water resources planning and protection section of a master plan (RSA 4-C:19-22). In the past, regional planning commissions prepared water resources plans for some municipalities. A conservation commission should get the Bulletin and any information available from DES and the regional planning commission before beginning the water resources section of an inventory.

A. Surface water and wetlands

US Geological Survey topographic maps show surface waters and waterways, intermittent streams, and the general location of wetlands. DES has delineated the major watersheds; the maps are on GRANIT and also available from regional planning commissions. Using these as a base, a commission can delineate subwatersheds. Undeveloped land along the shores of ponds, lakes, rivers and streams is also noteworthy.

Several sets of wetland maps for much of the state are on GRANIT: USDA Natural Resources Conservation Service (NRCS) soils maps; LANDSAT Thematic Mapper (TM) maps based on satellite data interpreted to depict wetlands; and US Fish and Wildlife Service's National Wetlands Inventory maps.

NRCS county soil surveys map areas of very poorly drained and poorly drained soils. Very poorly drained soils are almost always wetlands and generally have vegetation typical of bogs, marshes or swamps. Poorly drained soils may, but do not necessarily, support wetland vegetation. The reason for the variation in vegetative characteristics of poorly drained soils is that most NH county surveys include in this category some soils that are somewhat poorly drained because the acreage of somewhat poorly drained soils is too small to map separately.

For state and federal regulatory purposes, wetland soils are those identified by using the 2004 edition (Version 3) of *Field Indicators for Identifying Hydric Soils in New England*, published by New England Interstate Water Pollution Control Commission. These are almost the same as very poorly and poorly drained soils.

US Fish and Wildlife Service's National Wetlands Inventory maps delineate wetlands on aerial photographs, categorize them using *Classification of Wetlands and Deepwater Habitats of the United States* (L. M. Cowardin, et al., 1979), and transfer their boundaries to modified USGS quadrangles.

Ideally all three sets of wetlands maps should be used together; combined they provide the approximate location of wetlands. This is usually sufficient for planning purposes; field verification is always needed for precise boundary delineation.

Current aerial photographs can be used to identify wetlands and as a cross check for wetland maps from other sources. A skilled photo interpreter can identify wetland types and map them fairly accurately from an aerial photo, although field verification is needed, particularly in wooded areas. With some training, conservation commissioners should be able to identify probable wetland areas using "stereo pairs" of aerial photographs. A "stereo pair" is two aerial photos of the same area, each taken from a slightly different location. Examined through a stereo viewer, the landscape appears three-dimensional. Areas that appear flat may be wetlands, since wetlands have little if any slope. Apparent flat areas may be compared with topographic and soils maps and sites inspected to verify wetland characteristics.

There are several sources for aerial photographs. The planning board, regional planning commission, or county office of the USDA Farm Service Agency (FSA) should be able to identify the most recent aerial photographs of an area and their source. County FSA offices can order aerial photographs at their original scale and enlarged or reduced.

B. Flood hazard areas

Most New Hampshire municipalities with flood-prone areas participate in the federal flood insurance program and should have maps of areas subject to flooding in the municipal offices. If maps are not available locally, a conservation commission can consult the Office of Emergency Management, Department of Safety, or the flood insurance coordinator at the Office of Energy and Planning to identify flood areas.

C. Groundwater

About 60% of New Hampshire's population depends on groundwater, largely from saturated sand and gravel deposits or rock fractures in bedrock. An aquifer is any geologic formation capable of supplying water to wells; for example, glacial till, which transmits water slowly, is the aquifer for most dug wells. Demands of modern appliances exceed till's capacity to transmit water; most newer private wells are drilled. In municipalities without public water supplies, the entire land area is an aquifer for individual wells.

Rock fracture wells (also called drilled, pounded or artesian wells) can supply sufficient water for a single household in most of NH. Unless such wells are in an area of extensive fractures, they generally yield insufficient water for municipal or industrial use. Hydrogeologic studies are needed to identify areas of extensive rock fractures that may produce substantial quantities of groundwater; such a study is beyond the scope of a natural resources inventory.

When including groundwater in a natural resources inventory, a conservation commission should focus on sand and gravel aquifers, especially those likely to yield sufficient water for municipal and industrial use. Stratified sand and gravel deposits can store and transmit large quantities of water; these are the most productive NH aquifers. But the ability of sand and gravel to transmit water quickly makes a poor filter for pollutants from inappropriate land uses.

In the 1970s, US Geological Survey in cooperation with the NH Water Resources Board prepared a set of groundwater availability maps covering the state. These "reconnaissance" maps are based largely on soils, surficial geology, and highway bridge borings and show the general location of sand and gravel deposits that a preliminary assessment indicates are most likely to yield quantities of water greater than that needed by a single household. The purpose of these maps was to help those seeking groundwater supplies for municipal or industrial uses by identifying areas to explore; they continue to provide a regional view of these aquifers.

NH's sand and gravel aquifers were subsequently studied and mapped in more detail, more precisely defining aquifer boundaries, quantity and quality of water available, and the relationship between ground and surface water. For this study, the state was divided into 14 regions corresponding to the drainage divides of major watersheds; each has about the same area of sand and gravel deposits. USGS published maps and reports for each region.

DES Drinking Water Source Protection Program has delineated recharge areas of public water supply wells, identified areas favorable for new public water supply wells in stratified drift, and has numerous fact sheets, guidance documents, and maps on the DES website that also can be generated on request. DES has a *New Hampshire Groundwater Information Catalog* that describes information resources for NH's groundwater.

IV. BIOLOGY

A. Unusual plants

The best source of information on rare plant and animal species is the NH Natural Heritage Bureau (NH NHB) in the Division of Forests and Lands, Department of Resources and Economic Development. Established in 1984, the program first mapped historical reports of species and communities of special interest. Then field surveys began to verify the presence of reported flora and fauna. In some instances, the species were not found and the sites deleted from the database. Some species found to be more common in NH than previously believed also have been removed. Conversely, field surveys have located previously unreported species of concern and added them to the database. Field verification is ongoing; the database is continuously revised to reflect fieldwork and changed conditions.

NH NHB data are cross-referenced and maintained in manual files by element and by USGS quadrangle, in map files on USGS topographic maps, and on computer. The data are available to conservation commissions at no cost, although fees are charged to the private sector. A list by municipality of rare plants, animals, and exemplary natural communities is on NH NHB's website.

A commission should not overlook residents with botanic expertise. Natural Heritage Bureau botanists have not walked every square inch of the state; local observers may be aware of occurrences not yet included in the NH NHB database.

B. Wildlife

At the moment, wildlife data are more difficult to find than most other elements of a natural resources inventory. The best resource here is NH Fish and Game (F&G) Department's *Identifying and Protecting New Hampshire's Significant Wildlife Habitat: A Guide for Towns and Conservation Groups*, which focuses on identifying habitat likely to be used by wildlife. Wildlife does not stay in one place, and locations of sightings may be on a travel route rather than primary habitat. F&G is in the process of developing a Comprehensive Wildlife Plan for the State, due to be completed in 2005, that will flesh out the habitats identified in the *Guide* with data on where species are known to occur. Until the Plan is finished, the *Guide* is the best resource available.

The *Guide* states that the most important areas of wildlife habitat are unfragmented lands, areas within 300 feet of undeveloped shoreline of lakes, ponds, rivers, streams, and major wetlands; wetlands, especially larger ones, marshes, wetland complexes composed of wetlands and vernal pools, and clusters of small wetlands; open lands, including agricultural and other open fields, airports, shrub land, and abandoned, but not active, gravel pits; and identified habitat of rare species and those sensitive to disturbance.

The Natural Heritage Bureau includes information on rare wildlife in its database and the *Guide* has an appendix describing habitat of rare species and what to map for each.

For game species, including fish, birds and animals, local hunters, trappers and fishermen are good sources of additional information. Fish and Game has mapped deer-yards in a number of municipalities.

The Audubon Society of NH may have additional information. Audubon undertakes some projects for Fish and Game and prepared a breeding bird atlas during the 1980s. Audubon programs encompass birds and animals; the Loon Preservation Committee is an Audubon affiliate. Local bird or wildflower clubs also may have further information.

C. Natural areas of particular importance

This category could include areas that support a special variety of species, such as white cedar swamps or basin marshes, and areas that are good examples of particular ecosystems and of sufficient size to be sustainable. Areas in the latter category may be relatively common today, but as development continues they may become uncommon. Information on both sorts of areas may be available from the organizations mentioned above or from The Nature Conservancy, a private, non-profit, conservation organization specializing in identifying and preserving exemplary natural areas.

V. Man's use of open space land

Inventory elements described so far do not address man's influence on natural resources, although human activities help shape present biological and water resources. Much information on use of open space land should be in the current land use section of the municipal master plan, but some areas will need expansion.

A. Unfragmented land

One of the first aspects of land use to consider is where development has not yet occurred. Unfragmented areas are important for wildlife, biodiversity and forest management. These areas may be identified roughly by assuming that most roads have development along them and drawing a setback from roads, perhaps 500' wide, to locate large blocks of unfragmented land. What is considered a large block may vary: Fish and Game's *Identifying and Protecting New Hampshire's Significant Wildlife Habitat* suggests a minimum of 500 acres, but acknowledges that in southeastern NH, 250 acres may be more appropriate, while municipalities with little development may choose to increase the minimum acreage.

B. Production of food and fiber

Active agricultural and horticultural operations are easy to identify; active forest management is less obvious. Ownership by forest industries may help identify managed land; another source of information is assessors' files on forested current use land with documented stewardship. County foresters may know of other managed forestlands.

State land of the Division of Forests and Lands, Department of Resources and Economic Development (DRED), and Fish and Game is likely to be managed. The White Mountain National Forest and town or city forestlands could fit in this category as well. There may be productive land associated

with other state or county facilities, such as a county farm. Although tax maps and assessor's records will show these parcels, additional information on land use may be available from the managing agency.

C. Public services

Land in this category includes that owned by a municipal or private water company to protect surface or groundwater supplies or acquired for future water supplies and that associated with the present or anticipated future production or transmission of energy. Other areas might be associated with an airport or sewage treatment plant. Little used or unused rail corridors also should be included; the Division of Aeronautics, Rail and Transit in the Department of Transportation has this information. Although public access may be prohibited, such areas can provide wildlife and visual benefits and may be appropriate to include in an inventory. Assessors' records and tax maps will help with identification.

D. Recreation

Recreation land includes municipal and school parks and playgrounds, state and county parks, and privately owned recreation facilities such as golf courses, baseball fields and ski areas. Those charged with overseeing local recreation should have maps of existing municipal facilities and land acquired for future recreational development. State and county recreation lands may be identified in the same way as productive lands.

Assessors and tax maps will help to identify private recreation facilities. A conservation commission could note which are open to the public and under what circumstances. This information will help determine whether municipal plans treat private facilities as a recreation resource or as open space visually accessible to the public.

Some land available for recreational use such as trails and boat ramps may be part of areas managed primarily for conservation or for the production of food and fiber. The Current Use Assessment Program has a recreation category for land open to the public without charge for skiing, snowshoeing, fishing, hunting, hiking, and nature observation. Assessors' files will have this information.

NH Fish and Game Department, guided by the Public Water Access Advisory Board, uses a surcharge on boat registration fees to match federal funds to upgrade old and establish new boat ramps for access to public bodies of water and rivers.

The Bureau of Trails, Division of Parks, DRED, is responsible for a multiple use statewide trail system. The Bureau also offers advice and assistance on local trails, and administers grants to clubs and municipalities for construction and maintenance of motorized, nonmotorized, and multiple use recreational trails.

A conservation commission also should get in touch with local clubs for snowmobilers, trail bike riders, horseback riders, fishermen, hunters, and the like to find out what land is used and the arrangements made for its use. Those who rent horses, cross-country skis, and other equipment for recreation also should know where these activities occur.

In much of NH, private lands are used for recreation; arrangements with private landowners vary considerably in formality. Private landowners may not wish to have their land appear on a municipal map or in a report. A commission might make a mental note of these lands; owners may be willing to consider formal arrangements in the future.

E. Conservation

Land owned chiefly to protect it from development or unwise use can be described as conservation land, although the same areas may also be scenic, productive or provide opportunities for recreation or education. For example, a marsh owned and managed by Fish and Game chiefly for duck habitat may be used by canoeists as well as hunters. A data layer in GRANIT, the NH GIS database includes most permanently protected conservation lands (see Ownership below).

Conservation easements held by government agencies, land trusts, and other nonprofit organizations are likely to be in GRANIT. What may not be there are restrictions a planning board has imposed in the course of approving a development. In 1988, the Legislature enacted RSA 674:21-a, making conditions imposed by a local land use board enforceable as if they were conservation easements. Conditions of approval imposed prior to 1988 may not be equally enforceable. Deed restrictions affect the value of land and should be noted in planning board and assessors' files.

F. Education

To pinpoint natural areas used for education, a commission should start by asking schools. The science department of local schools or colleges should know of field trip destinations and areas used for scientific research.

Land owned by conservation organizations, such as The Nature Conservancy, Audubon Society of NH, or Society for the Protection of NH Forests, may be used for educational purposes. Much of the land in such ownership is open to the public, although access to fragile ecosystems may be restricted.

G. Historic and archaeological sites

Town histories, local historical societies, the NH Historical Society or the State Historic Preservation Office may have information on spots of historic interest that are now open space, such as places where bog iron was mined or old mill sites. The Division of Historical Resources is most likely to have information on prehistoric sites of archaeological interest, although other groups interested in history may also.

H. Aesthetics

Aesthetics are subjective and difficult to include in an objective inventory of natural resources. Some attempt should be made to do so, since the landscape is an important element in how people think and feel about a town. One way to find out what residents like about the appearance of the municipality is to ask them, perhaps through a questionnaire or a contest for the 10 best views in town. Common factors in the sites nominated may suggest positive steps that can be taken once a commission begins to develop recommendations based on its inventory.

The Office of State Planning's Technical Bulletin #10 on "Preservation of Scenic Areas and Viewsheds" may help with this part of inventory, as may the chapter on Scenic Resource Assessment in *Planning for the Future of Local Forests.*

VI. Ownership of open space land

In the course of identifying various uses of open space land, most conservation land will have been identified. The conservation land layer on GRANIT is constantly being updated and is the first dataset available to a web-based map application that allows those without GIS software to view, create and print maps of conservation land. The web page also allows viewers to submit updated information on conservation holdings.

A commission should check to be sure all town-owned conservation land is included. Then undeveloped land owned by other institutions, such as schools or colleges, should be identified. Before adding undeveloped land to the inventory as public or quasi-public open space, a conservation commission should try to learn the intended use of the land and exclude that slated for development.

Putting it all together

A conservation commission's next task is to organize the assembled information into a coherent description of natural resources. If maps are at different scales, they will need to be adjusted to the scale of the base map. As noted previously, changing scales affects the accuracy of data displayed, so the most precise method should be used to avoid introducing further inaccuracies. A commission should note the data sources and dates.

The accompanying report should explain and expand upon mapped data. For example, all steep slopes might be mapped the same, but the text could explain that those near a river are important because of unstable, sandy soils, while those in another area are rocky cliffs with scenic value.

A written report could be organized by resource or by geographic area. Devoting a section to each resource can be helpful when a conservation commission goes on to make recommendations on a town-wide basis, such as to protect wetlands with a wetlands overlay zoning district, or when new information about a resource becomes available. However, a municipality may contain a village district with independent zoning authority that has distinctive characteristics, such as a public water system, that warrants independent treatment.

The report should include an analysis of the inventory. Do some areas have multiple resources of interest? Are there areas of particular importance to the municipality, such as a potential water supply source? Are there resource areas that cross town boundaries?

While printing copies of the inventory for distribution is not required, it is a good public education tool. The more people who are aware of and understand the commission's

concerns about natural resources, the easier it is to gain support for conservation efforts. Resource maps make good displays at town meeting, town hall or the library.

The Warner Conservation Commission has placed a computer in the library for public use. It holds GIS natural resource data that can be combined in various ways and the resulting maps printed. This has proved popular with residents.

Once a conservation commission has prepared an inventory, it should have much of the data needed for recommendations on the conservation and wise use of municipal natural resources. However, commissioners should keep abreast of research, such as that on groundwater, and prepare addenda to the inventory as appropriate.

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Stone, Amanda J. Lindley, *Natural Resources Inventories: A Guide for New Hampshire Communities and Conservation Groups,* Durham, NH, UNH Cooperative Extension, 2001, 132 pp.

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Chapter 6

Developing a Conservation Plan

A conservation commission with a completed natural resource inventory is ready to consider the proper use and protection of those resources. To accomplish these goals, a commission needs a plan in order to focus its efforts, to decide on appropriate techniques to achieve the goals, to set priorities, and to provide a yardstick by which to measure progress.

The implementation measures in the plan are likely to involve a combination of land use regulation, land acquisition, and land management. Both the legislature and the courts emphasize that local land use regulation (zoning) must be consistent with the master plan. Therefore any plan developed by a conservation commission ideally should become part of the municipal master plan.

In the past, open space in a future land use plan was often a negative element consisting of leftover land – land not yet economic to develop. A section that specifies areas and techniques to achieve the appropriate level of protection makes conservation a positive element of the master plan.

A conservation plan provides a description of the existing and proposed "green infrastructure" of a municipality, just as the transportation section of a master plan describes existing and proposed roads. Green infrastructure is key to preserving community character, a goal of most master plans.

A commission starting work on a conservation plan should meet with the planning board early in the process because planning boards have statutory responsibility for preparing and adopting master plans. Discussing the natural resources inventory and the proposed conservation plan and how it will be developed should elicit suggestions from the planning board and pave the way for support for the plan and its adoption as part of the master plan.

Public involvement

A conservation commission must consider community desires in order to produce a plan that will be implemented. There is no single best time or technique for involving the public. A presentation to the planning board coupled with an invitation for residents to submit suggestions may be sufficient at the outset. If a municipality has recently prepared or revised its master plan, that process may have provided enough information on residents' views of conservation to allow a commission to proceed to the draft plan stage without formal solicitation of public opinion.

In other communities a conservation commission might start by distributing a brief explanation of the project and a questionnaire. The questions should try to identify general concerns, such as threat of pond pollution by development, as well as specific suggestions, such as the desire for public access to a river.

Once commission members know what they wish to include in the conservation plan and implementation strategies, they should explain and discuss these with the planning board and the public. Public reaction to specific land use proposals may lead a commission to revise some aspects of the plan.

Objectives

The first task in preparing a conservation plan is to articulate its purpose and specific objectives within the general goals of wise use and protection of natural resources. The objectives will help a conservation commission to decide which areas to recommend as permanent open space.

"Open space" is a term that may describe formal, designed areas such as urban parks, playgrounds, village greens and cemeteries; areas that are open as a result of their use such as farm fields and flood control lands; and areas minimally affected by human activity such as forests and wetlands. Because formal urban open space is usually the responsibility of other town boards and commissions, a conservation commission's chief concern will be with the other categories.

In the past, planners used per capita formulae to anticipate the demand for recreation facilities; today recreation planners have

recognized the shortcomings of formulae and recommend against their use. No methods exist to calculate the need or demand for open space. In September 2001, the Society for the Protection of NH Forests challenged each NH municipality to conserve "at least 25% of its lands for a network of trails, parks, farms, and forests where people can connect with the natural world".

Historically, urban designs have included formal open space. The English green belt concept, dating from the Elizabethan era, provided a band of undeveloped land around urban areas. Twentieth century ecological awareness of the flaws in geometric patterns of land preservation led to the belief, eloquently advocated by Ian L. McHarg in *Design with Nature* and more recently by Randall Arendt, that locations planned for development and open space should be determined by the characteristics of the land. The charge to conservation commissions in RSA 36-A to ensure the protection and wise use of natural resources seeks implementation of this concept.

The objective of protecting environmentally sensitive areas from potentially harmful uses will be common to most conservation plans, though the nature of such areas will vary from town to town. To insure against omitting a category in preparing the plan, a commission should list resources to be protected, e.g., wetlands, flood plains, steep slopes, public water supply sources, prime farm and forest soils, rare species, and unfragmented lands. Other objectives may vary, depending on local desires and characteristics such as natural features, amount and location of existing development, existing public or quasi-public conservation land, wildlife habitat, productive farm and forestland, and the like.

Data

The natural resources information needed to develop a conservation plan is contained in the inventory, ideally on GIS or a series of transparent overlay maps (see Chapter 5). One way to begin a conservation plan is to superimpose several overlay maps to see where resources overlap and what patterns emerge.

Begin with the overlays of land, water and biological resources. The composite produced will show the natural resources of the municipality, its environmental assets, and areas for which development restrictions may be appropriate. Some of the same areas will appear on more than one of the resource overlays, identifying areas of multiple concern, which are often called "co-occurrences". Then prepare a second composite of the overlays showing the present uses of open space land. The two composites plus the map of existing conservation land will provide a graphic picture of the natural resources, their present use and their ownership.

Natural resources do not respect political boundaries; a commission needs to find out what abutting municipalities have prepared natural resources inventories and conservation plans and obtain them. There may be opportunities for larger conservation areas that cross town lines. A commission will also need: maps of existing zoning, land use and water and sewer service areas; and maps of future land use, recreation, public utilities, and transportation (roads) from the master plan. This information, as well as that on natural resources, contributes to the development of a conservation plan.

Elements of the plan

Next a conservation commission should take its list of objectives and use the mapped data to locate areas of specific concern. As each area is identified, the commission should note why it should be protected or preserved. Articulating what is important about each and what it should be protected for or from will make it easier to select appropriate preservation techniques.

In the process some areas may be eliminated. For example, shallow soils with severe limitations for septic systems because bedrock is close to the surface are not a concern if a public sewer system is available. However, a commission should resist eliminating areas because of ownership or zoning, both of which are more easily changed than municipal infrastructure. In fact, it is better to ignore zoning and ownership until the framework of the plan is established.

After identifying areas to match its objectives, a commission should reexamine the natural resources and land use maps for opportunities beyond the listed objectives. For example, is there a location that would be ideal for a town forest or outdoor recreation? Are there areas of unfragmented forestland

that provide wildlife habitat and forest products? Are there ways of linking some of the identified areas, perhaps using riparian areas along streams and ponds, to facilitate the development of corridors for wildlife or trails for people? Should the conservation commission recommend that some Class VI roads become Class A or B trails as authorized in RSA 231-A? How does land used to produce food and fiber compare with areas identified by the county soil survey as prime agricultural and forest soils? When this process is completed, a commission will have a list of the open space elements of a conservation plan, why each should be protected, and how each should be used.

A conservation commission then should consider environmental issues common to all land in town, not just the areas identified as future open space. Are there degraded areas, such as wetlands or shoreland that might be restored? Is construction causing drainage and erosion problems? Are failed septic systems a problem? Chapter 7 describes areas regulated by the federal and state governments; a review of local regulations should identify gaps. Does the municipality have an erosion and sedimentation control regulations? sand and gravel regulations supplementing RSA 155-E? wetland and shoreland buffers? The commission should prepare a list of town-wide issues and problems.

A commission will have a list of the open space and town-wide elements of a comprehensive conservation plan. Now it must select the implementation methods.

Techniques

A conservation commission has a choice of techniques to implement the conservation plan. These include encouraging wise use of resources by individual landowners, local requirements for compliance with the regulations of state and federal governments, local regulation of land use through zoning ordinances and subdivision and site plan review regulations, regulation of activities through police power and public health ordinances, and acquisition of easements or fee interest (outright acquisition) in land. Each technique has uses noted briefly here and described in greater detail in subsequent chapters.

Acquisition

Outright, or fee simple, ownership of land provides the greatest control over its use. It is also the most expensive option for a municipality, since it involves the loss of future property tax income as well as acquisition costs. However, numerous studies by the American Farmland Trust and UNH Cooperative Extension among others have shown that the cost of community services for new residences exceed taxes paid.

Since RSA 36-A:4 specifically prohibits condemnation of land for conservation purposes, acquisition must be from a willing seller. Chapter 11 describes techniques for acquiring land. Acquisition is appropriate for land to be used by the public, such as a boat ramp or cross-country ski trails. Public ownership is also best for areas whose primary purpose excludes virtually all other uses, such as a municipal well field.

A conservation easement places permanent restrictions on some uses of land and establishes long-term enforcement of these restrictions. Easements are appropriate in areas where a conservation commission's objectives are to ensure that development does not alter natural features or when landowners are willing to allow public access, such as a trail, in the terms of the easement. An easement can prevent detrimental uses and/or allow public access while the landowner continues to enjoy other rights and duties associated with the land, including paying property taxes.

A conservation commission must be willing to monitor easement land to ensure compliance and prepared to enforce easement terms. But an easement or fee interest need not be municipally-held if there is a land trust, conservation organization, or government agency whose objectives for the property coincide with those of the commission.

In some cases an easement may be donated by a landowner interested in conservation or by a developer during review of a subdivision or cluster development. In other cases it must be purchased. An easement costs less than outright acquisition; how much less depends on what rights remain with the land.

Regulation

Zoning ordinances and planning board regulations for subdivisions are the primary tools for local control of land use (see Chapters 8 and 9). Zoning is appropriate to control or prevent development that may damage a resource or create a need for public expendi-

tures to address the problems created by unwise land use.

Zoning overlay districts with more stringent requirements may serve a conservation commission's objectives for protection of drinking water supplies, wetlands, shores of streams and ponds, steep slopes or floodplains. The primary reasons for zoning restrictions must be related to health, safety and the public welfare. Other concerns such as aesthetics of lakefront property or farmland preservation in a floodplain may be considerations, but subordinate to health and safety objectives.

Subdivision regulations adopted by a planning board may use soils, slopes, and septic system requirements to determine minimum lot sizes. A planning board may regulate subdivisions whether or not a municipality has adopted a zoning ordinance, but subdivision regulations without zoning will not necessarily protect natural resources because development can occur without subdividing land.

In addition to zoning, municipalities have regulatory powers in other areas that may help to achieve the objectives of a conservation plan (see Chapter 9). For example, RSA 147 and RSA 485-A:32 allow the board of health to adopt more stringent septic system regulations than those of the state and RSA 155-E allows additional local regulations and conditions for sand and gravel permits.

Chapter 7 describes development activities requiring state permits, such as all new septic systems, dredge and fill in wetlands, and subdivisions with lots of 5 or fewer acres not served by municipal sanitary sewers. A municipality can require appropriate state permits as a condition of subdivision approval and as a prerequisite for building permits to ensure compliance with state regulations.

Supplemental strategies

Additional methods will be needed to accomplish some objectives of a conservation plan, such as preserving agricultural land. Regulation can specify permitted uses and acquisition can prevent development, but neither can assure that land will be farmed. Agriculture is an economic activity; if it is unprofitable, it will not be pursued.

Local regulations can adversely impact farming, for example by prohibiting farm stands. Although some consider large lots as encouraging agriculture and open space, others note that a large minimum lot size encourages sprawl by requiring more acreage for a given number of housing units than does a smaller minimum lot size or zoning that allows cluster development. Since the location and terrain of farms is usually ideal for development, the effect of large lot requirements is more rapid conversion of agricultural land to residential uses as population growth increases housing demand.

A conservation commission will have to identify local regulations with a direct or indirect adverse impact on agriculture. *Preserving Rural Character through Agriculture: A Resource Kit for Planners* will help guide the analysis. This need not be done during the preparation of a conservation plan; the plan can merely state the commission's intent to explore this area as part of an agricultural preservation strategy.

Other measures that can supplement local acquisition and regulation include the designation of prime wetlands (see Chapter 10) and trails (see Chapter 12) and public education. The latter can cover a variety of activities, such as informing other local boards and the public of state and federal regulations, advising owners of land proposed for acquisition of financial benefits of donations and current use, and encouraging individual action to avert environmental problems through water conservation, proper disposal of domestic hazardous wastes, and the like.

Selecting strategies

The next step is to choose the method most likely to achieve the wise use of each area in the conservation plan. A conservation commission can use its previously prepared list of elements of the plan, which includes what each area should be protected from and for, as a basis for decisions.

The first factor to consider is the desirability of public access. In general, land open to the public should be acquired, although an easement may suffice if the use will be limited and supervised, such as an area to be used for school science classes. For trails, an easement or right of way may be alternatives to fee simple acquisition.

The second factor in recommendations for outright purchase is uniqueness. Acquisi-

tion is appropriate for outstanding natural features and may be wise for areas identified by congruent overlays as ones of multiple concern.

Regulation is the best way to address issues of town-wide concern, such as erosion during construction, and is an option for open space areas that meet the criteria of protecting the public health, safety, or welfare where public access is not contemplated. In recommending protection through zoning, a commission should remember that zoning is an ordinance; it can be changed at any time by vote of the legislative body. As undeveloped land becomes scarce and expensive, pressures to develop marginal land increase. Supplementing zoning regulations with easements provides insurance against regulatory changes.

Easements are the best tool for areas and activities that cannot be regulated easily, such as areas of largely aesthetic interest. The ridgeline of hills may be considered more attractive if covered with trees rather than houses, yet this result is difficult to achieve without an ownership interest.

A conservation commission also can list other techniques it plans to investigate further to supplement acquisition and regulation proposals, such as those in the agricultural preservation example mentioned above.

The draft plan

When a conservation commission has completed the steps above, it has prepared a draft conservation and open space plan. If resources are available, a draft map showing the proposed components and preservation techniques will help a commission explain its proposal to the planning board and the public. Ownership and zoning maps will identify areas that are already protected. These areas should not be eliminated from the conservation and open space plan for two reasons: first to show that some areas need no further action and second to document their importance should attempts to rezone or sell occur.

Next, a commission should seek comments on the draft from the planning board and the public and make any appropriate modifications. If the planning board is considering adoption of the commission's work as a part of the master plan, it may schedule its own or a joint hearing before the final plan and maps are prepared.

The finished plan

The last step is writing a description of the plan and preparing accompanying maps. The description should outline procedures followed to identify elements of the plan and protection options and how each was selected. The characteristics of each area in the plan can be described briefly, together with the conservation commission's recommendations for action. There should be an explanation of town-wide problems and how the recommended actions will address them.

A section at the end can summarize recommendations for regulations, for acquisition of the fee or lesser interest in the land, and for any supplemental actions the commission proposes to undertake, such as public education, establishing a town/city forest, or review of zoning and other local regulations for features that discourage agriculture.

The number of maps needed to illustrate the plan will depend on how much information can be clearly conveyed on each map. The map(s) should include areas identified in the natural resources inventory, areas included as elements of the conservation plan, the recommended method of protecting each area, and areas in which existing regulations and ownership conform with the plan.

Set acquisition priorities

In preparing the list of recommended acquisitions of fee interest or easements, priorities should be articulated and areas specified. The more precisely the areas to be acquired are identified, the better guidance the plan will provide. However, priorities should have enough flexibility to allow purchase of a lower priority parcel if the opportunity arises.

In setting priorities, a commission might consider: vulnerability to development, undeveloped shorelands, access to public waters, drinking water source protection, buffers to protect surface water quality, proximity to conserved lands, scarcity of the resource (e.g., the last farm in town, habitat for rare species), road front parcels that block development of back parcels, etc.

Some advocate "weighting", that is assigning numerical value to reflect the perceived importance of a particular resource in relation to others. *Planning for the Future of Local Forests: A Guide for New Hampshire Towns Using the Forestland Evaluation and*

Site Assessment Process (FLESA) offers examples of how this might be done.

Publicize the plan

Enough copies of the final plan and maps should be produced to ensure its availability for several years. Although it will need periodic review and refinement, a conservation and open space plan will be valuable for the commission, other local boards, and the public as a written and graphic expression of the objectives of the conservation commission and how it proposes to achieve them.

Hanover Conservation Commission prepared a beautifully illustrated pamphlet with a map summarizing its conservation plan. An executive summary of the plan for general distribution, together with copies of the full plan at the library and on the web, should reduce the cost of informing residents.

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Chapter 7

State and Federal Environmental Regulations

The primary responsibility of a conservation commission is local, but members should be aware of areas regulated by state and federal governments for several reasons. First, if commissioners notice activities contrary to state or federal regulations, they may wish to advise those involved and alert appropriate regulators.

Second, residents may call about a problem, since an active commission is the local advocate for conservation and environmental protection. Public relations are enhanced if a commission can refer residents to the agency with regulatory responsibility in the problem area.

A third reason may affect a commission's recommendations to other local bodies: the power of local government to regulate an activity may be preempted. Under our federal system of government, states are the source of regulatory power and may delegate this power to other levels of government. Through the U. S. Constitution, the states have given the federal government authority in some areas in which the effects of activities transcend state boundaries.

A state constitution may further delegate regulatory authority. The New Hampshire Constitution states in Part II, Article 2: "The supreme legislative power, within this state, shall be vested in the senate and house of representatives..." This means that municipalities, as subdivisions of the State, have only the powers granted to them by the Legislature, such as zoning authority. While the New Hampshire tradition of home rule is often mentioned, home rule in the legal sense is not a reality.

Municipalities may adopt local regulations when specific statutory authority has been granted by the Legislature to do so. In some areas a statute appears to grant municipalities authority to regulate certain activities, while another statute creates a state regulatory system. Some statutes specify that the stricter regulations shall apply. If a local ordinance conflicts with a state regulatory system, the courts may find that area preempted by the state and the local ordinance invalid. Some areas that courts have found to be preempted by the State of New Hampshire are regulation of herbicides, hazardous waste facilities, hunting and fishing, construction and maintenance of dams and hydropower facilities, access to state highways, and location of power lines.

The Environmental Protection Agency (EPA) administers most federal environmental laws, often with substantial responsibility delegated to the state. This chapter provides a brief summary of federal and state regulatory programs, arranged by resource or activity regulated, that conservation commissions are most likely to encounter. Appendix 1, "New Hampshire's Natural Resources: Who Is Responsible?" is a quick way to identify the appropriate agency; Appendix 2 contains their addresses and telephone numbers. Federal and state agency websites offer easy way to get information on regulatory programs.

Air quality

The Clean Air Act authorizes federal air pollution control programs. EPA sets standards for air quality and emissions from automobile and stationary sources. It also approves state implementation plans (SIPs) to improve air that does not meet EPA minimum standards and to prevent deterioration of air that meets or exceeds the minimum standards.

DES Division of Air Resources is responsible for administering the Clean Air Act, hazardous waste incineration under the Resource Conservation and Recovery Act (RCRA, see Wastes below), and the PCB inspection program under the Toxic Substances and Control Act (TSCA, see below). Air Resources oversees a permit system to control and monitor stationary source emissions, an asbestos renovation and demolition program, and preparation of plans to attain

air quality standards. NH has implemented the measures that most dramatically improve air quality, including regulation of carbon dioxide emissions from power plants. Further measures will produce modest improvements at disproportionate cost.

Air Resources is responsible for the NH program to reduce stationary emissions that contribute to acid rain. RSA 125-I, Air Toxics Control Act passed in 1987, authorizes the Division to control releases of toxic chemicals into the air.

Toxic substances and pesticides

Through its administration of the Toxic Substances Control Act (TSCA), EPA regulates manufacture, distribution, and use of chemical substances. TSCA exempts products in eight categories: pesticides, tobacco, nuclear material, firearms and ammunition, food, food additives, drugs, and cosmetics.

Under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), EPA regulates manufacture, distribution and use of pesticides, which include by definition herbicides and substances regulating plant growth. In New Hampshire, the Division of Pesticides Control of the Department of Agriculture, Markets and Food administers the provisions of FIFRA, under rules adopted by the Pesticides Control Board on labeling, sale, transportation, and use of pesticides. Pesticide application is controlled by certification of and permits for commercial appliers.

New Hampshire also has a Worker's Right To Know Act, RSA 277-A enforced by the Department of Labor, that requires employers to notify employees and local fire departments of any toxic substances in the workplace.

Wastes

The Resource Conservation and Recovery Act (RCRA) is the primary federal law regulating treatment and disposal of waste. Administered by EPA, RCRA covers solid waste, underground storage tanks for hazardous waste and petroleum products, and hazardous wastes "from cradle to grave" (generation, transport, treatment, storage and disposal).

EPA also tracks amounts of toxic chemicals reported by industries as released to land, air, and water or transported to treatment, storage, and disposal facilities through its Toxic Release Inventory (TRI), established by the Emergency Planning and Community Right-to-Know Act of 1986. TRI data can help assess waste minimization and pollution prevention efforts. According to EPA, reported toxic releases since 1988 have dropped nearly 82% in New England and 45% nationally. Between 1988 and 2000, NH industries reduced toxics released to the environment by 83%.

In New Hampshire, DES Waste Management Division (WMD) is responsible for enforcing RCRA. Under RSA 149-M, WMD issues permits for solid waste disposal facilities of all sorts, including landfills and trash-to-energy plants. RSA 147-A authorizes WMD to regulate hazardous waste treatment, storage, transport, and disposal, and hazardous waste facility siting.

The federal Comprehensive Environmental Response Compensation and Liability Act (CERCLA), or "Superfund", authorizes and funds cleanup of hazardous waste spills and waste disposal sites. When responsible parties can be identified, they must reimburse Superfund expenditures. EPA has procedures for reporting, evaluating, and cleaning up Superfund sites.

A state hazardous waste cleanup fund helps pay for remedial investigations and cleanup and provides limited support for domestic hazardous waste collections. DWM is responsible for Superfund coordination as well as state-funded investigations and cleanup of hazardous waste sites.

New Hampshire also has a revolving oil pollution control fund to pay for immediate cleanup of oil spills and discharges from leaking underground storage tanks (RSA 146-A:11-a). Parties responsible for spills or discharges must reimburse the fund. This fund may also pay for interim water supplies for pollution victims. Up to 10% of the money in the fund may be used for research on prevention and cleanup. A separate fund, created by RSA 146-D and administered by the Oil Fund Disbursement Board, helps owners of underground petroleum storage tanks pay for cleaning up discharges and damages to third parties therefrom.

In 1996, the Legislature created a Brownfields Program in DES to encourage cleanup and redevelopment of contaminated properties. Brownfields are old industrial properties with actual or possible contamination. Potential buyers, banks and municipalities have

been reluctant to deal with these properties for fear of liability for contamination. As a result, sites have been abandoned or minimally used, while those seeking business or industrial land opt for "greenfields" – uncontaminated rural land. The NH Brownfields Program is for landowners who did not cause contamination. It involves an agreement between DES and a property owner on the extent of cleanup required; the owner then cleans up the property in exchange for a "Covenant Not To Sue" from DES. EPA has a similar program of liability relief for some situations.

Endangered species

US Fish and Wildlife Service oversees the federal Endangered Species Act.

New Hampshire prohibits taking, possession, transportation, or sale of any endangered or threatened species of fauna and flora. RSA 212-A, Endangered Species Conservation Act, makes Fish and Game Department responsible for fauna ("any mammal, fish, bird, amphibian, reptile, mollusk, arthropod or other invertebrate").

Department of Resources and Economic Development (DRED) has responsibility for plants under RSA 217-A; the Natural Heritage Bureau in the Division of Forests and Lands administers this program. Both statutes require lists of endangered and threatened species adopted by rule and conservation programs for listed species.

Invasive species

Invasive species of plants and animals have become of increasing concern. As nonnatives, they lack natural enemies to check their proliferation, so they out-compete native species, thereby reducing wildlife food sources and further endangering rare plants.

In 2000, the Legislature created an Invasive Species Committee to advise the Department of Agriculture, Markets and Food, which oversees nurseries and plants and animals entering the state. In 2003, the Committee formally proposed three lists:

- Prohibited Species of plants and insects that should be banned immediately from deliberate sale, cultivation or transport;
- Prohibited Species with Conditions that, due to their value to wholesale and retail plant trades, should be phased out over three years, during which their propagation and importation would be banned; and
- Restricted Species that exhibit invasive tendencies but do not meet all the criteria for prohibited species.

The Committee will revise the lists as more information and research becomes available.

Water quality

The Federal Water Pollution Control Act, better known as the Clean Water Act, and the Safe Drinking Water Act are the primary federal laws regulating water quality. EPA administers them: issuing and enforcing standards, regulations, and permits; overseeing grant programs; and delegating authority as appropriate to the states.

Clean Water Act and RSA 485-A

In New Hampshire, DES Water Division is responsible for water quality. The federal Clean Water Act and its NH counterpart, RSA 485-A, prohibit polluting surface and ground water by introducing contaminants from a point source (pipe) or nonpoint source (dispersed source, such as storm water runoff or a septic system). DES adopts state water quality standards in the form of rules. Every point source must obtain a National Pollution Discharge Elimination System (NPDES) permit. This permit is issued jointly by EPA and DES, and specifies wastewater treatment, effluent monitoring, and a time schedule for meeting minimum standards if the discharge does not already do so.

The 1987 Clean Water Act amendments require EPA to address pollutants in stormwater under NPDES in two phases: Phase I, for which EPA permits are now required, covers some industrial activities in NH; Phase II covers other stormwater discharges. Phase II dischargers are divided into 2 groups. The first group, those whose discharges contribute to water quality violations or are "significant contributor of pollutants" (40 CFR §122.26(i)), now are required to obtain EPA permits; permits for the second group are being phased in. As of March 2003, all construction sites 1 acre or larger must comply with a federal stormwater control general permit that is similar to, but not identical with, NH DES Site Specific Permit requirements. Both EPA and DES have more information about the relatively new federal requirements on their websites.

The Clean Water Act's grant program for municipal wastewater treatment plant construction has been replaced by a revolving loan fund and more modest grants. DES administers these.

The Clean Water Act requires state classification of surface waters, authorized in NH by RSA 485-A:8-11. First, goals are established by the Legislature in a session law stating that a stream or body of water is Class A or B. When a session law is passed, water quality in a stream or pond may not meet criteria for its class. It is then up to DES to make the legislative goal a reality through regulation of discharges and allocation of construction grants or loans.

Another component of the Clean Water Act is funding for special projects. In New Hampshire funds have been used to assess and clean up several lakes and to study activities with water pollution potential. Nonpoint pollution grant funds have paid for demonstration projects such as vegetative stabilization of riverbanks.

Safe Drinking Water Act and RSA 485

The purpose of the Safe Drinking Water Act (SDWA) is to ensure that water provided by public systems poses no health threats. A public water system is defined in RSA 485:1, IV as one providing water for human consumption that has 15 or more service connections or serves an average of 25 persons or more at least 60 days a year. EPA establishes primary drinking water standards with maximum contaminant levels, requires regular water tests, regulates underground injection of potential contaminants, and pursues violators if a state does not. DES Water Division sees that the provisions and programs of SDWA are carried out.

In 1991, the Legislature authorized a wellhead protection program for public water supply wells that relies on inventories of potential sources of contamination and enforcement of best management practices (RSA 485-C). Other Division responsibilities include supervising all aspects of public drinking water supplies, analyzing water used for drinking or swimming, licensing youth camps, and certifying waterworks operators and laboratories conducting water analyses.

An additional power of the Water Division is to adopt rules to prevent contamination of a public water or ice supply if local regulations do not AND if requested to do so by a board of water commissioners, local board of health, local health officer, or 10 or more citizens (RSA 485:23-24). To date, this section has been used to protect only surface water supplies.

The 1996 SDWA amendments initiated revolving loan funds for drinking water projects. New Hampshire uses its Drinking Water State Revolving Loan Fund for two types of projects: infrastructure and source water protection. An infrastructure project might be one that develops a new water source to replace a contaminated one or that adds or upgrades water treatment facilities. A source water protection project might be one to delineate the protection area for a well or surface water supply or to acquire land to protect a water supply.

The Water Well Board attached to DES has adopted specifications for well construction, plus a requirement that wells be at least 75 feet from subsurface wastewater disposal systems. Also, all water well drillers must file well completion reports that provide the location, quantity and quality of water yield with the NH Geological Survey to help expand its groundwater database.

Subsurface wastewater disposal systems (RSA 485-A)

RSA 485-A requires DES Subsurface Bureau approval for any subdivision of land into lots smaller than 5 acres not served by a public sewer system. The Shoreland Protection Act (RSA 483-B, see below) requires subdivision approval for new lots of any size within 250' of lakes, ponds, rivers, and tidal waters. Also, before land with a habitable structure within 200 feet of a Great Pond or tidal waters is offered for sale, a site assessment must determine if the lot can meet current standards for sewage disposal.

DES subdivision approval is intended to ensure that each new lot has appropriate conditions for a septic system. When first enacted, it applied to all lots; later the Legislature exempted lots 5 acres or larger. Attempts to delete the exemption have so far failed to convince legislators that not all 5-acre lots can support septic systems and that the exemption encourages sprawl with its unnecessarily large lots, suburbanized landscape, and increased infrastructure costs.

The Bureau must also approve the design, construction, and operation of any sep-

tic or other system for subsurface wastewater disposal. DES rules require subsurface systems to be at least 75 feet from water wells and surface water, including wetlands with type A hydric soils, and 50 feet from wetlands with type B hydric soils. The Shoreland Act requires greater setbacks from lakes and ponds in certain soils. However, DES may approve a system less than 75 feet from an on-site water well when a septic system and the 75 foot protective radius would not otherwise fit on an existing lot (RSA 485-A:30-b). This requires the landowner's written approval, which must be recorded at the Registry of Deeds. Copies of Subsurface approvals and denials are sent to local planning boards or selectmen.

RSA 485-A:31 provides that if written disapproval is not mailed to an applicant for subdivision approval within 30 days or to an applicant for subsurface system approval within 15 days, "plans and specifications shall be deemed to have been approved." Fees for Subsurface permits go to the state's general fund, from which biennial appropriations are made for staff. As a result, staffing levels cannot respond quickly to changes in numbers of applications. During the 1980's construction boom, some projects were approved that should not have been. Municipalities are specifically authorized to adopt local requirements for septic systems (RSA 147; see also Chapters 8 and 9).

Septage and sludge (biosolids)

Septage is waste pumped from septic systems, and sludge is a by-product of wastewater treatment plants; both are also called biosolids. Volumes of both have increased as discharges of raw sewage to surface waters have decreased. Options for dealing with septage are wastewater treatment plants, septage lagoons, and landspreading. Options for sludge are landfilling, incineration, and landspreading, with or without composting.

EPA regulates treatment, disposal, and land application of "sewage sludge", which includes sludge and septage (40 CFR part 503). DES Water Division has rules that are a bit more stringent and add transportation and state sludge quality certification for landspreading.

Landspreading has become controversial in parts of NH. Some municipalities have banned spreading of biosolids generated by wastewater treatment plants; others have additional local requirements. Some municipalities with wastewater treatment plants have retaliated by refusing to accept septage from towns that have banned landspreading.

Site Specific or Alteration of Terrain Permits (RSA 485-A:17)

Until 1981, DES Wastewater Engineering Bureau's Water Quality Engineering section used the water quality protection authority in RSA 485-A:17 only to issue joint permits with the Wetlands Program for activities in or adjacent to surface waters. These joint permits continue to be issued for applications to the Wetlands Bureau with Site Specific conditions added to protect water quality.

Since 1981, additional regulations under the authority of RSA 485-A:17 require permits, called most often Site Specific but sometimes Alteration of Terrain permits, for construction or earthmoving activities that disturb an area of 100,000 contiguous square feet (50,000 square feet in "protected shoreland") or more. Such activities include industrial, commercial and residential development, and gravel pits. The only exception is for conventional agricultural operations, such as plowing a field, provided run-off does not pollute water.

For logging activities, rules provide a short-cut that eliminates permit applications: when filing an Intent-to-Cut form (used primarily to collect the timber tax), a forester or logger must sign a statement agreeing to use best management practices. This signed agreement constitutes an enforceable permit.

On projects of 100,000 square feet (50,000 square feet in "protected shoreland") or more, surface runoff must be controlled during and after construction whether or not surface waters or wetlands are directly involved. Hay bales, siltation curtains, grassed waterways or swales, and sediment basins are often used for this purpose.

To require a permit, the 100,000 square feet of disturbance must be contiguous in time and space. Roads and driveways are included in calculating acreage disturbed. For example, a 20-acre subdivision with 15 house lots may not need a permit if construction is phased and the area disturbed at any one time is less than 100,000 square feet. However, a 5-acre shopping center site that involves bulldozing 3 acres for stores, a parking lot and access roads would need a permit

because the land disturbed would be contiguous in time and space.

The purpose of site specific permits is to prevent water pollution that might result from alteration of surface drainage patterns and increased runoff, not to control land use. Through permit terms and conditions, DES regulates how an activity is conducted but does not prohibit an activity.

Comprehensive Shoreland Protection Act (RSA 483-B)

Although the NH Shoreland Protection Act was passed in 1991, it finally took effect July 1, 1994 when funds were appropriated to implement it. The Act applies to land within 250 feet of the "reference line" marking the edge of:

- the ocean,
- estuaries,
- lakes and ponds ten acres or larger, regardless of whether the 10 acres are natural or a result of damming, and
- rivers of fourth order or higher, including the Connecticut, except for rivers in the Rivers Management and Protection Program before January 1, 1993.

Within the 250 feet, called "protected shoreland", some new or expanded land uses are prohibited: solid and hazardous waste facilities, auto junkyards, and salt storage areas.

Other uses are subject to greater restrictions. DES must approve the subdivision of all lots, regardless of size, that are served by on-site septic systems. New housing units with septic systems must have 150 feet of shoreland frontage. In some soils, greater setbacks are required for the leaching portion of septic systems. Site Specific permits are required for disturbances of 50,000 square feet, and all development projects must use sedimentation and erosion controls.

In an effort to reduce the amount of phosphorus reaching surface waters, the Act envisions a wooded buffer area at the waters' edge and prohibits cutting more than 50% of the basal area of trees and of the total number of saplings within a 20-year period and removing stumps and roots within 50' of the reference line. Use of fertilizer, except limestone, is prohibited within 25' of the reference line; low phosphorus; low-phosphate, slow-release fertilizer is allowed beyond 25'. Primary structures must be 50 feet from the water. An existing structure that is closer to the water may be expanded, but may not be extended toward the water, except that an open porch or deck may be built up to 12 feet closer to the water.

The Shoreland Act created no new permits; it did increase the number of projects that must obtain DES permits and changed some permit requirements. DES is responsible for enforcement, which includes educating the public and responding to complaints.

Water quantity & management

Some government programs cover aspects of water other than its quality. These include navigational safety, dams for various purposes, flood control, river protection, new large groundwater withdrawals, and gathering data on amounts and movement of water.

Navigational safety

The federal River and Harbor Act of 1899 empowers the US Army Corps of Engineers to regulate dredge, fill, and structures in navigable waters of the US. Any fill projects subject to the River and Harbor Act are also subject to the §404 permit process. In New Hampshire, waters now designated as "navigable" include tidal waters, the Connecticut River, the Merrimack River from Concord to the Massachusetts border, and Lake Umbagog. The Corps of Engineers may decide in the future that other rivers or lakes meet the "navigable" criteria. DES Wetlands Bureau (see Wetlands below) also has jurisdiction over dredge, fill, and structures in and on the banks of all surface fresh and tidal waters of the state.

Boating safety in tidal waters is the responsibility of the NH Port Authority and the US Coast Guard and, in fresh water, the Division of Safety Services of the NH Department of Safety. Activities include installation and maintenance of navigational markers and ensuring the safe operation of boats. Speed, horsepower, and propulsion restrictions for boats on public fresh waters may be set by legislative action or by the Commissioner of Safety if petitioned to do so by 25 or more persons, any association with 25 or more members, or any governmental subdivision or agency (RSA 270:12). The Commissioner may prohibit or restrict operation of ski craft on a pond, lake, river, or a portion thereof after a public hearing on a petition brought by 10 or more residents or property owners in the town in which the pond, lake,

or river is located (RSA 270:74-a). Safety Services also regulates moorings on Newfound, Ossipee, Squam, Sunapee, Winnipesaukee, and Winnisquam Lakes (RSA 270:59-72).

Dams and hydropower projects

The Federal Energy Regulatory Commission (FERC) licenses hydropower projects under the Federal Power Act, which gives broad powers to hydro developers, including that of eminent domain. Hydro projects are encouraged by incentives contained in the Public Utilities Regulatory Policies Act of 1978 (PURPA). Dams for hydropower are subject to safety and construction requirements of DES Dam Bureau. The Wetlands Bureau must issue a permit for any fill or dredge. DES Surface Water Quality Bureau must certify, under §401 of the Clean Water Act, that the project will not have an adverse effect on water quality. The Army Corps of Engineers also must approve any fill, and, if waters are considered navigable (see above), any dredge as well.

The sole method to guarantee that a stretch of river will not be dammed for hydropower is the designation of that river or river segment under the federal Wild and Scenic Rivers Act (see below). However, the 1986 amendments to the Federal Power Act, enacted as part of the Electric Consumers Protection Act of 1986, limit some of the financial incentives for hydro development. A project on a "state protected waterway" or one with a "substantial adverse impact" on the environment will be ineligible for PURPA benefits. The Rivers Management and Protection Program (see below) is New Hampshire's effort to create a system of "state protected waterways". To date there has been no hydro project proposed on a state-designated river to test whether or not FERC will consider such rivers as "state protected waterways". The 1986 amendments further require that fish and wildlife conditions set by state and federal wildlife agencies be binding on hydroelectric licensees and that FERC must give "equal consideration" to the environment and recreation uses as well as to power production.

DES Dam Bureau is responsible for the safety of all dams in NH. It regulates construction of new dams, regularly inspects publicly and privately owned dams, and orders repair or removal of unsafe dams. DES is also responsible for maintaining state-owned dams and regulating the level of impounded waters.

Water flow and flood control

Nationally the US Army Corps of Engineers is responsible for structural flood control measures, which include dams, dikes, levees, dredging, channelization and the like. Several flood control dams in New Hampshire were built and are operated by the Corps; several more are owned and operated by DES. DES also regulates the water flow at a number of other dams to control lake levels for recreational purposes.

National Flood Insurance Program

Congress created the National Flood Insurance Program (NFIP) in 1968. After a century of trying to keep floods away from people by structural means, flood losses continued to increase. With NFIP, Congress attempted to change federal strategy to keeping people away from floods. The vehicle to accomplish this is federal flood insurance for property owners in "special flood hazard" areas. This insurance is available only in municipalities with local land use and building construction controls that are designed to reduce flood damage and that comply with minimum standards set by the Federal Insurance Agency. The Federal Emergency Management Agency (FEMA) administers the program; the NH coordinating agency is the Bureau of Emergency Management in the Department of Safety.

Most New Hampshire municipalities with floodprone areas participate in NFIP and have maps of local flood hazard areas. The maps are limited in that they delineate only areas subject to catastrophic flooding: areas subject to minor flooding a foot or so deep are not included; neither are flood areas with drainage areas less than one square mile.

Federal standards for local floodplain regulations focus on structural integrity of buildings rather than on human health and safety. Buildings constructed in compliance with the standards may still flood; health and safety problems may result from submerged wells, septic systems, electric lines, furnaces, and impaired access; but the building itself will not float downstream. While fill or construction that will increase flood height is deemed undesirable, federal standards allow for some increase in flood heights.

River and lake protection

The Wild, Scenic and Recreational Rivers Act of 1968, administered by the National Park Service, Department of Interior, provides for Congressional designation of rivers or river segments to preserve qualities that make certain free-flowing rivers outstanding. A river may be classified as "Wild", "Scenic", or "Recreational", depending on the amount of development along its banks. Once a river is designated, no federal agency may approve or assist with the construction of a project that might adversely affect the river. In effect, this eliminates dams and diversions, all of which must be federally approved. Wildcat Brook in Jackson and the Lamprey River in Lee, Durham, Newmarket and Epping are the only NH rivers included in the federal system.

The NH Rivers Management and Protection Program (RSA 483) in DES prescribes a process for nominating a river or river segment for designation as "natural", "rural", "rural-community", or "community" by the Legislature. Once designated, RSA 483 protects the river's water quality and flow; requires denial of state certification under §401 of the Federal Water Pollution Control Act for new dams and channel alterations in rivers or segments designated natural, rural, and rural-community; encourages adoption and implementation of river corridor management plans; and provides for preparation of comprehensive management plans to "address the management and protection of instream values and state lands within the corridor." (RSA 483:10-a) DES has a procedure for establishing instream flow rules for designated rivers; in 2003 the Legislature funded a pilot program on the Souhegan to test it. To date fourteen rivers and segments of rivers have been designated.

A program for lakes, the NH Lakes Management and Protection Program also in DES, was established in 1990 (RSA 483-A). The program is to recommend state level management criteria for lakes, develop guidelines for lake management and shoreland protection plans, and encourage local and regional development and implementation of the plans.

DES biologists investigate water quality and biota of lakes and rivers and, to assist in these endeavors, sponsor volunteer lay monitoring programs for lakes and rivers. DES also runs the state exotic aquatic weed program (funded by a surcharge on boat registration fees) that attempts to deal with lake infestations, and has the power to designate restricted use areas on lakes and ponds with new, limited infestations of exotic aquatic weeds in hopes of containing or eliminating the new infestations.

Large groundwater withdrawals

Since 1998 DES has had regulatory authority over new large groundwater withdrawals (57,600 gallons or more per day) under RSA 485-C. The intent is to ensure that new large withdrawals do not adversely impact surface waters, including wetlands, and existing wells without adequate mitigation. If, after a 10-year permit is issued for the withdrawal, unanticipated impacts occur, DES can order reduction in quantity or cessation of the new withdrawal.

Water quantity data

Two federal agencies, Army Corps of Engineers and US Geological Survey, collect information on water quantity and flows. The latter, in cooperation with DES Water Division, mapped the location, quantity and quality of groundwater in sand and gravel deposits (stratified drift aquifers) in New Hampshire.

NH Geological Survey at DES is responsible for amassing water resources data. Information is collected through cooperative programs with the US Geological Survey and well completion reports (see Safe Drinking Water Act above). Since 1987, DES has been registering large volume water users and collecting periodic quantitative reports.

Wetlands

Dredging, filling, and placing structures in wetlands and surface waters of the state are regulated at the state level through joint permits issued by two programs in the Water Division of the NH Department of Environmental Services (DES): the Wetlands Bureau under RSA 482-A and the Site Specific Program that issues permits under RSA 485-A:17. The principal concern of Site Specific is to ensure that projects do not adversely impact water quality. The Wetlands Bureau considers other aspects of proposals as well, such as impacts on flood desynchronization and on wildlife habitat.

RSA 482-A provides for conservation commission participation in the wetlands

permit process and specifically authorizes local enforcement of its provisions. Wetlands protection is described in detail in Chapter 10.

At the federal level, the US Army Corps of Engineers issues permits for fill in waters of the United States (all surface waters including wetlands) under §404 of the Federal Water Pollution Control (Clean Water) Act and for dredge and fill in navigable waters under §9 and §10 of the River and Harbor Act of 1899. The federal program is independent of New Hampshire's joint wetlands permit process. However, in 1992 the Corps issued the first NH state program general permit (see Chapter 10), which was most recently reissued in 2002 and means that most projects receiving a NH Wetlands Bureau permit need not also obtain an individual federal permit.

Other Regulated Activities

Mining

RSA 155-E requires municipalities to regulate extraction of sand, gravel and construction aggregate (see Chapter 9). DRED issues permits for prospecting for and mining of other solid substances from natural deposits "on or in the earth or in or underneath water" (RSA 12-E). Reclamation plans are required as part of a permit, and a bond must be posted before a permit is issued.

Logging

Two aspects of timber harvests, cutting near water and disposing of slash, are regulated by RSA 227-J and enforced by DRED Division of Forests and Lands through District Forest Rangers. Unless all local permits are in hand to convert land to uses other than forestry, no more than 50% of the basal area of trees may be cut within 150 feet of a body of water 10 acres or larger, fourth order or higher stream, or public highway or within 50 feet of any other perennial stream or body of water smaller than 10 acres associated with a perennial stream. The "basal area" of a tree is the area of a cross section of a tree measured 4 1/2 feet above the ground. There are also restrictions on location and, in some cases, height of slash piles.

A logging operation must also comply with other statutes: for example, streams may not be polluted and a Wetlands Bureau permit is required for temporary, as well as permanent, logging roads that cross perennial or seasonal streams. The Intent-to-Cut form, filed by landowners with local assessing officials primarily for collecting the timber tax, includes an agreement to use best management practices to prevent surface water pollution. A "notice" serves as a permit for minimum impact logging projects when filed with the Wetlands Bureau (see Chapter 10).

Roads

RSA 229:5 divides all roads into 6 classes. Classes I-III-a include interstate highways, turnpikes, primary and secondary roads, recreational roads in state "reservations", and boating access highways to public waters; the state is responsible for them. The Department of Transportation regulates access to these roads through "curb cut" permits, except for Class III-a boating access highways, to which abutters may not obtain access.

Class IV highways are roads in the compact sections of cities and towns listed in RSA 229:5,V; Class V highways are all other town and city roads maintained by the municipality. Class VI highways are roads that, by vote of the local legislative body, have been discontinued subject to gates and bars and roads that have not been maintained for 5 successive years. Class V roads that became Class VI for lack of maintenance but subsequently are maintained more than seasonally for at least 5 successive years will return to Class V status (RSA 229:5,VI). The governing body regulates use of all local roads; the planning board regulates access to Class IV and V roads. If a planning board is authorized to regulate subdivisions, building permits may be issued on a Class VI road only if the governing body has decided, after review and comment by the planning board, to authorize building permits on that Class VI road (RSA 674:41).

Billboards and junkyards

NH Department of Transportation issues permits for junkyards, billboards and other off-premise signs on roads that are part of the National Highway System and former federal aid primary highways (RSA 236:69-110). In 2002, the Legislature amended RSA 149-M to enable NH DES to regulate junk yards and auto salvage facilities to protect the environment.

Municipalities may use zoning powers to regulate billboards, signs and junkyards

anywhere in town. RSA 236:111-129 requires local regulation of junkyards, including those regulated by DOT and DES.

Public utilities

The New Hampshire Public Utilities Commission (PUC) supervises services provided by public utilities, including non-municipal water companies. It sets standards for services and approves rate changes and capital improvement plans.

The New Hampshire Site Evaluation Committee is composed of specified representatives of state agencies; its chairman is the Commissioner of the Department of Environmental Services, and its vice-chairman is the Chairman of the PUC (RSA 162-H:3). The Committee evaluates applications for bulk (30 megawatts or more) electric generating facilities, high voltage transmission lines, and other energy facilities. Before a new facility may be built or an old one expanded, the Committee must find that a site and facility "will not unduly interfere with the orderly development of the region"; "will not have an unreasonable adverse effect on aesthetics, historic sites, air and water quality, the natural environment, and public health and safety"; and "is consistent with the state energy policy" (RSA 162-H:16, IV). However, the provisions of RSA 212-A, Endangered Species Conservation Act, "shall not interfere in any way with the siting or construction of" bulk power supply or energy facilities (RSA 212-A:13, III).

Resources

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Chapter 8

Local Regulation: Zoning

Planning for and regulating land use is principally a municipal responsibility in New Hampshire; conservation commissions often are involved when the objective is protection of natural resources. Zoning is the chief method of controlling land use, supplemented by subdivision and site plan review regulations, sand and gravel excavation permits, and health, building and fire codes. No matter what the form of local regulation, the issue of "taking" is likely to arise.

Taking

The Fifth Amendment to the United States Constitution states: "...nor shall private property be taken for public use, without just compensation." The Constitution of the State of New Hampshire has a similar provision in Part I, Article 12: "But no part of a man's property shall be taken from him, or applied to public uses, without his own consent..."

A clear example of "taking" would occur if a government were to take physical possession of a piece of land and construct a public building on it. In this instance, the owner would have to be paid for his land because he would be deprived of any use of his land.

When a regulation is proposed that limits the use of property, someone will raise the issue of "taking" by regulation, also called a "regulatory taking" or "inverse condemnation". According to the US Supreme Court: "Police power regulations such as zoning ordinances and other land-use restrictions can destroy the use and enjoyment of property in order to promote the public good just as effectively as formal condemnation or physical invasion of property." (*San Diego Gas & Electric Co. v. City of San Diego*, 438 US 621, 1981) The US Supreme Court reaffirmed this view in *Lucas v. South Carolina Coastal Council* (112 S. Ct. 2886, 1992), a case in which a landowner was completely prohibited from using his property.

In 1987, the US Supreme Court ruled in *First English Evangelical Lutheran Church of Glendale v. County of Los Angeles* (482 US 304) that a landowner temporarily deprived of all reasonable use of his land by a regulation is entitled to compensation even if the regulation is repealed later. The NH Supreme Court had reached the same conclusion in 1981 in *Burrows v. Keene* (121 NH 590).

In *Burrows v. Keene* (121 NH 590 at 598), the NH Supreme Court stated: "This is not to say that every regulation of private property through the police power constitutes a taking. Reasonable regulations that prevent an owner from using his land in such a way that it causes injury to others or deprives them of the reasonable use of their land may not require compensation...Nor do reasonable zoning regulations which restrict economic uses of property to different zones and which do not substantially destroy the value of an individual piece of property effect a taking requiring compensation. But arbitrary or unreasonable restrictions which substantially deprive the owner of the 'economically viable use of his land' in order to benefit the public in some way constitute a taking within the meaning of our New Hampshire Constitution ...It is a matter of degree. The owner need not be deprived of all valuable use of his property. If the denial of use is substantial and is especially onerous, a taking occurs. There can be no set test to determine when regulation goes too far and becomes a taking."

The facts of *Burrows v. Keene* illustrate a situation that the NH Supreme Court found to be a "taking" requiring compensation. "In that case, the plaintiffs, in 1973, purchased 124 acres of woodland in Keene for the purpose of subdividing it into lots. The property was located in a rural zone in which subdivision was permitted. In 1975, the plaintiffs approached the Keene Planning Board and the city's conservation commission about a subdivision plan. The city responded by requesting time to arrange to purchase the land so that the city could preserve its open spaces. The city offered the plaintiffs $27,000 for the land, based on an appraisal predicated on the city's intended noncommercial use of the land. The parties were unable to agree on price, and, when the plaintiffs sub-

mitted further subdivision plans, those plans were denied. In 1977, the city amended its zoning ordinance to include 109 acres of the plaintiffs' 124 acres in a conservation district in which development was forbidden." (*Claridge v. NH Wetlands Board*, 125 NH 745)

On the other hand, in both *Sibson v. State* (115 NH 124) and *Claridge v. NH Wetlands Board* (125 NH 745), the NH Supreme Court upheld the NH Wetlands Board's denial of permits to fill and found that neither denial constituted a taking because "...the landowner's action would substantially 'change the essential natural character of [the] land so as to use it for a purpose for which it was unsuited in its natural state and which injures the rights of others'." (*Claridge v. NH Wetlands Board*, 125 NH 745, quoting from *Sibson v. State*, 115 NH 124 at 129-130)

While neither the US Supreme Court nor the NH Supreme Court have provided a standard test to determine whether or not a particular ordinance is a "taking", the more closely an ordinance adheres to the purpose for zoning stated in RSA 674:16, "...promoting the health, safety or general welfare of the community...", the less likely it is to be found a "taking".

In *The Taking Issue*, a 1973 study of the history and court decisions on this point, the authors conclude that "...the fear of the taking issue is stronger than the taking clause itself...[and] is inhibiting the sort of reasonable regulatory action that is needed to protect the environment while respecting the position of individual landowners." (pp. 318-319). To deal with both the reality and the myth of the taking issue, the authors advocate as the best strategy "...simply to spend more time in drafting of regulations and the presentation of facts supporting — or opposing — them. Too often the regulations take the form of sweeping prohibitions and blanket indictments of all development simply because no one has taken the time to study and work out a reasonable compromise between the needs of the environment and the rights of the individuals." (p. 327). Thirty years later, those comments are still valid.

Master Plan

A master plan is the foundation for zoning; the statutory prerequisite for a zoning ordinance is planning board adoption of the vision and land use sections of the master plan (RSA 674:18). The NH Supreme Court has reinforced the importance attached to master plans by the Legislature: "Comprehensive planning with a solid scientific, statistical basis is the key element in land use regulation in New Hampshire." (*Patenaude v. Meredith*, 118 NH 616 at 621). However, an adopted master plan is merely a plan and legally unenforceable until it is implemented by a zoning ordinance adopted by the local legislative body (town meeting or city or town council).

Adoption procedures

A planning board is responsible for preparing, and in towns holding hearings on, proposals to adopt or revise the zoning ordinance. In towns, a zoning ordinance or revision to the ordinance must then be adopted by ballot vote at town meeting. In cities and towns with the town council form of government, the local legislative body determines how a zoning ordinance is to be adopted or revised, but a public hearing is required for all zoning ordinances and amendments (RSA 675:2-3).

The role of a conservation commission is advisory. A commission can comment on zoning proposals or draft an amendment and recommend it to the planning board. Sometimes a planning board will ask for help in drafting regulations for particular areas, such as wetlands, or for uses, such as signs. Then the planning board will decide whether to adopt the commission's recommendation, or a modified version thereof, as its own proposal to the legislative body.

Alternately, a conservation commission can petition for a zoning amendment. The petition must be in correct warrant article form, signed by at least 25 voters, and presented to board of selectmen between 120 and 90 days before the annual town meeting (RSA 675:4). The planning board must hold a hearing on the petitioned amendment, but may not revise it. After the hearing, the planning board must vote on whether to recommend adoption or defeat of the amendment, which will be on a ballot for a town meeting vote with the planning board's approval or disapproval noted.

Basic zoning concepts

Conventional zoning establishes land use districts within a municipality in order to separate incompatible uses and provide for orderly development. In each district, some uses are permitted as a right, some are prohibited, and some are allowed only under certain conditions by right or by special exception or conditional or special use permit. Each district may have a number of other requirements for lot size, frontage, setbacks, parking and the like; requirements must be consistent within each district but may vary between districts. In addition to prescribing the districts in which a use may be located, a zoning ordinance may impose requirements on a specific use, such as size and position of signs and special setbacks or screening for junkyards.

Smart growth or anti-sprawl advocates, who favor compact development, are concerned that most zoning ordinances rigorously separate land uses and, when coupled with dimensional requirements such as lot size, frontage, and setbacks, effectively prohibit construction of traditional downtowns and village centers. The 2000 census found NH to be the fastest-growing state in the northeast; conservation commissions should remember this and consider smart growth concerns when reviewing proposed zoning ordinances.

Often commission comments on conventional zoning districts are "to assure proper use of natural resources..." (RSA 674:17 (g)). For example, if wetlands are zoned for industrial use, requests to fill will follow. While the issue of "taking" focuses on the potential decrease in land value due to use restrictions, the same attention is not accorded zoning that increases the value of land. Land zoned for industrial or commercial uses by right usually commands higher prices than land zoned for rural or residential uses. Landowners rarely object to zoning that increases land values but are likely to protest changes that decrease values. Therefore it is easier to change zoning to more intensive uses than to less intensive ones – a political fact of life that conservation commissioners should keep in mind.

Zoning districts can protect some water resources. A watershed district can control uses harmful to a surface water supply. If a public water system uses groundwater, a district around the well field can regulate potentially polluting uses.

If there is a large lake, shore districts can provide areas for marinas, for example, while including appropriate buffers, setbacks, and minimum frontage for various other uses. If there is a single major river, a similar shore district might be appropriate.

Conventional zoning districts less easily protect some areas of concern, such as wetlands, streams and floodplains, because the resources occur in numerous locations. For example, a stream may flow through agricultural, residential, commercial, and industrial areas. Designing conventional use districts for such resources would result in numerous small districts that would be difficult to portray accurately on a zoning map. For this reason overlay districts, described below, are often used.

Innovative zoning

While some of the zoning concepts in this section are not new, all are listed in RSA 674:21, Innovative Land Use Controls, and are therefore subject to a special administrative requirement in 674:21, II. While an "innovative land use control ordinance" may be administered by various boards or individuals who may grant conditional or special use permits, RSA 674:21, II specifies that, if such an ordinance is NOT administered by the planning board, the planning board must comment in writing on any proposal prior to final action by the administrator.

A conservation commission proposal to the planning board for a zoning amendment, perhaps in the form of a draft ordinance, is likely to be defined as "an innovative land use control" because the list in RSA 674:21 includes "environmental characteristics zoning". Any ordinance adopted under this section should cite its authority, e.g. "adopted pursuant to RSA 674:21".

Environmental characteristics zoning

This heading covers many areas of conservation commission interest. Although natural features may be considered in conventional zoning districts, other factors such as roads, public water and wastewater systems, and existing land use may have greater influence on district boundaries. Further, protecting natural resources in conventional use districts could result in a complicated ordinance and maps. For these reasons over-

lay districts often are used for features that occur in multiple locations in a municipality, such as floodways and floodplains, wetlands, steep slopes, aquifers, rivers, streams, ponds, and lakes.

An overlay district is one that is superimposed on existing use zoning districts. Development must comply with the requirements both of the underlying district and of the overlay district. The underlying district allows certain uses by right and perhaps additional uses by special exception; it is a positive statement of what land uses may occur in the district. An overlay district adds restrictions and requirements to those of the underlying district. It may prohibit a use allowed by the underlying district, and thereby make a negative statement about land use.

Overlay zoning districts designed to protect natural resources from people or people from natural resources differ from conventional districts in that the section of ordinance creating the district contains a statement of purpose – what the special requirements of the district are intended to achieve or prevent. Such overlay districts are not growth control techniques; if growth rather than environmental protection is the concern, it must be addressed directly and in accordance with RSA 674:22-23.

Cluster and planned unit developments

Cluster development, also known as conservation or open space development, is housing development that groups permitted number of units more closely together and dedicates unused area as permanent open space. A cluster provides housing at the same density as a conventional layout but allows greater flexibility in placement of units; the terrain of the site can receive greater consideration. A cluster can be designed so that environmentally sensitive areas remain undeveloped. Rather than dividing undeveloped land into yards for individual units, it, too, is clustered and provides more contiguous open space for the use of residents. The developer benefits because a more compact arrangement reduces costs for roads and utilities. The community benefits because housing is provided, but road maintenance is reduced and undeveloped land is permanently preserved.

A planned unit development (PUD) is usually laid out as a cluster but involves a mix of uses. Sometimes the mix is a residential one of single- and multi-family housing; sometimes commercial uses are allowed also.

Both clusters and PUDs may be allowed in various zoning districts, usually with a minimum acreage requirement. There must be sufficient open space to make such an arrangement worthwhile.

Two concerns have arisen about open space in cluster developments: one that in the future local regulations may change, allowing the open space to be developed; the second that the open space often consists only of unbuildable land. RSA 674:21-a was passed in 1988 to address the first concern; it gives open space and other development restrictions approved under innovative land use controls the status of conservation easements, enforceable by the municipality or property owners, whether or not a conservation or deed restriction has been filed in the Registry of Deeds. In addition, many municipalities require formal conservation easements on the open space be filed in the Registry, and held by the municipality or by a land trust or other conservation organization.

The zoning ordinance itself must address the concern that a development's open space is unbuildable land and that therefore the developer is getting more units/acre than he would otherwise, while the municipality gets the task of monitoring small, noncontiguous, and not very useful easements. The ordinance could require deduction of unbuildable land prior to determining the number of units and could further require that the open space contain some percentage of buildable land and be contiguous within the development and, to the extent possible, with open space in abutting developments. If a natural resource such as a stream or ridgetop exists on the property, the open space should include it.

Clusters and PUDs are sometimes confused with condominiums. Clusters and PUDs describe the arrangement of buildings on the land, while condominium is a form of ownership. Condominiums cannot be treated differently from the same physical arrangement of buildings with a different sort of ownership (RSA 365-B:5). Therefore, if a zoning ordinance has no cluster provision, clusters are not allowed for condominiums.

Village plan alternative

The "village plan alternative", a form of cluster subdivision, was added to the RSA

674:21 innovative zoning list in 2002. RSA 674:21,VI.(c) gives requirements for this sort of development: density no greater than for a conventional subdivision, development limited to 20% of the land area, compliance with building codes, and requirements related to "public health and safety concerns, including any setback requirement for wells, septic systems, or wetland requirement of the department of environmental services". Regulations on lot size (including, perhaps, those of the state), frontage, and setbacks from lot lines do not apply.

At this point it is unclear whether local environmental regulations, such as buffers along streams and around wetlands, would apply to "village plan alternative" developments. Commissions should exercise caution until this question is answered.

Transfer of development rights

Transfer of development rights began as an urban zoning technique whose use has been expanded to the preservation of open space. In New Hampshire development rights have been acquired in the form of conservation easements by a number of governmental and private agencies, including the NH Department of Agriculture in the acquisition of agricultural development rights program. In a conservation easement the right to develop is held but not exercised by the grantee.

When a zoning ordinance has established a program for the transfer of development rights, unexercised development rights in a specified district or zone may be transferred by private sale to property in another district, which then can be developed at greater density than permissible without the transferred rights. For example, if zone A allows residential development at a density of one unit an acre and zone B allows 3 units an acre, the owner of land in zone B could acquire development rights to two acres in zone A and use them to build 5 units on his acre in zone B. This example assumes the zoning allows a 1:1 transfer and that 5 units per acre are allowed in zone B if the rights are acquired from another zone.

The ordinance implementing a transfer of development rights program must specify the zones involved, the proportion of development rights to be transferred, and the maximum density in the zone to which rights are transferred. The ordinance can provide for a direct transfer of rights between private owners or for the acquisition of rights by a municipality or a public corporation, which would sell the rights to developers. Such a program requires sophisticated zoning and administration and should not be undertaken without professional assistance.

Performance standards

In its purest form, performance standards zoning has no use districts and associated dimensional regulations for setbacks, buffers, building height, etc. Instead the ordinance specifies what development impacts are important, such as traffic, density, sewage, noise, and water. The municipality may be treated as a unit, or there may be districts, each with a different list of impacts.

A developer prepares a detailed assessment of his proposed project based on the concerns identified in the ordinance. The planning or zoning board then decides whether to allow the project on the basis of the projected impacts.

Use of performance standards can provide greater flexibility than conventional zoning districts. Developers need not conform to specific frontage and use requirements and can design their projects in an environmentally and economically sound fashion. On the other hand, technical expertise, and probably professional staff, is needed to assess impacts and to ensure that performance standards benefit the municipality.

Some performance standards are built into most New Hampshire zoning ordinances through the mechanisms of special exceptions and conditional use permits. A use may be permitted by special exception only if the zoning board of adjustment finds that the proposed use meets the criteria set forth in the zoning ordinance. Conditional or special use permits are similar but usually administered by a planning board.

Other techniques

Other innovative zoning techniques are less directly related to conservation commission concerns. Incentive zoning provides specific rewards, such as increased density, for specific public benefits provided by a developer. Timing incentives and phased development allow a project to be constructed over several years, which decreases the immediate impact on municipal infrastructure and services and gives a municipality time to meet increased demands caused by development. Growth management and timing of develop-

ment are options under RSA 674:22-23 only if a planning board has adopted both a master plan and a capital improvements program. An interim growth control regulation may be adopted when unusual circumstances exist (RSA 674:23).

Anatomy of a zoning ordinance

A conservation commission is most likely to be involved in drafting, as a recommendation to the planning board, a section of a zoning ordinance to protect a specific natural resource as an "environmental characteristics" overlay district. Understanding the existing zoning ordinance and how it is assembled is step one. Although specific requirements and organization will vary, any zoning ordinance will contain:

- statutory authority for adoption
- purpose
- establishment of districts
- rules for determining precise location of district boundaries
- definitions
- permitted and prohibited uses
- dimensional regulations (lot size, frontage, setback, building height, etc.)
- uses allowed by special exception
- non-conforming uses, lots and structures
- establishment of a zoning board of adjustment
- administration
- enforcement
- severance clause

An ordinance may not have a separate section for each item on the list, but all the information will be included somewhere.

A conservation commission will need to know the contents of the existing zoning ordinance in order to draft an amendment that is clear and accomplishes what is intended. The structure of the ordinance may require amending several sections. Definitions may be in one section; uses and dimensional regulations may be in tabular form. Creation of a new underlying district is likely to require changes in more sections and maps than an overlay district, but even an overlay district may involve amending several sections of an ordinance.

Model ordinances and examples of what other NH municipalities have adopted are available from such sources as the Department of Environmental Services, Office of Energy and Planning, and regional planning commissions. All municipalities are required to file municipal master plans and ordinances with the Office of Energy and Planning where a file is maintained for each municipality.

Clarity is essential for any zoning ordinance. Those who administer the ordinance are unlikely to have drafted it; they must rely on the wording of the ordinance.

This handbook does not include model or sample ordinances in order to remove the temptation to adopt a model without careful consideration of local conditions, both physical and administrative. Instead, the sections to include in drafting an overlay district for environmental protection are described here with a few examples and suggestions. The examples and suggestions are intended to point out some areas to consider but should not be viewed as exhaustive.

1. Purpose

This section provides a list of reasons for the adoption of the restrictions in the district, including both the harm to be prevented and the benefits to be derived. It should be as clear and comprehensive as possible because the granting of special exceptions, conditional or special use permits, and variances must by statute be consistent with the stated purposes of the ordinance. However, the purpose section is not itself a regulation, it merely helps to interpret regulations contained elsewhere in the ordinance.

A purpose common to all zoning ordinances must be to promote the health, safety or general welfare of the community because that is the reason for the statutory grant of power to zone (RSA 675:16). A zoning ordinance may state this purpose so that it applies to all sections of the ordinance; if this is the case, it need not be reiterated. Another purpose found in RSA 674:17 is universally applicable to environmental protection districts: "To assure proper use of natural resources..." More specific reasons are needed for each resource district. Examples include:

- **Floodplains/floodways**: to reduce hazards of floods to public health, safety and general welfare; to protect occupants of floodplains from flood damage caused or aggravated by unwise land use; to avoid large expenditures of public funds for

disaster relief and flood control; to protect capacity of floodplains to absorb, store, and transmit runoff and floodwater;

- **Wetlands**: to maintain water quality by preserving the ability of wetlands to filter pollution, trap sediment, retain and absorb chemicals and nutrients, and produce oxygen; to retain natural flood storage and flood-moderating capability of wetlands; to preserve wildlife habitat and feeding areas; to protect exemplary and unusual natural areas; to avoid expenditure of municipal funds to provide and maintain essential services and utilities that might be required as a result of misuse or abuse of wetlands;
- **Wetland and surface water buffers**: to prevent erosion and sedimentation; to prevent pollution by leaching and runoff of nutrients; to maintain the scenic character of the shoreline that enhances recreational use, providing economic benefits and aesthetic enjoyment; to preserve aquatic habitat; to retain vegetation that provides cover and corridors for wildlife;
- **Steep slopes**: to prevent erosion and sedimentation; to prevent health problems caused by improper siting of septic systems; and
- **Water supplies**: to prevent threats to public health from pollution of water supplies; to preserve quality and quantity of present and future water supplies; to protect groundwater zones of contribution (or the watershed of a surface supply) from land uses that would reduce quantity or impair quality of present (or future or potential) water supplies.

2. Definitions

An ordinance may have a section devoted exclusively to definitions. If so, any new definitions needed for an environmental district should be included in that section. Wherever they are located, definitions should be consistent both throughout a zoning ordinance and with any definitions contained in state statutes or rules. Definitions help to interpret, but are not in themselves, regulations.

In addition to adding definitions, amending existing ones may be appropriate. For example, a new district that limits building in certain areas, such as wetlands, steep slopes, or within a certain number of feet of a stream or waterbody, may involve amending a definition of unuseable or unbuildable land.

In 2004, an amendment to RSA 482-A:2 inserted a definition of wetlands: "X. "Wetlands" means an area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal conditions does support, a prevalence of vegetation typically adapted for life in saturated soil conditions." The bill also added RSA 674:55 that requires local zoning and other ordinances to use this definition of "wetlands" and further requires that all wetlands be delineated in accordance with rules adopted by the Wetlands Bureau.

3. Establishing a district

Regardless of the resource, a description of its location must be included in the zoning ordinance. For rivers, streams, and bodies of water, this may accomplished by adopting a buffer setback of a specific number of feet. Where to start measuring should be clearly stated and easily identified in the field, whether it is from the thread of a stream, the edge of a stream, a seasonal high water mark, or a mean high water mark. Specifying gradient in the definition of steep slopes may be sufficient (e.g. 15% or greater), since slopes are easily observed and calculated.

Floodways, floodplains, and aquifer districts will require maps adopted as part of the ordinance because these features are more difficult for non-experts to identify in the field. Many NH flood hazard areas have been mapped. If maps are not available locally, the regional planning commission or Office of Emergency Management should have copies. If a flood hazard area has no official map, a watercourse setback will have to suffice until it is mapped.

Surficial aquifers, sand and gravel deposits potentially capable of producing sufficient water for industrial or public use, have been mapped for the entire state. DES has mapped and put on its website zones of contribution for existing public water supply wells.

Wetlands

Maps of wetlands are more of a problem. State and federal regulations require that wetlands be delineated according to the 1987 Army Corps of Engineers Manual (which requires use of soil, plant and hydrologic data) and the *Field Indicators for Identifying Hydric Soils in New* England. Unfortunately, there are no wetland maps prepared using these criteria. Maps available on GRANIT include

Coastal Program maps of salt and fresh water wetlands for Portsmouth, New Castle, Rye, Hampton, North Hampton, Hampton Falls and Seabrook; National Wetlands Inventory (NWI) of the US Fish and Wildlife Service; and LANDSAT TM maps; and some county soil surveys. Unfortunately if these data layers are superimposed, the areas identified as wetlands likely will not be identical.

Ideally, a municipality should have mapped its wetlands before adopting a wetlands ordinance or zoning district, but most have not done so. Some simply use the three criteria to define wetlands with no maps; others use soil maps prepared to the standards of the National Cooperative Soil Survey, most often by the USDA Natural Resources Conservation Service order 2 soils maps because the maps are available and reasonably accurate for planning purposes. A commission should review available wetlands maps and decide whether to use the most accurate ones with a zoning ordinance, or to provide no maps.

If a conservation commission elects to use soils maps to identify wetlands, under RSA 674:55 it will be unable to define these as wetlands. (see definitions above) A municipality will still be able to use soil maps, but will have to call the areas "wet soils", or something similar, rather than wetlands. And it will have to decide whether to use only very poorly drained soils (which are invariably wetlands) or to include poorly drained soils as well (which are often wetlands). NH soil surveys often include in the poorly drained category some soils that are somewhat poorly drained because the acreage of somewhat poorly drained soils is insufficient for a separate category at the scale of the county soils maps. Some soils mapped as poorly drained do not have characteristic wetland vegetation and may be good agricultural soils, particularly if drainage tiles are installed.

Another problem with the scale of county soil survey maps is that small areas of different soils are not delineated. An area mapped as very poorly drained may include small areas of better drained soils and vice versa. To deal with dissimilar inclusions in a soils map, many NH wetlands zoning districts use soils, vegetation, and hydrology (the method prescribed by Wetlands Bureau rules and the 2004 statutory amendment described above) to determine the boundaries of wetland districts. Scientifically this is the best approach, but it may present practical problems for local administrators unless local wetlands have been mapped using all three criteria. A local administrator will have little trouble using soil maps to determine district locations but may have neither time nor expertise to identify in the field wetlands that do not appear on maps. The effect may be uneven enforcement of wetlands district requirements.

4. Locating districts precisely

A zoning ordinance will contain rules for determining district boundaries, probably related to property lines and the center of roads and streams. Since natural resources occur without regard for property lines, an environmental district should contain a mechanism for precise boundary determinations. The appropriate method will vary, depending on the method and map used.

For example, if soils are used to establish lot sizes, then the refinement of those boundaries should be based on a more detailed delineation of soils. An order 1 soil survey soil survey (see Chapter 9 Subdivision Regulations) should be required. A commission that plans to use soils to define a district should ask its County Conservation District for help in drafting soil criteria for the ordinance.

The ordinance should specify that the landowner disputing the boundary will be responsible for producing and paying for any expert evidence needed; the ordinance also should specify the credentials of the expert. For example, a wetland district could provide for determination of a precise boundary by the administrator based on evidence presented by a wetland scientist.

5. Permitted and prohibited uses

A new district that is not an overlay district will need a comprehensive list of uses to be allowed by right, to be allowed under certain circumstances, and to be prohibited. If the new district is an overlay, the underlying zone will have a list of uses.

A conservation commission's first task is to consider existing regulations and decide whether to rely in part on the uses in underlying districts or whether to include all permitted and prohibited uses in the overlay district. A commission might decide to rely on the uses in underlying districts and include only those that differ in the overlay. This approach will result in a list of uses that are prohibited or permitted only under specified

conditions. Or a commission might decide on a comprehensive listing of uses, both for emphasis and to ensure that future amendments to underlying districts do not inadvertently affect the overlay district.

Uses that are not harmful should be allowed by right. In floodplains, wetlands, aquifer, and stream, pond, and wetland buffer areas, permitted uses often include farming (excluding new clearing in buffers), forestry, conservation areas, operation and maintenance of existing water control structures, nature trails, and outdoor recreation. In wetlands, outdoor recreation is usually limited to activities such as hunting and fishing that do not require altering land. Floodplain districts might allow additional uses that alter terrain without increasing the height or impeding the flow of floodwaters, such as golf courses, tennis courts, and unpaved parking lots. In aquifer districts, residences and some commercial or industrial activities also might be allowed. Depending on the nature of steep slopes, uses in such a district can be limited to conservation or allow forestry and trails.

Some uses may be appropriate only under certain circumstances. For example, farming may be allowed in wetlands or water supply districts provided that no sedimentation and erosion occurs and that pesticides, fertilizers, and manures are stored and applied so that water quality is not degraded. Areas with public water and wastewater systems may support uses that could be damaging with individual wells and septic systems, for example apartment complexes in an aquifer district. Appropriate conditions for specific permitted uses must be clearly stated in the ordinance.

In compiling a list of potentially damaging uses, a conservation commission should check uses permitted in the underlying district(s) to be sure prohibited uses are comprehensive. Examples of prohibited uses might include:

- **Floodplains**: residences; structures not floodproofed; water wells; septic systems; storage of buoyant, flammable, explosive or toxic substances; land fills and stump dumps; fill, structures or obstructions that will increase flood height or damage;
- **Wetlands**: septic systems, land fills and stump dumps; subsurface storage of petroleum, petroleum products, and hazardous or toxic substances; storage of road salt and other leachable materials; buildings; structures; lawns;
- **Steep slopes**: septic systems, land clearing and stumping, structures;
- **Aquifers**: landfills other than for brush and stumps (no construction debris); subsurface storage of petroleum, petroleum products, and hazardous or toxic substances; hazardous waste disposal; storage of road salt and other leachable materials; on-site discharge or disposal of industrial process waters; subsurface disposal systems for wastewater other than of the quantity and quality generated by one- and two-family residences; dumping snow; animal feedlots; automotive service and repair shops; junk and salvage yards; and
- **Shore and wetland buffers**: land clearing; lawns; parking lots; buildings and structures except those related to water use.

In assessing uses to be permitted or prohibited, a conservation commission must consider the specific characteristics within the district and be sure that prohibitions are directly related to the resource to be protected. The gradients and soils of steep slopes can vary considerably. Unwise uses in shore buffer districts will depend on the depth of the district and whether the buffer is adjacent to a large river, small stream, lake or pond. Proposals for prohibited uses in or adjacent to wetlands should take into account the definition of wetlands; if wet soils are used, a distinction between very poorly and poorly drained soils may be useful, perhaps with a subcategory for poorly drained soils that abut very poorly drained. If a municipality has designated prime wetlands in accordance with RSA 482-A:15, a larger buffer around the designated wetlands may be appropriate.

The examples of permitted and prohibited uses above are intended solely as illustrations. The particular characteristics of land in the district may make some of the examples inappropriate and may require additional allowed or prohibited uses not included here.

6. Dimensional regulations

Septic system setbacks and minimum lot size are two areas commonly regulated to

protect water quality. Lot size is usually part of underlying zoning districts, but septic system setbacks greater than those required by the Department of Environmental Services are sometimes included in wetland and shore setback overlay districts. In considering whether to propose greater septic setbacks, a conservation commission should bear in mind that DES' Subsurface Bureau has rules that require a 75' setback from surface waters and very poorly drained soils and a 50' setback from poorly drained soils. Neither Subsurface nor Wetlands Bureau allows fill for septic setbacks; both advise applicants to seek variances from zoning ordinances with greater setbacks.

While NH municipalities are specifically allowed by RSA 147:10 to adopt stricter standards for septic systems than the state's, the effect of greater local setbacks may also be a request to fill wetlands to meet local requirements on an existing lot. Some municipalities deal with this conflict between intent and result by granting variances from the local zoning requirement (RSA 674:33). The approach taken by one NH town is to require an additional local setback only in excessively drained soils because these are the least capable of removing potential pollutants from septic effluent.

7. Special exceptions and conditional or special use permits

A use allowed by right under certain conditions (e.g., apartment complexes are permitted if served by municipal water and sewer) requires no judgment; the condition is either present or absent. Special exceptions and special or conditional use permits are for uses that need individual review and judgment on their compatibility with the intent of the district.

Special exceptions (issued by a zoning board of adjustment) and special or conditional use permits (issued by a planning board) are designed to cover requests for uses that are anticipated and uses that are not anticipated but may be compatible with the intent of the ordinance. In the case of anticipated uses, a special exception or conditional or special use permit is required when detailed review with a decision based on the specifics of a proposal is desirable. A zoning ordinance authorizes special exceptions or special or conditional use permits and specifies criteria to be used in deciding whether they should be granted.

Wetland districts often provide for a special exception or conditional or special use permit for streets, access roads, driveways, and utility rights-of-way or easements including power lines and pipe lines, provided the facility is essential to productive use of land outside the district and provided the facility is located and constructed to minimize any detrimental impact on wetlands. In this example, uses are specified (streets, etc.), as are criteria on which a decision is to be based (essential to productive use of land outside the district; designed to minimize detrimental impact on wetlands).

Most environmental districts provide a "catch-all" special exception or conditional or special use permit for uses not otherwise permitted that are consistent with the intent in establishing the district. An example might be the creation, restoration, or expansion of a wetland as mitigation for destruction of a wetland that cannot practically be avoided in conjunction when widening an existing road or bridge.

Whether an ordinance provides for a special exception or conditional or special use permit will depend on which board is specified as the administrator in the ordinance. If it is the zoning board of adjustment, the ordinance will allow special exceptions; if it is the planning board, the ordinance will allow special or conditional use permits. In some municipalities, the zoning board is responsible for administering conventional zoning while the planning board administers innovative zoning provisions. RSA 674:21 allows an innovative zoning ordinance to designate as administrator either of these two boards or another person or board, but if the planning board is not chosen, it must provide written comment on any proposal under innovative zoning. A conservation commission should consider adding a requirement for comments from the commission as well.

8. Non-conforming uses

A zoning ordinance will have a section on non-conforming uses and structures, that is, existing structures and uses at the time the zoning ordinance or amendment is adopted that do not comply with requirements of the new ordinance or amendment. There may be a limit on expansion or special requirements for replacement (in the event of abandonment

or destruction by fire, flood, etc.) of a non-conforming use or structure. A conservation commission drafting an ordinance creating a new district should review the section on non-conforming uses to see if amendment is appropriate. If, for example, the new district provides floodplain protection, it may be wise to eliminate provisions for replacing non-conforming structures or uses destroyed by flooding.

RSA 674:39 exempts plats approved by a planning board from subsequent changes in zoning and subdivision regulations for 4 years, unless the changes "...expressly protect public health standards, such as water quality and sewage treatment requirements...", provided that active and substantial development has begun within 12 months of approval. In addition, RSA 676:12, V exempts any subdivision or site plan from changes for which the public hearing notice is posted after the final application has been accepted as complete by the planning board. These exemptions and protections for non-conforming uses and structures make a "grandfather clause" unnecessary and unwise.

9. Variances

Every zoning ordinance is required by RSA 673:1 to establish a zoning board of adjustment to hear and decide appeals and to grant variances from the requirements of the zoning ordinance "...if, owing to special conditions, a literal enforcement of the provisions of the ordinance will result in unnecessary hardship..." (RSA 674:33). Over the years, NH courts have clarified that the special conditions must be related to the land and its characteristics rather than to the owner's circumstances. If a conservation commission is amending an existing zoning ordinance, a zoning board of adjustment with the power to grant variances will exist.

10. Severance clause

A severance or separability clause that permits a court to find a section of a zoning ordinance invalid without affecting the rest of the ordinance is probably included, either at the beginning or end of an existing zoning ordinance. A severance clause need not appear in every section of the ordinance; if one does not already exist, it should be drafted to apply to the entire zoning ordinance.

Preadoption Review

There is no requirement for legal review of a zoning ordinance or amendment. However, town counsel will be called upon to defend the ordinance in court if it is challenged; seeking his or her advice prior to adoption is sensible.

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Chapter 9

Additional Local Regulatory Tools

Zoning is the principal tool for local regulation of land use. Opportunities for more limited municipal control of land use and of specific activities include: (1) regulation of subdivisions, (2) site plan review, (3) sand and gravel excavations, (4) health code, and (5) designation of scenic roads. Such regulations are a supplement, not a substitute, for zoning in guiding the development of a municipality. However, in municipalities without zoning regulations, these can provide some control over individual projects – except for site plan review for which zoning is a prerequisite.

Subdivision regulations

Regardless of whether or not a municipality has adopted a zoning ordinance, town meeting or city council may authorize the planning board to regulate the subdivision of land (RSA 674:35). The planning board must adopt regulations before exercising this power. The statutory list of areas that subdivision regulations may cover includes several of potential interest to conservation commissions: the provision of open spaces "of adequate proportions"; the provision of parks suitably located and "of reasonable size for neighborhood playgrounds or other recreational uses"; the requirement that the land "...be of such character that it can be used for building purposes without danger to health"; and the establishment of minimum lot size, including "such additional areas...as may be needed...for on-site sanitary facilities" (RSA 674:36, II).

A conservation commission can recommend that the planning board adopt subdivision regulations to avoid potential problems related to natural resources, such as excluding wetlands and steep slopes from calculations of minimum lot size because these areas are unsuitable for buildings and septic systems. A commission could also recommend that final approval of a subdivision not be granted until all needed state permits are received, including ones from DES Wetlands Bureau, Subsurface Bureau for a subdivision with lots of 5 or fewer acres and on-site wastewater disposal, or Site Specific Program for disturbing 100,000 (50,000 in areas covered by the Shoreland Act) square feet or more (see Chapter 7).

A number of New Hampshire municipalities use soils to determine minimum lot sizes for areas served by on-site sewage systems. Since the 1980s many towns have required High Intensity Soil Survey (HISS) maps to implement a system of lot sizes by soil types. *High Intensity Soil Maps for New Hampshire, Standards* are based on a classification system once used by the Soil Conservation Service, rather than soil series (the current classification system of the National Cooperative Soil Survey). HISS maps are useful for assessing suitability for septic systems, but they identify only the four soil properties (drainage class, parent material, restrictive features, and slope class) that are needed for subdivision regulations that have lot sizes based on capability of soils to support septic systems and leach fields without contaminating groundwater.

By the mid 1990s, soil scientists became concerned that municipalities were attempting to use HISS maps for making land use decisions that went well beyond their intended purpose, which is to ensure that lots are adequately sized to accommodate on-site water supply wells and wastewater disposal systems. As a result, the Society of Soil Scientists of Northern New England (SSSNNE) developed standards for soil maps prepared to Level 1 mapping standards of the National Cooperative Soil Survey, *Site Specific Soil Mapping Standards for New Hampshire and Vermont.* SSSNNE is the nonprofit, professional organization of soil scientists that also developed and published HISS map standards.

Level 1 maps provide the same information as HISS maps, as well as data on suitability for numerous other uses. Soils mapped using the Site Specific standards are consistent with USDA/NRCS soils series classifications and interpretations that are valuable for other planning purposes,

whereas HISS maps cannot be converted to USDA/NRCS soils series. For example, USDA/NRCS soils series can be used to determine soil limitations for road construction, whereas HISS maps cannot. For planning purposes beyond simple determination of the appropriate size for lots with onsite water supplies and septic systems, maps prepared to Site Specific standards should be required.

In 2003, SSSNNE released an updated publication, *Soil Based Lot Sizing: Environmental Planning for Onsite Wastewater Treatment in New Hampshire,* which supercedes all previous soil based lot size publications. The new lot-size-by-soil-type publication provides tables for lot sizes based on soils mapped under HISS and the newer Site Specific mapping standards. The HISS tables are not identical to those published earlier (1987), so municipalities using the earlier standards will need to update them; the Site Specific tables are new. All three publications are available at www.sssnne.org.

The Office of State Planning has developed a set model requirements for soils and wetlands mapping data for use in local subdivision and site plan review regulations. A conservation commission wishing to explore the use of soil-based lot size subdivision regulations should also seek the help of the County Conservation District in designing appropriate requirements.

After subdivision regulations have been adopted, some planning boards seek the views of the conservation commission on individual subdivision applications, and other commissions volunteer their recommendations. In some cases, modifications to a proposed subdivision may avoid the need to alter wetlands or natural drainage systems as the lots are developed.

Site plan review

The authority to review site plans for non-residential and multi-family housing development, whether or not it involves a subdivision, may be given to a planning board by vote of the town meeting or city council *only* in those municipalities with a zoning ordinance and subdivision regulations (RSA 674:43). The planning board must first adopt regulations, which may address adequate drainage, protection of groundwater quality, and provision of "open spaces and green spaces of adequate proportions" (RSA 674:44). As with subdivisions, a conservation commission may make recommendations to the planning board on its regulations or on a particular proposal.

Septic systems

Municipal regulation of septic systems may be contained in the zoning ordinance or in regulations proposed by the health officer and approved by the selectmen. RSA 147:10 specifically authorizes the adoption of local regulations "to ensure the safety and adequacy of subsurface sanitary disposal systems within the municipality." Also, RSA 485-A:32 states that the Department of Environmental Services' (DES) standards are minimums and do not preclude more stringent municipal requirements.

The provision of adequate sewerage is a requirement for all occupied buildings, regardless of age (RSA 147:8). State regulations can ensure appropriate design and construction of new septic systems, and DES approval must be obtained for all lots smaller than 5 acres not served by public sewer and all lots under the Shoreland Act (see Chapter 7). Local regulations are needed to ensure that lots 5 acres or larger have areas adequate to support septic systems and leach fields.

Further, RSA 485-A:38 requires DES approval before the load on a sewage disposal system is increased either by expanding a building or by extending occupancy of an existing structure from seasonal to year-round. RSA 147:17-a and 17-b mandate repair and replacement of failed systems. A site assessment to determine if a lot can meet current sewage disposal standards is required before developed land within 200' of a Great Pond or tidal waters is offered for sale. Towns may require sewage disposal systems to comply with current standards as a prerequisite for building permits.

Requirements for other permits

A local requirement for obtaining appropriate permits from other levels of government (Wetlands Bureau, Subsurface Bureau, or US Army Corps of Engineers, for example) before a building permit is issued can help ensure that a builder gets these permits. Such a requirement encourages local enforcement of state statutes, since the permits would also be a municipal requirement.

Underground tanks

Local fire departments are responsible for enforcing the requirements for petroleum storage tanks adopted by the state Fire Marshal and designed to prevent fires and explosions. Since fire departments already deal with these tanks, they can also oversee compliance with DES Division of Waste Management's regulations for tanks of 1100 gallons or more. Local regulations to prevent pollution may be adopted for tanks smaller than 1100 gallons.

Toxic substances

Fire departments maintain lists of toxic substances in the workplace; employers are required to report such substances by RSA 277-A, the NH Worker's Right to Know Act. The data sheet for each substance must describe procedures for safe handling and use, as well as measures for cleaning up spills and leaks and for fighting fires.

Excavations for sand, gravel, rock, soil or construction aggregate

In a departure from its customary practice of enabling a municipality to regulate a particular activity if it chooses to do so, the NH Legislature requires a local permit for the commercial excavation of earth with a few specific exceptions (RSA 155-E). The statute provides that the planning board administer the excavation permit system but allows a municipality to vote to assign administration to the selectmen or board of adjustment instead. Local regulations may, but are not required to, be adopted for commercial excavations. In every case, a public hearing must be held prior to the issuing of a permit.

RSA 155-E:3 requires an applicant to send a copy of his permit application to the conservation commission but does not provide for consideration of the commission's comments on an application. A commission should be sure that local regulations are adopted that include consideration of commission recommendations on permit requests. A commission will also need to establish a reliable system to be sure that it receives a copy of all permit applications. Once the regulations and a notification system are in place, the commission should review and comment to the local regulator on each application.

In addition to specifying conservation commission participation in the permit process, local regulations may be more stringent than RSA 155-E and can provide specifics absent from the statute to ensure uniform treatment of all applications. For example, RSA 155-E:8 says that the expiration date shall appear on the permit but does not specify the length of time for which a permit will be valid. To assist both the regulator and the applicant, local regulations also should include requirements of RSA 155-E so that one document will cover all requirements for an excavation permit.

Specifically exempted from the requirement to obtain a permit under RSA 155-E are excavations that are:

- incidental to construction, agricultural and silvicultural activities;
- granite quarries;
- contiguous to, or from contiguous land in common ownership with, a stationary manufacturing and processing plant that was in operation on August 24, 1979;
- contiguous to, in common ownership with, in the same town as, and appraised and inventoried as part of the same tract as excavations that were in use on or before August 24, 1979; or
- exclusively for construction, reconstruction, or maintenance of a Class I-V highway and performed by the unit of government with jurisdiction over the road or a contractor therefor, but a copy of the pit agreement must be filed with the local regulator prior to the start of excavation.

All excavations, even those not required to obtain a permit, must comply with the operation and reclamation standards in RSA 155-E:4-a, 5 and 5-a. In addition, before topsoil is removed from any new excavation area, a bond must be filed with the municipality to ensure reclamation of the new excavation area. Local regulations should include the process for determining the appropriate amount of a reclamation bond.

A permit for a gravel pit must be denied in instances spelled out in RSA 155-E:4. Where excavations are not allowed by zoning, a permit may not be issued provided that the zoning ordinance permits "opportunities for

excavation of some of these resources in at least some, but not necessarily all areas within the municipality." If a local zoning ordinance prohibits all excavations or fails to mention them, then "excavation shall be deemed to be a use allowed by special exception" in any non-residential area (RSA 155-E:4, III). A municipality with any sand and gravel deposits whatsoever would be wise to permit excavation of some of those deposits in its zoning ordinance.

Of particular interest to conservation commissions is RSA 155-E:4, V, which prohibits issuing a permit "Where the excavation would substantially damage a known aquifer, so designated by the United States Geological Survey." Areas in New Hampshire with the potential to yield large quantities of groundwater are likely to be sand and gravel deposits, so further definition in local regulations of "substantially damage" may help to reduce conflicts.

RSA 155-E:11 specifically authorizes local regulations to include "reasonable measures for the protection of water resources, consistent with the municipality's local water resources plan", but also requires a procedure for granting an exception to those measures if the applicant can demonstrate that water quality will not be adversely affected.

The removal of gravel in and of itself will not necessarily damage an aquifer or pollute groundwater, but care must be taken in using and storing fuel and lubricants. Local regulations can specify impervious storage containers and refueling locations. The Department of Environmental Services has two helpful fact sheets: *Best Management Practices (BMPs) for Groundwater Protection* and *Best Management Practices for Fueling and Maintenance of Excavation and Earthmoving Equipment.*

The removal of vegetation and gravel is apt to enhance groundwater recharge by allowing more rapid percolation of precipitation and runoff. At the same time filtration of potential pollutants is reduced by the absence of vegetation and decreased soil depth. Excavation to or below the water table increases evaporation and the potential for pollution. Requiring a hydrologic assessment of a proposed excavation site, including the quantity, quality, and direction of flow of groundwater can help regulators evaluate the potential consequences of excavations of various depths.

Another factor to consider before issuing an excavation permit is the anticipated use of the area once it is restored. If future use may be a residential subdivision with on-site water and septic systems, this should be reflected in the depth of excavation permitted and in the restoration requirements. A greater distance might be required between the bottom of the excavation and the top of the water table, and restoration might include a layer of sand below the future septic systems. The County Conservation District and the septic system construction rules of the Subsurface Bureau, DES, will be helpful in designing specific requirements.

If the anticipated use is recreational, such as a golf course or ball fields, excavation closer to the water table might be allowed. (A municipality would be wise to monitor use of pesticides and fertilizers on such a site.) One way of ensuring that a future recreation area does not become a subdivision would be to transfer the development rights to the municipality in exchange for allowing excavation closer to the water table.

Scenic Roads

Old stone walls and large trees provide an attractive border for many rural New Hampshire roads, yet increasing population and traffic may lead to road improvement projects that threaten such walls and trees. Designation of a road as "scenic" can ensure that the fate of stone walls and large trees is considered when road or utility improvements are proposed.

RSA 231:157 provides for a town meeting vote to designate a particular road as "scenic". For such an article to appear on the town meeting warrant, the town clerk must be presented with a list of abutters of the road and a petition signed by 10 voters and/or owners of land abutting the road. If town meeting votes to designate the road as scenic, no road improvements that involve damage to or removal of stone walls or trees with a circumference, measured 4 feet above the ground, of 15" (a diameter of 4.77") or more may occur without a public hearing and written permission of the local body (usually the planning board or conservation commission) chosen by town meeting to oversee scenic roads (RSA 231:158).

RSA 231:158, V also allows a town to adopt provisions applying to scenic roads that are different from or in addition to those specified in the statute. A town might wish to specify the criteria for making decisions on removal of trees and stone walls; it might wish to protect some trees smaller than 15" in circumference as potential future replacements should some larger trees die or need to be cut.

Conservation commissions should be aware that scenic designation does not prevent destruction of stone walls and trees, it merely requires that a hearing be held if a proposed utility or municipal road project will affect the trees and stone walls. A tree or trees along a scenic road may be removed without a public hearing but with written permission from the selectmen if the trees threaten safety or property, must be removed to restore utility service, or have been declared a public nuisance in accordance with RSA 231:145-146.

Scenic road designation does not protect stone walls and trees from removal or alteration by the landowner, unless the "trees have been acquired by the municipality as shade or ornamental trees pursuant to RSA 231:139-156" (RSA 231:158, IV). However, if a stone wall or tree marks a boundary, then its "defacement, alteration of location, or removal" is a misdemeanor (RSA 472:6). Perhaps the greatest value of scenic road designation is to forewarn road agents, utility companies, and landowners of probable adverse public reaction to altering the character of the road.

Prime Wetlands

The designation of some wetlands as "prime" under RSA 482-A is an additional regulatory option available to conservation commissions, although one that is not locally enforced. The "prime" designation is adopted by the same procedure required by RSA 675 for adoption of zoning after the conservation commission has prepared a report and map in accordance with the regulations of the Wetlands Bureau (see Chapter 10). Following the municipal vote, the report and maps are submitted to the Wetlands Bureau, which will accept them if they are prepared according to the Bureau's rules.

The areas designated as "prime" will receive extra attention from the Wetlands Bureau. If an application involves a designated prime wetland AND if the conservation commission advises the Bureau within 14 days of the filing date that it does, then the Bureau must hold a hearing regardless of the scale of the project. If the Bureau approves a permit for the proposal, the permit will not be issued for 28 days following the decision to allow time for an appeal by the municipality.

Resources

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Chapter 10

Wetlands Protection

Wetlands are among the most biologically diverse, productive, and unique habitats on earth. No part of our landscape provides so many benefits at so little cost to the public. Wetlands play a role in flood control, water quality maintenance and improvement, groundwater discharge and recharge, shoreline stabilization, fish and wildlife habitat, recreation, and education. However, the diversity of wetland types and individual wetland areas means that their values and benefits can vary significantly.

Wetlands are land areas where water is so abundant that it is the major factor determining the nature of soil development and plant growth. Wetlands are either periodically or continuously saturated or inundated by water. Although wording varies, all definitions of wetlands use three parameters: hydrology (presence of water); hydrophytes (wetlands plants); and hydric soils (wet soils). Because water is not always observable in a wetland (in a vernal pool or wooded swamp in summer or in a tidal marsh at low tide for example), hydrophytic vegetation and hydric soils are used as evidence of the regular presence of water.

Wetland types found in New Hampshire are inland fresh water wooded swamps, vernal pools, wet meadows, shrub swamps, marshes, bogs and fens, and coastal salt and freshwater marshes. The US Fish and Wildlife Service (USFWS) has developed a comprehensive, scientific system for classifying wetlands (see Resources at the end of this chapter; document link on DES web site: www.des.state.nh.us).

The values of wetlands were not widely recognized until recently. Projects to "reclaim" wetlands by draining them for agricultural use or filling them for residential or industrial development were prevalent until the mid-twentieth century. Preserving wetlands benefits the general public but not necessarily the owner of the wetland. The issue may be not only a matter of public versus private interests, but also one of conflicting public interests.

Federal wetlands programs

Historically federal programs treated wetlands inconsistently. Some federal agencies accelerated wetland losses by subsidizing their conversion to other uses, while others worked to preserve them through acquisition and regulation. In 1986, Congress passed the Emergency Wetlands Resource Protection Act "...to promote, in concert with other Federal and State statutes and programs, the conservation of the wetlands of the Nation in order to maintain the public benefits they provide..." The Act sought to identify and address inconsistent federal wetland policies, to accelerate the collection of wetlands data by the National Wetlands Inventory of the US Fish and Wildlife Service (USFWS), and to expand acquisition programs.

The 1988 report of the National Wetlands Policy Forum, convened by the Environmental Protection Agency (EPA), urged federal agencies to: (1) adopt one definition of wetland for regulatory purposes; (2) enforce wetlands regulations uniformly nationwide; and (3) adopt a policy of first avoiding, then reducing, and, only as a last resort, mitigating adverse wetland impacts. The report advocated "no overall net loss" of wetlands and a long-range goal of increasing the quality and quantity of the Nation's wetlands.

USFWS, EPA, US Army Corps of Engineers (Corps), and USDA Soil Conservation Service (now Natural Resources Conservation Service) adopted the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands* in January 1989. In December 1989, EPA and the Department of the Army signed a memorandum of agreement on a policy first to avoid, then to reduce, and, only as a last resort, to mitigate adverse wetlands impacts.

The Federal Manual plus more uniform enforcement of federal wetlands regulations triggered a national wetlands policy debate, due to the "sudden" increase in regulated wetland areas. New Hampshire and New England experienced no such increase because the Corps in New England and EPA Region I (New England) had been enforcing federal

regulations all along and because, unlike most states, all 6 New England states have inland wetland regulatory programs.

In 1991 Congress directed the Corps to use the *1987 Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1* (January 1987) instead of the 1989 Manual. Today the Corps, EPA and the NH Department of Environmental Services (DES) use the 1987 Corps Manual and *Field Indicators for Identifying Hydric Soils in New England* (Version 3, 2004) to delineate wetlands. The Corps Manual is linked to DES web site at www.des.state.nh.us.

Federal regulation

Federal regulation of activities in surface waters including wetlands is based on §10 of the River and Harbor Act of 1899 and on §404 of the Clean Water Act that amended the Federal Water Pollution Control Act in 1972. Both are administered by the US Army Corps of Engineers; its regulations (33 CFR Parts 320-330) implement both laws. The Corps regulates dredge, fill, and structures in navigable waters under the River and Harbor Act to ensure safe navigation (see Chapter 7); under §404 it regulates the discharge of dredged or fill material in all waters of the United States, including wetlands, with some exceptions. These include normal farming, silvicultural and ranching activities; excavating farm ponds, irrigation and drainage ditches; construction of farm, forest, and temporary mining roads; and maintenance of "currently serviceable" structures such as dikes, dams, levees, bridges, and causeways.

In reviewing permit applications, the Corps of Engineers evaluates such factors as economics, historical values, flood damage, recreation, water supply, water quality, energy needs, and food production. EPA has adopted guidelines for considering alternatives and impacts with which all applicants must comply. EPA has the power to enforce §404 and to veto any permit application if project impacts are unacceptable. Another mechanism available to EPA under §404(b)(1) is "advanced identification" of unsuitable discharge sites for dredged or fill material to warn applicants of areas for which permit approval is less likely. EPA Region I has not used this technique to date.

Corps regulations define waters of the United States as: (1) all tidal waters; (2) all waters that are, have been, or might be used in interstate commerce; (3) all interstate waters and wetlands; (4) all intrastate waters and wetlands "...the use, degradation or destruction of which could affect interstate or foreign commerce..."; (5) all impoundments of (1)-(4); (6) all tributaries of (1)-(5); and (7) the territorial seas. The Corps defines wetlands as "...those areas that are inundated or saturated by the surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." (33 CFR 328)

In effect, the Corps of Engineers has jurisdiction over almost every waterway and wetland in New Hampshire. The Corps has two types of permits, general and individual, for fill in waters of the United States and dredge or fill in navigable waters.

General permits are issued by rule and amount to an exemption from individual scrutiny for projects or locations described in the regulations. Some general permits require the Corps to be notified before work begins; others do not. General permits may be issued for the entire country (nationwide general permits) by Department of the Army regulation or for a region or state (regional or state general permits) by the appropriate Corps of Engineers Division.

The Corps has issued a general permit (State Programmatic General Permit) for New Hampshire and has revoked all nationwide permits here. Most NH projects classified as minimum impact and minor under Wetlands Bureau rules that receive a permit from the Bureau qualify for approval under the State Programmatic General Permit. Proposals involving more than 3 acres of impact and most proposals that involve impacts over one acre continue to need an individual permit from the Corps, as will activities regulated under the River and Harbor Act of 1899.

If a project has a Bureau permit and is categorized as minimum impact, work may begin without waiting for Corps authorization. Minor projects with Wetlands Bureau permits may proceed unless the Corps notifies the applicant of the need for an individual permit within 30 days of Wetlands Bureau approval. If a project is major under Bureau rules and involves less than 3 acres of wetland impact, the Corps will notify the ap-

plicant within 30 days whether the work is authorized or an individual permit is needed.

Individual permits are required for projects that do not qualify under the State Programmatic General Permit. The Corps publishes a public notice of each application for an individual permit and accepts comments for 30 days on the proposed project from the public, Environmental Protection Agency (EPA), US Fish and Wildlife Service, and National Marine Fisheries Service. The Corps also may hold a public hearing.

The Corps may not issue a §404 permit for a project for which a state permit has been denied, but it may issue a permit that is more restrictive than state or local authorization. Some projects must have all three approvals: local, state, and federal. If a proposal appears to exceed the scope of the NH State Programmatic General Permit, a conservation commission should advise an applicant for a state wetlands permit to contact the Corps to find out if an individual permit is needed.

Other federal programs and policies

1. Executive Order 11990, Protection of Wetlands, was issued by President Carter in 1977. It requires all federal agencies to minimize the destruction, loss, or degradation of wetlands. Federal projects in federally-owned wetlands are to be avoided unless there is no practical alternative. This Order does not apply to federally-permitted or licensed activities on non-federal property.

2. Executive Order 11988, Flood Plain Management, also dates from 1977. It requires written justification for a federally-funded project in a floodplain, including the alternatives considered and compliance of the proposed project with state or local floodplain protection regulations.

3. The Fish and Wildlife Coordination Act requires wildlife conservation to be given the same consideration as other aspects of federal water resource development projects. Under this Act Fish and Wildlife Service, National Marine Fisheries Service, and state wildlife agency chiefs attempt to mitigate adverse impacts on wetlands.

4. The Endangered Species Act of 1972 prohibits a federal agency from undertaking or funding a project that will harm an endangered or threatened species, many of which frequent or reside in wetlands.

5. The National Environmental Policy Act (NEPA) of 1969 requires Environmental Impact Statements (EIS) for federally-funded and federally-permitted activities that would have significant environmental impacts. An EIS can help identify the adverse impact of development on wetlands.

6. The Coastal Zone Management Act of 1972 requires federal agencies to comply, to the maximum extent possible, with approved state coastal zone management programs. Applicants for federal permits or licenses for activities affecting land or water resources in the coastal zone must certify that the proposed activity will comply with the state's coastal zone management program.

7. National Wetlands Inventory (see Chapter 5) of US Fish and Wildlife Service is a nationwide set of maps delineating wetlands according to the USFWS wetlands classification system. Maps are available on GRANIT GIS and the USFWS website or by calling 1-800-USA-MAPS.

8. Swampbuster provisions in the Farm Bill are implemented by the Natural Resources Conservation Service and deny federal farm benefits (cost-share payments, etc.) to those who drain, destroy, or plant commodity crops in wetlands converted after December 23, 1985.

9. Wetlands Reserve Program, part of the Farm Bill, provides federal funding for wetland restoration and enhancement in exchange for removing marginal farmland in converted wetlands from production. If a private landowner elects to put a permanent easement on the wetland, USDA pays for the easement plus the full cost of restoring the wetland. If a landowner chooses a 30-year easement, USDA pays 75% of the cost of a permanent easement and 75% of the cost to restore the wetland. In addition, there is provision for a cost-share agreement, usually with a minimum term of 10 years but without an easement; USDA pays 75% of the wetland restoration cost.

10. Conservation Reserve Program (CRP) is another USDA grant program that offers annual rental, plus incentive, maintenance, and cost share payments for 10-15 years to farmers who plant crop or pasture land with species that provide wildlife cover and reduce erosion. Land adjacent to wetlands and rivers and streams is eligible for

this program, which to date has not been widely used in NH.

11. Wildlife Habitat Incentives Program is also a USDA cost share program designed to encourage improvement of wildlife habitat. Private landowners sign an agreement for 5-10 years, although agreements of 15 years and longer are encouraged with a greater percentage of cost share assistance. Originally WHIP focused on uplands, but recently emphasis has been on improving riparian and aquatic areas, including wetlands.

12. Federal Migratory Bird Conservation Fund is financed by waterfowl hunters through required purchases of federal duck stamps and by admission fees to some National Wildlife Refuges. Proceeds are used to acquire habitat for migratory birds, much of which is wetland. In addition, US Fish and Wildlife Service uses this fund for wetland restoration on land that is and will remain privately owned.

13. Land and Water Conservation Fund, established in 1965, supports the purchase of natural areas, including wetlands, by federal, state, and local governments (see Chapter 11).

14. Pittman-Robertson, Dingell-Johnson, and Wallop-Breaux Acts provide funds to pay 75% of appraised fair market value of land purchased by the NH Fish and Game Department for wildlife protection, game or fish management, and access to public waters (navigable streams, tidal waters, and natural ponds of 10 or more acres).

15. Wild and Scenic Rivers Act adds the National Park Service to the federal agencies reviewing applications for federal permits on designated rivers. In NH, the Wildcat in Jackson and Lamprey downstream of the West Epping dam are in the program.

16. The Environmental Protection Agency is engaged in numerous research projects on wetlands.

NH wetlands regulation

RSA 482-A, administered by DES Wetlands Bureau, is the statute protecting NH wetlands from "despoliation and unregulated alteration". It specifically authorizes conservation commission participation in the regulatory process.

In 1967 New Hampshire was in the vanguard of the wetlands protection movement when the Legislature gave the NH Port Authority permitting power for all activities in tidal wetlands and tidal waters of the state. Two years later this authority was expanded to "any" waters of the state and transferred to a Special Board for Dredge and Fill, administratively attached to the Water Resources Board. In 1979 the name of the Special Board was changed to Wetlands Board, and 3 members of the public (one of whom was a conservation commissioner), appointed by the Governor, were added.

In 1996 the Legislature eliminated the Wetlands Board, gave permitting authority to DES, and created a Wetlands Council to review wetlands rules and hear appeals from Department decisions. The thirteen-member Council is composed of representatives of 6 state agencies (Department of Transportation, Fish and Game Department, Department of Resources and Economic Development, Office of Energy and Planning, Department of Safety, and Department of Agriculture, Markets and Foods) and 7 members of the public appointed by the Governor and Council (one a member of a municipal conservation commission, one a member of a soil conservation district, one an elected local official, one a natural resource scientist, one a member of the marine construction industry, one a member of the nonmarine construction industry, and one with "experience in environmental protection and resource management").

DES has jurisdiction over projects to "excavate, remove, dredge, fill, or construct any structures" in, or on the bank of, any fresh or tidal surface waters or wetlands in the state (RSA 482-A:3). Also within jurisdiction are sand dunes and areas adjacent to tidal waters within 100 feet of the highest observable tide line. DES Wetlands Bureau's definition of freshwater wetlands is identical to that of the Corps of Engineers: "...those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands include, but are not limited to, swamps, marshes, bogs and similar areas." Surface waters include lakes, rivers, brooks, and perennial and seasonal streams, but exclude sheet runoff in the absence of a defined channel or of wetland vegetation.

For all except minimum impact projects, Bureau rules require that wetlands be delineated according to the 1987 Corps of Engineers Manual and *Field Indicators for Identifying Hydric Soils in New England.* A conservation commission should have an up-to-date copy of Wetlands Bureau rules to understand fully how the Bureau implements its authority. The statute and rules are on DES web site at www.des.state.nh.us.

NH Wetlands Bureau permits

Wetlands Bureau rules classify projects as major, minor, or minimum impact. At one time, minimum impacts projects were a subcategory of minor projects and every project needed an individual permit. As wetlands knowledge, regulations, and staff have become increasingly sophisticated, public pressure and the need to devote staff time to the more complicated, larger projects has led to efforts to streamline permitting of small projects categorized as minimum impact by Bureau rules.

Standard permit applications

For major and minor projects, and currently for some minimum impact projects as defined in Wetlands Bureau rules, an applicant completes 5 copies of the Bureau's standard application form, all of which must be signed and dated by the town or city clerk of the municipality in which the project is proposed. The date of signing by the clerk is the "filing date". The clerk retains 4 copies, each accompanied by a plan, for immediate distribution to (1) selectmen, mayor, or city manager, (2) planning board, (3) conservation commission, and (4) clerk's files. The clerk sends the fifth copy and plan with the applicant's check for the appropriate fee to the Wetlands Bureau. The applicant also submits to the clerk postal receipts or copies thereof to show that abutters have been notified.

Only a conservation commission has the power to "intervene", or delay consideration of an application by the Wetlands Bureau to allow time for local review of the proposal. To obtain additional time, a commission must notify the Bureau in writing that it wishes to investigate an application. The Bureau must receive this notification (also called an "intervention") within 14 days of the filing date.

If a commission intervenes, the Wetlands Bureau must delay action on an application until the Bureau receives a written report from the commission or until 40 days after the filing date, whichever comes first. Then the Bureau reviews the application and conservation commission report.

The Bureau must hold a public hearing on an application for a project "with significant impact" or "of substantial public interest" (RSA 482-A:8) and for projects in or adjacent to an officially designated prime wetland (RSA 482-A:11, IV). The Bureau notifies the local conservation commission when a hearing is scheduled (RSA 482-A:8).

After review, with or without a public hearing, the Bureau issues a permit with conditions or denies the application. If a decision is contrary to recommendations of a conservation commission, it must be supported by findings of fact.

Minimum impact permit applications

The minimum impact classification is intended to cover those projects that, provided they are done properly, ought to be permitted with minimal oversight. The concern is to ensure that what the applicant calls minimum impact complies with the Bureau definition and that work is conducted properly so that environmental degradation is avoided. In the last decade, various arrangements to permit minimum impact projects without, or with less, individual scrutiny have been adopted, some in statute and some in rules.

Statutory Notification Permits

Forestry activities defined as minimum impact may include:

(a) temporary logging roads to be removed after a timber harvest, provided that the road is neither in a prime wetland nor within 100' of the highest observable tide line, and

(b) permanent culverts or rock fords for logging roads, provided that: roads at crossings are no more than 15' wide; fill is no more than 50' wide at the base of crossings; streams crossed are less than 10' wide; wetlands crossed have no standing water for 10 months of the year and no crossing is longer than 50 feet; and crossings impact no bogs, marshes, sand dunes, tidal wetlands, undisturbed tidal buffer zones, endangered species, or exemplary natural communities identified by the NH Natural Heritage Inventory.

For these forest management projects, an Intent-to-Cut form must be filed with the Department of Revenue Administration, and a notice must be filed with the Bureau with copies to the municipality, to the logger to keep on site during the cut, and to the landowner. When filed with the Bureau, this notice constitutes an enforceable permit.

Trail construction

Those constructing or maintaining recreational trails must comply with *Best Management Practices for Erosion Control During Trail Maintenance and Construction*, published by the Department of Resources and Economic Development (DRED), and must file a notice with the municipality, Wetlands Bureau and DRED. This notice is an enforceable permit.

Seasonal docks in lakes and ponds

In 2002, the Legislature added a new notification permit for minimum impact seasonal docks on lakes and ponds (but not on rivers or in tidal waters). To qualify, the dock must be: the only one on the frontage; removed during the non-boating season; narrow, rectangular and perpendicular to shore; no more than 6 feet wide; no more than 40 feet long if the water body is 1,000 acres or more; no more than 30 feet long if the waterbody is less than 1,000 acres; located at least 20 feet from the abutting property line on a parcel with at least 75 feet of frontage; and installed in a manner that does not require altering or regrading the shore.

The applicant need only file notice, which constitutes an enforceable permit, with the Wetlands Bureau and not with the municipality. The Bureau lists these notices on its web site in its Weekly Decision Report.

Recreational gold dredging permits are valid statewide, and applications go directly to the Wetlands Bureau without opportunity for local comment. Panning for gold does not need a permit; people who use small motor dredges do, and must comply with conditions in the Bureau rules that include obtaining landowner permission prior to dredging.

Expedited applications

In order to use an expedited application form, the applicant must obtain the signature of the conservation commission on the application prior to filing it. Signing the permit indicates that the commission (1) believes the plans and application are accurate, (2) has no objections to the proposed project, and (3) waives its right to intervene, or investigate, the proposal. A commission should sign only if it agrees with the 3 stipulations. Should a commission refuse to sign an application, an applicant can still apply for a permit but must file either the standard application form described above or a permit by notification form described below.

Permits by notification in rules

In 2003, the Wetlands Bureau adopted rules to implement the newest form of permit by notification (PBN) authorized by RSA 482-A:11, III(b) and VI. For many minimum impact projects, an applicant can fill out a PBN form, attach the additional information required, and file it as if it were a standard application. A conservation commission may sign the application as it may with the current expedited applications.

However, should a commission choose not to sign the application, the applicant may still submit the application. Intervention (see standard permits below) will be assumed, but a commission will have only 21, rather than 40, days to comment on the project. Bureau staff may deny an application if it is incomplete or fails to meet the minimum impact criteria. If the application is not denied, an applicant can proceed with the project 10 days after filing with the town or city clerk if the commission signed the project or 25 days if it did not. The posted application form replaces an individual permit.

Standard application

An applicant may also apply for a minimum impact permit using the standard application described above.

Appeals

Once a decision is made, "[a]ny person aggrieved" (an applicant, abutter, or conservation commission, for example) has 20 days to request the Bureau to reconsider (RSA 482-A:10, I). If the project involves a wetland officially designated as "prime" under RSA 482-A:15 (see below), the commission or local governing body is specifically authorized by RSA 482-A:10, XVIII to appeal the granting of a permit. This reconsideration request must include all "each ground for complaint" because neither the Wetlands Council nor Superior Court may consider any ground not specified in the request for reconsideration (RSA 482-A:10, II). The Bureau may consider

new evidence and may hold a hearing as part of its reconsideration.

Appeal from a Bureau decision after reconsideration must be filed within 30 days with the Wetlands Council. The Council may agree with the Bureau decision or may find that the decision was "unlawful or unreasonable" and remand it (RSA 483-A:10, VI). "Any party aggrieved" by a Council decision must request reconsideration within 20 days (RSA 483-A:10, VII). After reconsideration by the Council, "[any] person aggrieved" may appeal to Superior Court within 30 days of the decision (RSA 482-A:10, VIII). If the Wetlands Council remands a decision to the Department, the Department may accept the determination and issue a new permit or order, or, if it disagrees, the Department may request the Council to reconsider and then may appeal to Superior Court.

Conservation commission participation

A conservation commission should, but is not required to, participate in the fill and dredge permit process. Bear in mind that Wetlands Bureau staff is familiar with many, but not all, NH wetlands, and that the Bureau, along with other state regulatory agencies, is chronically understaffed. If a commission does not look at the site of a proposed project, it may not be inspected.

To be effective in the fill and dredge permit process, a conservation commission must establish a reliable system with the town or city clerk to ensure that the commission is informed *at once* when an application is filed. Each application should be reviewed immediately. If a commission foresees no problems with a proposed project, it should write and tell the Wetlands Bureau.

If a commission needs more time to assess a proposal filed on a standard application form, a letter should be sent to the Bureau as soon as possible in order to reach the Bureau within 14 days of the filing date. A commission vote is not needed; any member may write expressing the commission's desire to investigate. A commission will need to consider how it wishes to deal with the newest PBNs. To ensure that commission processes applications consistently, the procedure to be followed should be in a commission's by-laws.

The commission should investigate and report its findings and recommendations on standard applications without delay. However, the Bureau will not act on a standard application until it receives a report from the commission or until 40 days from the filing date, whichever occurs first.

A commission's report need not be elaborate; the Wetlands Bureau wants to know if the application and plan accurately describe the proposed project and its impacts. A commission should report on:

- the application, plan and photographs: Does the information appear accurate? Are all wetlands on the parcel delineated? Are all impacts shown? For shoreline alterations or structures, are measurements correct? Are all existing shoreline modifications and structures shown on the plans?
- the wetland: Is the type of wetland correctly identified (e.g. bog, marsh, forested, wet meadow, vernal pool)? Is it isolated, adjacent to open water, contiguous to wetlands on abutting parcels, part of a wetland complex? Does the wetland have a special value or function?
- the project: Are there alternatives to achieving the project's objective with reduced wetland impact? Will the project impact abutters?
- the application: Were there questions about the information supplied in the application that were answered by site inspection? (Bureau staff may have similar questions.)
- other information: Is there anything unusual about the parcel, such as ownership, previous violations or permits for work on the lot or in the same wetland?
- commission recommendation to the Bureau (e.g., not opposed if specific conditions are imposed, deny or approve with reasons); be sure to mention any concerns the commission has about the proposed project

If a conservation commission comments consistently on applications, the absence of a letter (perhaps because a commission failed to receive an application or because the letter was lost or misfiled) may cause Wetlands Bureau staff to seek the commission's opinion. This is less likely if a commission comments only sporadically.

If a conservation commission "intervenes", it should *ALWAYS* send a report to the Wetlands Bureau with a copy to the ap-

plicant. Bureau staff heeds commission recommendations and often advises applicants to try to resolve any differences with a commission. The sooner an applicant knows of problems, the sooner they can be addressed.

Enforcement

Enforcement of state environmental regulations is a perennial problem. RSA 482-A:13 and 14 provide the Bureau with two methods of dealing with violators: an administrative fine of up to $2,000 that may be imposed by the Department, and a civil suit brought by the Attorney General, which may include a fine of up to $10,000, with each day of a continuing violation considered a separate offense.

Local enforcement options include application to a justice of the superior court for an injunction (RSA 482-A: 14-b, II). Or any state or local law enforcement official may prosecute a violation of RSA 482-A in district court (RSA 482-A:14, II).

Violations are relatively easy to spot because the statute requires a Wetlands Bureau permit (or a notification form for some minimum impact projects) to be posted at the project site. The Bureau sends a copy of each permit to the selectmen or city manager, so a commission should check local files before reporting unauthorized work.

The Wetlands Bureau receives hundreds of complaints every year and is chronically behind in reviewing them. Some complaints may stem from disputes between neighbors that, upon investigation, turn out not to be violations at all. As a result, the Wetlands Bureau enforcement staff prioritizes complaints by size (amount of impact: square feet of wetland, linear feet of stream, cubic yards of fill); by type (poses a threat to the environment or water quality); and by value of the impacted resource. Public waters, public water supply, marsh, bog, salt water and prime wetlands are considered more valuable than a wooded wetland or wet meadow, for example.

If a conservation commission discovers a violation, the first step should be to advise the property owner or contractor that a wetlands permit is needed. A commission should make every effort to resolve small violations locally. A small violation may be considered one that would qualify for a minimum impact permit had the violator applied.

In attempting to resolve small violations locally, a commission should bear in mind that it has no enforcement powers and no authority to enter property without a landowner's permission. A commission's best approach to a landowner or contractor is to offer help and information.

A commission might discuss in advance how to treat violations with local officials with enforcement powers, such as the board of selectmen, code enforcement officer, building or health inspector. In some towns, reports of violations received by local officials are referred to the conservation commission to check to be sure they are violations; the commission reports its findings, and the selectmen (or other enforcers) take it from there.

A commission should report a violation, preferably in writing, to the Wetlands Bureau without delay if it is large, impacts valuable resources, or small but local efforts to resolve it have been unsuccessful. The Bureau has a complaint form on its website, but if a commission does not use the form, describe the violation as clearly as possible, including approximate area of impact, type and results of impact (such as fill in a wetland that is causing siltation in a stream), location of and directions to site, name of landowner or violator, sketch plan or pictures, and any local efforts to resolve the situation.

Prime Wetlands

RSA 482-A:15 authorizes a municipality to designate some of its wetlands as "prime wetlands". Because of "their size, unspoiled character, fragility, or uniqueness", officially designated prime wetlands receive special consideration from the Wetlands Bureau.

The conservation commission is charged with preparing a report on and maps of the proposed "prime wetlands" in accordance with Bureau rules (Wt Chapter 700). Selecting candidates for prime designation involves an inventory and evaluation of most local wetlands. One method of evaluating, or comparing the functions and values of, wetlands is the *Method for the Comparative Evaluation of Nontidal Wetlands in New Hampshire.* The handbook is published by DES and may be purchased from its Public Information and Permitting office (PIP, see appendix II). Wetlands Bureau rules specify format of maps and the wetland functions, such as flood control, to be rated.

After a conservation commission has prepared a report and maps, "prime" designation is adopted by the procedure used to adopt zoning (RSA 675:2 or 3). Following municipal vote, the report and maps are submitted to the Wetlands Bureau, which will accept them if prepared according to Bureau rules.

Once a municipality's official designation of "prime wetlands" has been accepted, the conservation commission is responsible for advising the Bureau within 14 days of the filing date if an application involves a prime wetland. If an application proposes work in or adjacent to a prime wetland, the Bureau must hold a public hearing regardless of the scale of the project. If the Bureau decides to approve an application for a project in or adjacent to a prime wetland, the permit is not issued for 28 days after the decision to allow time for appeal by the conservation commission or municipal governing body.

Local wetlands protection

DES does not regulate development in uplands adjacent to freshwater wetlands, yet such development can damage a wetland. To supplement the state dredge and fill permit process, many New Hampshire municipalities regulate activities in and adjacent to wetlands through zoning ordinances and subdivision and site plan review regulations (see Chapters 8-9) or provide more permanent protection by acquiring wetlands or easements on them (see Chapter 11). The impetus behind *Buffers for Wetlands and Surface Waters: A Guidebook for New Hampshire Municipalities* (see Resources below) was to provide municipalities with a scientific basis for buffers in zoning ordinances.

Conservation commissions have been and continue to be active in educating the public on the value of wetlands and the laws and regulations to protect them. Vehicles used include: fliers, letters to contractors on wetlands regulations, workshops, school programs, slide-tape shows, films, wetlands mapping, newspaper articles, town reports, and town meeting displays.

Incentive to preserve wetlands

The Current Use Board recognizes that use of wetlands in New Hampshire is subject to federal, state, and, in many NH municipalities, local regulation. Therefore, the rules require NO minimum acreage in the wetlands category to be eligible for current use assessment. All other categories require 10 contiguous acres to qualify.

The definition of wetland in the Current Use statute is precisely the same as that of the Army Corps of Engineers and DES Wetlands Bureau: "'Wetlands' means those areas of farm, forest and unproductive land that are inundated or saturated by surface water or groundwater at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." (RSA 79-A:2, XIV) Because current use assessments reflect the productive capability of land, farmed and forested wetlands should be in the farm or forest categories of current use. Only wetlands neither used for agricultural purposes nor capable of growing trees qualify for the wetland category of current use assessment.

The current use assessment for wetlands historically has been less than $20 per acre and probably will remain low. As a result, property taxes on an acre of wetland in current use are more likely to be pennies than dollars.

A landowner must apply to the local assessing officials to have his land assessed at current use rates. If the land qualifies as an unproductive wetland, it must be granted current use assessment (see Chapter 11). In addition, under Current Use rules local assessing officials "...shall allow a buffer of up to 100 feet in depth provided that the land within the buffer is unimproved and is being left in its natural state..." (Cub 304.04(b)). If a local zoning ordinance provides for an undeveloped buffer area around wetlands, the conservation commission should encourage assessing officials to suggest that landowners apply for inclusion of a buffer area to correspond to local zoning up to the allowable 100 feet maximum when a wetland is placed in current use.

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Chapter 11

Acquisition and Related Techniques to Preserve Open Space

A conservation commission is authorized by RSA 36-A:4 to acquire the fee (full title) or a lesser interest in land for conservation purposes in the name of the city or town with the approval of the governing body. The natural features a commission wishes to protect and the projected use of the property may determine whether a commission itself wishes to acquire the parcel or an easement on it or to encourage another conservation organization to do so. Describing the techniques for acquiring land and easements should help a commission choose the appropriate option.

Fee simple interest

Ownership is the most secure method of land protection. A landowner has maximum control of property and its use, but ownership involves responsibilities that a conservation commission must be prepared to assume. A commission must manage, maintain and, if appropriate, provide for public use of the land. These responsibilities should be considered before a commission acquires property.

All land acquired by a conservation commission is town or city property; municipal ownership alone does not guarantee that a parcel will be used for conservation purposes in perpetuity. Commissions have found that either a reverter clause in a deed or an easement held by another conservation entity ensures that land will be used for conservation purposes. Such a clause or easement can cause town fathers in search of space for a parking lot to look elsewhere.

A reverter clause provides that ownership will revert to another party (perhaps the original owner or a local, regional or statewide land trust) if the property is no longer used for conservation purposes. However, a reverter to the original owners or their heirs may reduce the value of a gift for tax purposes. If another organization is named in a deed, that organization also must sign the deed (RSA 477:47).

Another way to achieve the same result is with an easement held by a local, regional, or statewide land trust. A conservation easement is easier to arrange before a parcel is acquired because approval from the local legislative body is not needed, but several conservation commissions have successfully persuaded town meeting to grant easements on town conservation land to a land trust.

Municipal land acquisition may cause concerns about liability and loss of property tax revenue. NH statutes encourage public access for recreation to both public and private land by limiting liability when no admission is charged (RSA 212:34 and 508:14).

Most parcels a commission wishes to acquire are probably in current use, a state program to allow preservation of open space by assessing property at its current, rather than its highest and best, use. Property tax receipts from land in current use are likely to be modest. In addition, Costs of Community Services analyses have repeatedly demonstrated that residential development costs taxpayers more to provide municipal services than it generates in property taxes.

Acquisition of fee simple interest is probably appropriate if long-range plans for the area include extensive public use.

Easements

A conservation easement, authorized by RSA 477:45-48, provides permanent protection for conservation land without acquiring fee simple title. It places permanent restrictions on certain uses of the land and establishes long-term enforcement for those restrictions. The landowner continues to own and use the land as long as the uses do not conflict with easement restrictions. Easements often encourage forestry and agriculture while prohibiting incompatible development. The land remains on the tax rolls, probably at current use rates. If the municipal assessment does not reflect the conservation easement, the landowner may apply to

the local assessing officials for a conservation restriction assessment (RSA 79-B).

In accepting an easement on behalf of the town with approval of the local governing body, a conservation commission assumes responsibility for monitoring the property. Monitoring involves assembling a file of baseline data on the property and annual inspections to check compliance with easement terms. If inspection reveals a problem, a commission should write to the landowner. If the problem is not resolved, it should be referred to town counsel to pursue in court. (See also Chapter 12)

Each conservation easement will differ somewhat, depending on the desires of the landowner and the characteristics of the land. For example, some landowners may be unwilling to allow public access in conjunction with an easement; a narrow strip of land along a river may call for different restrictions than a large, forested tract. A conservation commission should draft, with the advice of town counsel, a "standard" easement with optional clauses to offer landowners contemplating easements. Then the "boilerplate" will be in place, and landowner negotiations can focus on uses allowed and prohibited.

An easement is appropriate if a landowner wants to continue to manage the land for farming or forest products while protecting it from development; if the scale of the project makes fee simple acquisition too expensive, for example, protecting portions of properties of numerous landowners around a lake; or if the area of conservation interest is limited to a portion of the property, such as a ridgeline or steep slope.

Conservation easements may be donated or purchased, and also may be obtained in conjunction with wetlands permits or local development review, especially if zoning provides for cluster development. Donations under these circumstances may also provide tax benefits to the developer. In addition, RSA 674:21-a states: "Any open space designation or other development restriction..." that is imposed by a local land use board as a condition of approval "...shall be deemed to create a conservation restriction as defined in RSA 477:45..." In all other cases, the town or qualified conservation organization that will hold the easement must sign the easement.

Development rights

Acquisition of development rights is merely another way of describing buying a conservation easement. In 1979, the NH Legislature created the Acquisition of Agricultural Land Development Rights Program (RSA 432:18-31-a) and appropriated funds to protect important farmland. Farmers sold easements to the NH Department of Agriculture, Markets and Food, which continues to hold "agricultural preservation restrictions" on the farmland. This program is still on the books, but has not been funded recently.

A municipality or land trust also may purchase development rights, or a conservation easement, on farm or other conservation land. Instead of a tax deduction for donating an easement, the landowner receives cash for its value.

The transfer of development rights requires supportive municipal zoning but operates similarly to a purchase program. Development rights are transferred from conservation land, such as farmland, to land slated for development (see Chapter 8).

Acquisition techniques

Fee interest donation

Donation is the simplest and least expensive way to acquire land. A conservation-minded landowner may choose this technique to ensure long-term protection without the responsibilities of ownership. The land is removed from the donor's taxable estate, and the gift may provide federal income tax deductions if made to a qualified recipient of tax-deductible contributions such as a municipality or a land trust.

An outright donation is the simplest form of donation. It provides the maximum tax deduction for the landowner and gives the donor immediate ownership.

A landowner may prefer to make a donation by devise (bequest). The gift is in a landowner's will and takes effect after his or her death. Such a donation ensures eventual, long-term protection and reduces the value of a donor's taxable estate for state and federal tax purposes.

A landowner may also donate the interest in property over several years until the town or land trust has full ownership. This technique is called donation of undivided partial

interests and allows a landowner to spread income tax deductions over several years.

Another type of donation is the gift of a remainder interest in a residence or farm with a reserved life estate. A landowner transfers ownership of the property but reserves the right to use and reside on the land until his or her death or the death of a specified successor. The conservation commission receives clear title upon the death of the holder of the life interest. This is more secure than donation by devise because the gift occurs immediately, and details are not left to the estate's executors. However, tax advantages for the donor are less than those associated with an outright donation. The commission's control and use of the land while the landowner is alive depend on arrangements made with the landowner.

Land accepted by any of these methods need not have significant conservation value if a landowner agrees that the town may sell the property, perhaps with conservation restrictions, and use the proceeds to buy other conservation land. The landowner receives a tax deduction and the commission may be able to use the money to buy a more critical area. However, neither the commission nor selectmen may dispose of town-owned land without town meeting authorization. This technique is more often used by land trusts than by municipalities.

Easement donation

A landowner who donates an easement is donating a partial interest in real property and is therefore eligible for a charitable income tax deduction. Some owners of land whose value has increased will benefit by reducing their potential taxable income by donating an easement before selling the land.

The IRS has criteria in the Internal Revenue Code, Section 170(h) for easements that qualify as charitable deductions. Conservation easements should:

1. preserve land areas for outdoor recreation for, or education of, the general public (e.g., forest land used for cross-country skiing); or
2. protect a relatively natural habitat of fish, wildlife, or plants, or a significant ecosystem (e.g., wetland, habitat of a rare plant); or
3. preserve open space when it is for the public's scenic enjoyment or pursuant to a clearly delineated public policy and yields a significant public benefit (e.g., locally or regionally identified important productive farm or forest land, a ridge visible from public places, land in an area of town designated by the master plan as worthy of conservation); or
4. preserve an historically important land area or certified historic structure.

The easement must also convey public benefit, based on one or more of the following factors:

1. uniqueness of the property (e.g., one of the last remaining large wetlands, significantly large block of productive forestland); or
2. intensity of development in the area (e.g., land threatened by encroaching development); or
3. consistency of the easement with public programs for conservation (e.g., area designated for conservation in the town master plan); or
4. opportunity for the public to use the property or appreciate its scenic values.

It is important that the landowner ensure an easement complies with the criteria established by the IRS; otherwise the tax deduction could be denied.

The Center for Land Conservation Assistance at the Society for the Protection of NH Forests or a local or regional land trust can assist a conservation commission with conservation easements; in addition, most municipal governing bodies will want town counsel to review the terms of easements prior to accepting them. To be sure of compliance with IRS regulations, a landowner should have an experienced attorney review a proposed easement.

Land acquired for failure to pay taxes

Land on which the owner has failed to pay taxes is often acquired by a municipality and later sold. Some of this land may be valuable for conservation purposes. RSA 80, the statute governing municipal acquisition and disposal of real estate for unpaid taxes, allows a municipality to retain such a property for public purposes with the approval of the local legislative body (RSA 80:80,V for tax lien towns; RSA 80:42-a for tax sale towns).

Conservation land or easements may be acquired in this way, but only if a conservation commission has an opportunity to consider the conservation potential of each parcel before it is sold. A town meeting or city council may vote to authorize the commission to review and make recommendations on whether to keep tax title land. Such a warrant article might be worded:

"To see if the town will vote to require that the selectmen, before disposing of real property acquired by tax collector's deed, first ask the conservation commission to recommend whether or not the retention of such real property would be in the best interests of the town as provided in RSA 80:80, V (80:42-a in tax sale towns), subject to the final ratification of the next annual or special town meeting."

Should a commission identify a parcel or an easement with conservation value, town meeting or city council would have to vote to keep that land or easement and to authorize the conservation commission to manage it.

Bargain sale

Not all landowners are willing or able to donate their land or an easement on it, but a commission may be able to purchase the land or easement for less than fair market value. Federal income tax deductions may make such a "bargain sale" attractive to a landowner as well.

Option and right of first refusal

If a conservation commission wishes to buy a parcel but cannot do so immediately, it may be able to purchase an option or obtain a right of first refusal. Both guarantee an opportunity to act at a later date.

An option establishes a price at which the land may be bought at any point within a specified period of time. It provides time to raise money for the purchase, to complete applications for grant assistance, to obtain a town appropriation, or to do whatever else is needed to complete the purchase.

A right of first refusal is less specific. It guarantees the opportunity to purchase the land at a price equal to a *bona fide* offer from another party. It gives a conservation commission time but does not fix the price.

Both techniques provide a way to own the property eventually and time to organize and raise money. Neither obligates a commission to buy. Costs vary with the situation.

Limited development

If purchasing land is impossible and development is planned, a commission may be able to persuade a developer to preserve the portion of the parcel with particular natural resource value. This may be accomplished in several ways; some options to consider are cluster development (see Chapter 8), a conservation easement, or an outright donation. Some consultants have expertise in combining preservation with limited development, or a conservation commission can refer those interested to a local, regional or state land trust for help.

Management/protection agreement

Some landowners are unwilling to part with their land or put an easement on it. In that case, a conservation commission might inform a landowner of important or unique features of the property and encourage management for resource protection. This approach may be suitable for rare plant habitat, for example.

A further step would be to enter into a protection or management agreement with a landowner that obliges him or her to manage the land in a particular way for a specified period of time. The agreement may not require changes in the landowner's current management practices, but it provides a commitment on the landowner's part and a measure of control for the commission. It also may open the door for more permanent protection in the future.

The length and specificity of the contract will depend on the desires of both parties, but generally the longer and more specific the better. A commission should be sure that the arrangement can be easily monitored. Such agreements also may be appropriate for a trail or area, such as water access, used by the public but privately owned.

Covenants and deed restrictions

A covenant is a written agreement between two or more parties in which each pledges to the other(s) that something will or will not be done. A covenant passes with the land to future owners and is enforced by the parties to the agreement, who benefit from and share the burden of the restrictions. However, a covenant may be voided by

agreement of the parties involved or by the court if it is found to be outdated or no longer appropriate.

Covenants in the form of deed restrictions are sometimes conditions of subdivisions but are difficult to enforce. A conservation commission should suggest that the planning board require easements, rather than covenants, as subdivision conditions. However, covenants or deed restrictions are a technique to bear in mind should landowners approach the commission with concerns for which municipal action is inappropriate.

Right-of-way agreement

There may be situations, such as establishing a trail, greenway or water access, in which the commission cannot negotiate permanent protection for every parcel. At a minimum, a right-of-way agreement provides legal permission for the public to cross the landowner's property. It may cost nothing, and may be temporary, that is, for only a specified period of time. Like a management agreement, a right-of-way agreement provides a basis for a continuing relationship with a landowner that may be important for future protection efforts.

Funding land acquisition

In December 2002, the Society for the Protection of NH Forests and its Center for Land Conservation Assistance published *Saving Special Places: Community Funding for Land Acquisition* and sent a copy to every conservation commission. The book is a valuable resource for commissions engaged in land acquisition and should be replaced if it is not in the commission library.

A. Federal funds

The **Land and Water Conservation Fund** is a federal fund administered in New Hampshire by the Division of Parks and Recreation, Department of Resources and Economic Development. After a lapse of some years, Congress has resumed appropriating money annually for this program. The Fund may pay up to 50% of the appraised fair market value of lands for conservation and recreation acquired by municipalities, school districts, and the state. The other 50% must be raised or appropriated. If a landowner donates part or all of the 50% in a bargain sale, the value of the donation counts toward the required match.

Should a conservation commission wish to take advantage of this fund, early contact with the Division of Parks is advisable. The staff can assist with grant applications and steps needed to complete a project, such as obtaining an acceptable appraisal and municipal approval.

Scenic easements are eligible for 80% federal highway funding under the **Transportation Enhancement Program**, administered by the NH Department of Transportation. The 20% local match must be in dollars.

The US Department of Agriculture's Natural Resources Conservation Service (NRCS) administers a federal **Farm and Ranchland Protection Program** (FRPP) that provides funding for conservation easements on farmland of at least 10 acres that contains important farm soils, has an approved NRCS conservation plan, and is surrounded by sufficient agricultural land to make continued farming viable. FRPP will pay up to 50% of the appraised value of a conservation easement; the landowner may donate up to 25% of the required match through a bargain sale. FRPP funds may not be used for transaction costs, such as surveys, appraisals, title work or insurance, legal fees, and the like. The dollar amount available for FRPP varies, depending on annual Congressional appropriations. Deadlines are usually 45 days after NRCS publishes a request for proposals in the Federal Register.

Several other USDA programs administered by NRCS also provide funding toward conservation easements: the **Conservation Reserve, Wetlands Reserve,** and **Grassland Reserve Programs**. Each has specific criteria that must be met, and all depend on annual federal appropriations. Information about each may be found on the USDA and NH NRCS websites; NRCS District staff can help with applications to all four programs.

USDA Forest Service administers the federal **Forest Legacy Program** that pays up to 75% of the cost of conservation easements (or, less often, outright purchase) to retain productive forests threatened by conversion to other uses. The 25% match may be in the form of protection of other land with important forest values. A forest stewardship plan must be in place prior to closing. Funding for Forest Legacy also depends on Congress; increasingly appropriations are earmarked for

specific projects. DRED's Division of Forests and Lands can help with applications.

NH Fish and Game Department receives funds for land acquisition under the federal Pittman-Robertson, Dingell-Johnson, and Wallop-Breaux Acts. These funds pay 75% of appraised fair market value of land purchased by the Department for wildlife protection, game or fish management, and access to public waters (navigable streams, tidal waters, and natural ponds of 10 or more acres). State Waterfowl Conservation Fund money also may be available to purchase wetland and waterfowl areas. Any land bought with these funds is held by the state.

If a conservation commission wants to protect land for wildlife habitat or for access to public waters and a landowner must be paid, ownership by Fish and Game may be the answer. The commission can facilitate the process by arranging a meeting between a landowner and Department staff.

B. State funds

The Land and Conservation Investment Program, assisted by the private Trust for New Hampshire Lands, provided state funds from 1987-1991 for public acquisition of conservation land. In 1999, a Legislative Study Committee concluded that a new, continuing program, funded at $12 million a year, was needed to preserve not only conservation land but also historic and cultural resources.

The Legislature created the NH **Land and Community Heritage Investment Program (LCHIP)** in 2000; the amount available for grants depends on the biennial state budget. LCHIP will fund up to 50% of a project's cost; at least 25% of the match must be in cash, the rest may be in donated land or easements, services, and the like. A stewardship plan is required, as is an annual monitoring report. Land acquired using LCHIP monies must be open for public recreation.

The Department of Environmental Services administers the **Water Supply Land Conservation Grant Program**, whose purpose is to provide funds to municipal or non-profit water suppliers to acquire land to protect water supplies. The land must be within a source water protection area as shown on GRANIT's water supply coverage layer; DES website also has the maps. The Program will pay up to 25% of the cost of land or easements; DES has a loan fund that can help finance the matching funds. However, the amount of money available depends on the biennial state budget.

C. Local funds

Under RSA 36-A:5, the local legislative body may create a **conservation fund**, under the control of the conservation commission, in which money accumulates from year to year. Potential sources of conservation fund money include donations, municipal appropriations, allocation of the use change tax, or management of conservation lands. (See Chapters 2 and 12.) A commission may vote to spend money from its conservation fund for any purpose stipulated in RSA 36-A. This includes land acquisition, plus related expenses such as appraisals, surveys, title searches, or purchasing options.

RSA 36-A:5 requires a commission to hold a public hearing before using the conservation fund to buy "any interest in real property". In addition RSA 36-A:4 requires a conservation commission to obtain the approval of the local governing body prior to accepting or buying land or an easement. Because a commission is a part of municipal government; the municipality holds any land or easements it acquires.

Another vehicle that municipalities may use is a **capital reserve fund** for conservation land/easement acquisition (see Chapter 2). In creating the capital reserve fund, town meeting may authorize the selectmen under RSA 41:14-a to serve as agents to acquire conservation land; if this is not done, town meeting itself must vote to expend capital reserve funds to purchase land/easements. The latter course has the disadvantage that some sellers may be unwilling/unable to wait until next town meeting.

Recently, some towns have voted to authorize bonds for conservation land acquisition. Although 2/3 or 3/5 of the vote is required to authorize a bond, a bond is similar to a capital reserve fund in that the bonds may not be issued unless the warrant article specifically delegates that authority to the selectmen.

Hollis, one of the first towns to vote for such a bond issue, authorized the selectmen to issue the bonds, but required approval by a majority of voters, at either a regular or special town meeting, of the particular parcel(s) to be purchased. In addition, in Hollis the authorization for the bond lapsed at the end of the year. The following year, over 90%

voted to authorize another bond issue almost twice as large.

D. Private funds

There may be private funds in a community designated for conservation. The selectmen, city council, or New Hampshire Charitable Foundation (see Appendix II) should know if any exist. A few other foundations may fund conservation land acquisition; the Concord Public and Plymouth University Libraries have foundation resource collections for use in researching funding sources.

As land prices increase, more conservation commissions are turning to residents to contribute to land acquisition projects. Some sponsor events to raise money; others simply ask for it. Donors receive a federal income tax deduction because a municipality is a qualified recipient of tax-deductible contributions. Money raised may be placed in the conservation fund with the approval of the selectmen, or in a trust fund (see Chapter 2).

E. Acquisition by or with the help of other conservation organizations

A number of New Hampshire organizations acquire land for purposes that may be compatible with a conservation commission's objectives for a parcel. Among these are the Society for the Protection of New Hampshire Forests (SPNHF), Audubon Society of New Hampshire, The Nature Conservancy, local and regional; land trusts, and some river or watershed associations. The Center for Land Conservation Assistance at SPNHF has a comprehensive list of land trusts in New Hampshire and the municipalities in their service areas.

State agencies, in addition to Fish and Game, whose land acquisition and management goals may parallel those of a commission are Forests and Lands and Parks, two separate divisions in the Department of Resources and Economic Development. The US Fish and Wildlife Service in some areas such as the Connecticut Valley may be another option. (See Appendix II).

Trust for Public Lands is an organization that may help specific projects. The Trust specializes in acquiring, for a fee, properties or easements for eventual transfer to other nonprofit or governmental agencies, and has staff with expertise in land transactions and fundraising who can make a substantial contribution toward the success of a project.

Increasingly, conservation commissions are working on land or easement acquisition projects with partners, often local or regional land trusts. This provides opportunities to share responsibility for fundraising, to benefit from added expertise, to address concerns of property owners who do not trust government, and to have another organization hold an easement, or backup interest in an easement, on conservation land, ensuring its future protection.

If a conservation commission is unable to obtain an important parcel, then promoting its acquisition by another group should be considered. Each of the groups mentioned has specific requirements for land acquired; all are limited by financial and management considerations. Some may charge fees for monitoring easements and staff time involved in arranging a donation. A commission's role in the acquisition process might consist of assessing the objectives for a parcel of the commission, the landowner, and potential private or public owners. The commission could then arrange for a landowner to meet with the appropriate organization.

Current Use Assessment

A conservation commission may be able to assist landowners who would prefer not to develop their land by making them aware of current use assessment. If a landowner does not intend to develop his or her land, he or she may be able to reduce property taxes by applying for this property tax program. While most NH landowners with large holdings are already in current use, some with smaller acreage may be unaware that there is no minimum acreage requirement for wetlands.

By informing residents about current use, a conservation commission may assist landowners and in the process learn about their long-term land use objectives. Perhaps in addition to current use assessment landowners may be interested in a permanent land protection technique, such as a conservation easement.

The purpose of Current Use (RSA 79-A) is to encourage preservation of open space land by assessing a qualifying parcel at its value for its current use, rather than at its highest and best use value, which is often development. With reduced property taxes, landowners may able to avoid having to sell their land for development.

Rules recommended by the Current Use Board and adopted by the Department of Revenue Administration to implement RSA 79-A provide for current use assessment of farm, forest, and unproductive land, including wetlands. A landowner must submit an application to local assessing officials on or before April 15 of the year for which current use assessment is first requested. If the land meets the criteria and is classified for current use assessment, assessing officials must record this with the county Register of Deeds. Annually the Department of Revenue Administration (DRA) publishes a booklet of current use rules, criteria, application procedure, and assessment rates, posts it on the DRA website, and sends it to assessing officials before the April 15 application deadline.

Land that has qualified for current use assessment remains so classified, regardless of ownership, until the land use changes to a non-qualifying use or the land no longer meets current use criteria (e.g., a farm becomes a suburban subdivision or part of a property is sold and the remaining acreage is too small to qualify). The owner of the land at the time of change of use or failure to meet criteria must pay a use change penalty of 10% of the fair market value of the land at the time the change occurs. A municipality may vote to allocate all or part of this use change tax to the conservation fund (see Chapter 2).

Discretionary Easements

Undeveloped land that fails to meet the criteria for current use assessment may qualify for a discretionary easement if it provides one or more of the public benefits listed in RSA 79-C:3 (see Appendix III). These are:

- land for outdoor recreation or education, provided there is public access and its conservation and recreation values make it attractive to the public; or
- relatively undisturbed habitat that: (1) has rare, endangered, or threatened species, or (2) contributes to the viability of a park or conservation area, or (3) is a high quality ecosystem; or
- land that provides "scenic enjoyment" from a public way or public waters or where protection is in local, state or federal conservation policy; or
- historically important land that: (1) is itself significant, or (2) is in or adjacent to an historic district, or (3) contributes to historic or cultural integrity of property on the National Register of Historic Places; or
- undeveloped part of an airport that serves local or regional transportation needs or preserves open space; or
- golf course open to the general public.

An application for a discretionary easement is made to the local governing body, whose decision on whether or not to acquire the easement must weigh public benefits gained against tax revenue lost. The governing body's decision on acquiring a discretionary easement may be appealed only for failure to comply with RSA 79-C.

Provisions of a discretionary easement must include the current use category, the assessment for the term of the agreement (between the land's current use value and 75% of its fair market value), restrictions on the use of the land, and the term of the agreement (at least 10 years).

Unlike current use assessment, the owner of land under a discretionary easement may apply for release from the easement if he or she can prove extreme personal hardship. The penalty for such a release during the first half of the duration of the easement is 20% of the current market value of the land; during the second half, the penalty is 15%. Once the term of the easement is up, there are no restrictions on or penalty for development. However, provisions of the easement may, but need not, require a payment at the end of the easement term of up to 10% of the market value.

Neither current use assessment nor a discretionary easement will permanently preserve open space. Both may enable a landowner who does not wish to develop his land to retain ownership longer than he or she might have been able to do without property tax relief.

Acquisition procedure

The first step in acquiring land or an easement is identifying the area(s) where a commission wants land to remain as permanent open space. Chapters 5 and 6 on Natural Resource Inventories and Conservation Plans describe how to do this. In the process of developing a conservation plan, a commission should establish criteria for acquiring and easements.

Initial contact with landowners

Once an area is identified, a commission should focus on approaching landowners within that area. If there are several landowners, consider whom to approach first. Is there a conservation-minded landowner? Is there a landowner with substantial acreage who might be interested in disposing of it – perhaps an elderly person no longer willing to take responsibility for its management or an out-of-state landowner who appears uninterested in the property? If there is development pressure, is there a parcel that, if acquired, would block development of some or all of the area of conservation interest?

A commission could then write to the selected landowner, or if no landowner is an obvious first choice, to all landowners in the area of concern expressing interest in their property for conservation purposes, explain what those purposes are, and ask whether the landowner has considered what he/she would like to see happen to the land in the future. The letter might also briefly describe a range of conservation options, ranging from a management agreement to outright acquisition, or these could be reserved for the first meeting. The point of the letter is to introduce the idea of conservation and get the landowner thinking about the future of his/her property. If a commission member knows the landowner, "planting the seed" could take place in a conversation rather than a more formal letter.

A landowner wishing to put a conservation easement on his/her property or convey it for conservation purposes may approach a commission. The first question a commission should ask itself is whether the property is worth protecting. Does it have natural resources worth protecting? Is it part of the open space or conservation plan? Does it abut areas within the plan that might benefit from expansion? Does it link conservation lands? Does it meet the commission's other criteria for acquiring land or easements?

Following up

Once a commission has written to, or been approached by, a landowner in whose land the commission is interested, the next step is to meet with the landowner and find out what his/her objectives are for the land and to introduce various conservation options if possible. It may be helpful to leave written information for the landowner to consider, such as the 2004 Center For Land Conservation Assistance publication *Conserving Your Land: Options for New Hampshire Landowners* or the Land Trust Alliance's *Conservation Options: A Landowner's Guide*; the publications are available from the sponsoring organizations.

If a landowner expresses interest, subsequent visits will involve walking the property and discussing its conservation values and protection options, while getting to know the landowner and his/her wishes.

Getting specific

As talks progress, a commission will need to assemble information on the property, such as maps, aerial photos, survey, land use history, management plans, municipal data such as assessors records, specific natural resource data and man-made improvements, potential contaminants on the site, copies of deeds, mortgages, liens or other encumbrances and releases, and title history. If all necessary information is not available and there is a cost associated with obtaining it, a survey for example, this will need to be taken into consideration in designing the final deal.

If a conservation easement seems appropriate, a commission should discuss its terms, such as rights to be reserved, additional restrictions, public access and the like. If the commission will be buying the land or easement, the payment amount needs to be determined, and a project budget developed.

Some funding sources require an appraisal, and often have a list of acceptable appraisers. There is no legal requirement for an appraisal; a commission may want to pay for one for a property or easement whose value is unclear. If the landowner is donating part or all of the value of the land or easement and wants a federal income tax deduction, the landowner must obtain an appraisal that complies with IRS requirements.

Municipal procedures

Once the terms are agreed upon, a commission should hold a public hearing as required by RSA 36-A:5, II, to gauge public opinion on the proposed acquisition then seek approval of the governing body.

Acquisition details

After the public hearing and approval of the governing body, a commission may wish

to have the landowner sign a purchase and sale agreement. A purchase and sales agreement may also be obtained prior to the public hearing and request for governing body approval, provided an escape clause, "subject to the approval of the Board of Selectmen (or City/Town Council)", is included.

If the acquisition will be a conservation easement, the commission should then provide a copy of its standard easement, tailored to the landowner's wishes. A commission should always suggest that the landowner consult his or her tax advisor and attorney.

At this point a title search will be needed. If the history of property ownership is complicated, a firm specializing in title work may need to be hired. Depending on who does the title search, title insurance may or may not be advisable. Title insurance simply insures that whoever did the title search found everything; if something has been overlooked, the insurance company will try to collect from the person or firm who did the search. Therefore, if a municipal employee did the search, there is little point in paying for title insurance, since the municipality will be responsible for any oversights.

Another aspect of the property that needs investigation is its land use history: is there evidence on or were there past uses of the property that might have led to contamination? If a costly cleanup is needed, does the commission still wish to acquire the land?

If possible, a commission acquiring land should obtain a warranty, rather than a quitclaim, deed from the landowner. A warranty deed offers a guarantee that the landowner owns the land described in the deed; a quitclaim deed merely agrees to transfer whatever interest the landowner may have in the property being transferred.

If a modern survey of the property is unavailable, a licensed surveyor will be needed to prepare one. A survey involves investigating the deeds not only of the property involved but also of all abutting properties to determine property boundaries. As a result, costs of a survey will vary considerably. However, if a commission is purchasing land or an easement, particularly in an area that has been a woodlot for a long time, a survey will show exactly how much acreage is involved, which may or may not agree with the acreage in the deed.

When all preliminary work has been completed, the land or easement is formally transferred to the municipality with the deed signed by the selectmen, mayor, or city manager and recorded in the county Registry of Deeds. Then the commission should thank the landowner. Finally, a commission should announce the acquisition, generating positive publicity for the commission's land acquisition program.

Resources:

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Chapter 12

Managing Conservation Land, Trails, and Easements

A conservation commission itself cannot hold title to land or easements; the town or city holds the fee or any interest in real property acquired for a municipality through the efforts of a commission. However, RSA 36-A:4 specifies that any interest in land acquired in the name of the municipality by the conservation commission (with the approval of the governing body) be managed by the commission. To reinforce this requirement, all deeds for conservation land or easements should specify future uses (conservation purposes) of the parcel and commission management or monitoring of it. The best insurance that the land will remain in conservation uses is an easement held by or a reverter to a qualified land trust.

Whether or not specifically acquired for conservation purposes, a vote of a legislative body (but not the governing body) may designate municipal land as a town forest (see Chapter 13) with the commission as manager. A municipal governing or legislative body also may vote to authorize a conservation commission to manage other parcels of town-owned land for conservation purposes. If possible, a vote of the legislative body is preferable because then most town counsels will advise a subsequent vote by the same group prior to the land being converted to another use.

Town-owned conservation land

Proposed and anticipated uses for municipally-owned conservation land should be outlined in the commission's conservation plan (see Chapter 6), but once a commission has responsibility for a parcel, a concrete, individually designed, management plan will be needed. This section describes factors to consider and sources of assistance in developing a management plan for a specific area.

Detailed inventory

The first order of business in developing a management plan is marking the boundaries of the parcel, if this has not already been done. Then one needs to identify the natural and cultural resources on the property, which include soils, water, wetlands, wildlife habitat, natural communities of particular interest, timber stands and their condition, recreational and educational opportunities, opportunities for scenic views, and historic or archaeological features such as cellar holes, stone walls, and likelihood of prehistoric use.

Depending on the expertise of members, a commission may be able to do some or all of the inventory itself. Foresters experienced in writing stewardship plans should be able to do such an inventory, as should some biologists. The state archaeologist in the Department of Cultural Resources may be able to advise on the likelihood of prehistoric use. A commission also might consider involving residents with appropriate skills in the inventory and subsequent management plan, both as a way to complete the inventory inexpensively and as a way to generate local interest in and support for the conservation land and commission.

Management objectives

If land is acquired to protect an important natural resource, such as ground or surface water supply or an exemplary biological community, all other potential uses of the property will be subordinate to the primary purpose of protection. A rare natural area may be best left undisturbed with public access allowed only for research. The NH Natural Heritage Bureau at DRED and The Nature Conservancy can advise on managing areas with endangered or threatened plant species or exemplary natural communities; NH Fish and Game Department and Audubon Society of New Hampshire can suggest wildlife habitat management measures.

For land whose primary purpose is water supply protection, activities should be limited to those that do not threaten water quality. Forest management may be appropriate, perhaps to control the mixture of tree species on the site and to enhance recharge (see Chapter 13). The Water Division of the Department of Environmental Services is a good source of advice on appropriate restrictions on uses of water supply lands.

If the property includes some areas that have been used or are suitable for agriculture, these areas might be leased to a farmer for agricultural purposes. The County Conservation District can help to identify farmland of statewide, regional, and local importance and may be able to assist with conditions for such a lease. An agricultural lease usually lasts for several years (5 or more) to allow a farmer to reap the benefits of increased yields resulting from his investment of time and money in soil improvements. Long-term leases benefit the landowner as well, since good stewardship is encouraged.

Before a conservation commission becomes a landlord, the disposition of the income from the leased property should be considered. The income will be deposited in the municipality's general fund unless a vote of town meeting or city council directs it elsewhere. A commission may wish to devote the income to a specific purpose, such as management expenses for conservation lands or future land acquisitions. If a conservation commission wishes income from leased land to be deposited in the conservation fund, a vote of the legislative body is needed. The dollar amount of anticipated income and its deposit in the conservation fund also must be included in the annual commission budget adopted by town meeting or city council (see Chapter 2).

Most parcels managed by a conservation commission will have neither a sensitive resource to be protected nor good agricultural land. Then a commission must begin by determining the appropriate uses for a parcel based on its physical characteristics and location. The nature of the area obviously plays a major role in management decisions: potential uses and management of a wetland differ substantially from those of a wooded upland area.

Location is also important. For example, a conservation commission may have responsibility for two wetlands, one of which may be innately superior for environmental education purposes. But if the superior area is a brisk twenty-minute hike from the nearest road and the other is down the street from a school, the nearer area is more likely to be used by science classes than the more remote one.

The same is true for recreation opportunities. If easily accessible private land is open to cross-country skiing, snowmobiling, hiking, and the like, then it will be more heavily used than less accessible municipal land. This factor should be considered in developing management plans for the immediate future but should not inhibit municipal acquisition of land in more remote areas. As population, development, and land prices increase, the availability of large tracts of private land for recreation will decrease. Public lands that seem remote today may provide the only local opportunities for such recreational pursuits in the future. A conservation commission should work closely with the municipal recreation and parks commission on acquisition of or management plans for conservation land that involves recreational uses.

A conservation commission should start its development of a management plan with an assessment of the capabilities of the land itself that takes into consideration both the natural and cultural resources of the property. A good source for this initial evaluation is the county soil survey. County Conservation District personnel can assist in interpreting and using soils maps and survey information to identify potential uses, for example by locating areas of prime forest soils or areas where off highway recreational vehicle (OHRV) trails would cause substantial erosion.

Once a commission has determined the uses suitable for an area, the next step is to decide which uses to offer. While multiple use of municipal land is a good objective, a single tract of land may be unable to accommodate all potential uses. Some uses are compatible, such as harvesting timber and enhancing wildlife habitat; others may conflict, such as a trail for ATVs and a heron rookery. If the parcel is of sufficient size, it may be possible to separate incompatible activities to avoid conflicts.

In addition to the recreation and parks commission, a conservation commission should involve other residents in deciding the uses of conservation land. This is particularly important if management decisions will involve choosing between competing uses or users for which there are local advocacy groups. If a commission anticipates recruiting volunteer assistance to carry out the management plan or asking for a municipal appropriation for some portion of the plan, involving the community in the decision-

making process can create a valuable base of support. How this is best accomplished will vary from town to town, but some techniques to consider are public meetings, questionnaires, a display with opinion cards at town meeting, newspaper articles, and a discussion with the city council or selectmen.

In the course of public discussions, concern may be expressed about municipal liability for users of conservation land. NH statutes encourage public access to both public and private land by limiting the liability of landowners when no admission is charged (RSA 508:14). Another consideration is municipal liability for "inclement weather" hazards (i.e., snow and ice) on conservation land. To qualify for municipal immunity under RSA 507-B:2-b, all that is needed is for "the official responsible for such policy" to adopt of one that there will be no snow removal on conservation lands. In addition, the Parks Division of the Department of Resources and Economic Development (DRED) carries liability insurance on official state snowmobile trails and the NH Heritage Trail. While neither statutes nor insurance policies can prevent a lawsuit, they can ensure that the plaintiff loses.

Management plan

After a conservation commission has selected the management objectives, detailed plans must be developed for each portion of the parcel. Most commissions will need some assistance. Help, both direct and referral, is available from several sources: County Conservation District for an assessment of the land's ability to support specific uses; Fish and Game Department and Audubon Society of NH for wildlife management; County Forester and consulting foresters for forest management (see Chapter 13); DRED's Trails Bureau for trails; local science teachers for environmental education areas; and the NH Association of Conservation Commissions for referral to conservation commissions with experience in managing similar resources.

Conservation land managed by New Hampshire commissions is used for a variety of purposes. These include hiking, nature, fitness, cross-country skiing, and educational trails; water access; picnicking; hunting, fishing, and trapping; wildlife habitat; preservation of natural areas; forestry and demonstration forests. Land managed by a conservation commission need not be an officially designated town forest in order for forest management to occur. However, if conservation land is not an officially designated town forest (RSA 31:110-113), a vote of town meeting or city council will be needed to ensure that income from forest operations goes to the conservation fund or a forest management fund rather than to the general fund of the municipality.

Implementing a management plan

Once a management plan is prepared, it will need implementation: trails built, boat ramps constructed, signs erected, maps and guides published, forests managed, etc. Municipal appropriations may provide some funding for materials and labor, but additional sources of funds may be needed. If the property is an officially designated town forest, the forest management fund (see Chapter 13) may be used. A conservation fund established under RSA 36-A:5, may also be used to manage conservation land.

The Land and Water Conservation Fund, administered in NH by DRED's Parks Division, is a source of matching money for conservation and recreation land development as well as for acquisition, assuming Congress has appropriated funds. Smaller projects may be eligible for NH Conservation License Plate grants, administered by the State Conservation Committee.

The Trails Bureau, also in the Parks Division, has grant funds available to municipalities for construction and maintenance of OHRV trails. The Trails Bureau also administers any federal highway funds appropriated for trails and trail-related projects. The NH Department of Transportation manages the rest of NH's share of federal highway dollars, some of which (chiefly Enhancement Funds) may be used for bike paths and other transportation-related conservation projects.

Commissions have successfully solicited donations of or for materials and labor. Community organizations for youth and adults, such as scouts, Rotary, and garden clubs, have provided financial and physical assistance for projects on conservation land. The involvement of groups and individuals who are not conservation commission members provides two benefits: the work is completed more quickly, and those who assist feel a part of the project — a trail becomes 'our' trail, not the 'conservation commission's' trail.

After trails, signs, and the like are constructed, they will need maintenance. Depending on the size of the area and the tasks involved, commission members may be able to maintain an area themselves, or they may need to recruit regular volunteers, sponsor an annual community fix-up and clean-up day, or hire staff.

Use regulations

A conservation commission managing land may find that some use restrictions are needed — perhaps to prevent damage to a hiking trail by ATVs, to control overnight camping, or preclude midnight beer parties at a picnic area. Because the commission is managing municipally-owned land, the municipality may restrict or ban particular uses. The police are the appropriate enforcers of use restrictions, but there must be an ordinance to enforce. A commission could draft such an ordinance for vote of the town meeting, selectmen or city council.

Several New Hampshire municipalities have adopted ordinances of this sort. They identify the areas to which the restrictions apply, allow or prohibit specific uses, and require written permission from specified officials for some uses. To address the problems mentioned above motor vehicles might be prohibited entirely or excluded from certain areas, overnight camping might be allowed only with special permission, and access might be prohibited after a stated hour unless overnight camping permission has been obtained.

Trails as public rights-of-way

For years conservation commissions have been constructing and maintaining trails, not only on conservation land and in town forests, but also in corridors, for example between mountains, along rivers, or on abandoned railroad rights-of-way. Ownership of land in trail corridors and arrangements that allow trail construction vary. The land may be owned by a municipality or a school district, perhaps for purposes other than conservation; it may be subject to an easement that permits a trail; it may be owned by the State with the responsible state agency issuing a license to construct and maintain a trail; or it may be privately owned with a formal or informal agreement authorizing trail construction. Some commissions have included Class VI roads as part of a municipal trail system, but in the past hesitated to maintain these roads for trail purposes because of the lack of clear authority to do so.

The enactment in 1993 of RSA 231-A, Municipal Trails, provided a new trail option and a way to formalize use of Class VI roads as trails: creation of municipal trails that are full public rights-of-way. A conservation commission may find this option useful if it wishes to repair an existing Class VI road for trail use only or to create a new, permanent trail corridor across land with multiple owners.

The statute provides for two classes of trails, both full public rights-of-way that may be established by vote of the local legislative body:

- Class A trails that abutters may use for vehicular access to existing buildings and for forestry or agricultural purposes as if the trails were Class VI roads, regardless of any public trail use restrictions; and
- Class B trails, on which abutters also must comply with public trail use restrictions.

Neither class of trail may be used for vehicular access to new or expanded structures or buildings, neither class of trail has the status of a publicly approved street, and a municipality has no responsibility to maintain a Class A trail for vehicular use by the abutters. Public trail use restrictions may be placed on a trail of either class by (1) a landowner as a condition of a deed or easement, (2) the local legislative body, or (3) the local governing body. Any restrictions on trail use, e.g., horses only, no wheeled vehicles, are enforceable in the same way as traffic laws if posted at entrances to a trail from a public highway or at property lines where allowable uses change.

Town meeting or city council may vote to reclassify an existing full public right-of-way that is a Class V or Class VI highway as a Class A or B trail, but a highway that provides the only access to any land may be reclassified as a Class B trail only with the written consent of the affected landowner(s). Within 6 months a landowner may appeal the reclassification of the highway as a trail; the municipality then would be responsible for paying damages to affected landowners, just as if a Class V or VI highway were discontinued. (Discontinued subject to gates

and bars means the same as discontinued.) Reclassifying a Class V highway to either class of trail or a Class VI highway to a Class B trail is more likely to result in appeals and damages than reclassifying a Class VI highway to Class A trail because abutting landowners have the same rights to use Class A trails as they do to use Class VI highways.

In addition to reclassifying existing public rights-of-way, new public rights-of-way may be created by vote of the legislative body to establish a Class A or B trail. Trails may be established on town-owned land, including conservation land and town forests. Establishing Class A or B trails on land that the town already owns may be done by vote of the legislative body. Or the legislative body may designate someone else, such as the conservation commission, to do so.

The statute vests management of trails, including erecting signs, in the local governing body, unless the legislative body votes otherwise. The selectmen or city council may delegate trail management responsibilities by written agreement to a town committee or commission (such as the conservation commission) or to "a volunteer of a nonprofit organization or association" (RSA 231-A:7).

A warrant article to authorize the commission to establish Class A or B trails on town land and to manage them might be worded:

"To see if the town will vote to authorize the conservation commission to establish Class A or Class B trails as full public rights of way on town land/in the Town Forest/on town-owned conservation land/on town-owned land managed by the conservation commission and to manage any such Class A or Class B trails in accordance with RSA 231-A."

RSA 231-A also explicitly authorizes municipalities to acquire land or an interest therein for trail purposes, but prohibits use of eminent domain to establish trails. RSA 231-A:5 specifies that conservation commissions may use their authority to acquire conservation land in RSA 36-A:4 to obtain land for trail purposes.

Finally, RSA 231-A limits liability by stating, "All trails established under this chapter shall be deemed to constitute land open without charge for recreational or outdoor purposes pursuant to RSA 212:34 and RSA 508:14, I, (see Appendix 3) and the liability of owners, lessees or occupants of land affected by a trail, and of the municipality established the trail, shall be limited as set forth in those statutes." (RSA 231-A:8)

Other trails

Not every trail must be a public right-of-way. Some trails or portions of trails may be on state land with a license from the responsible agency; some may be on private land with a verbal or written agreement between the municipality and the owner involved; and some may be on privately-owned land subject to a conservation easement that allows public access or an easement for the trail itself. A commission should be aware that trails on private land without permanent trail or conservation easements allowing public access may be discontinued by the landowner at any time. If a particular trail or segment of trail on private land is an important part of a trail network, the commission should try to persuade the landowner to enter into a permanent agreement to guarantee public access.

Conservation easements

Conservation easements held by a municipality must be monitored to ensure compliance with the terms of the easements; this responsibility usually rests with the conservation commission, either explicitly in the easement document or implicitly if the responsible local enforcer is unnamed. If monitoring uncovers a violation, the landowner must be persuaded or forced to remedy the situation. Many recent easements provide that the easement holder may remedy a violation should the landowner fail to do so, and charge the landowner for costs incurred.

Baseline data

In order to monitor compliance with terms of a conservation easement, one needs to know its location, terms, and condition at the time the easement took effect. This is particularly important for conservation commissions because easements are in perpetuity, yet today's volunteer commission members may not be members 15 years from now. Therefore, documentation assembled on each easement needs to be clear and understandable to future commissioners, and should be kept in a permanent file – perhaps a looseleaf binder or a file folder to which pages can be securely attached to prevent loss. A commis-

sion may wish to have summary data on each easement in a computer database; keeping complete files, including plans and photos on computer will require substantial storage space.

Data needed for each easement are:

- Easement document: Terms of each easement will vary, reflecting the wishes of the landowner or conditions under which the easement was acquired. A separate summary of activities prohibited in the easement area may be helpful;
- Plan of the easement area, together with a legal description of the boundaries, which ideally should be monumented on the property itself;
- An aerial photo, if available, with the easement area marked;
- Photographs of the easement area at the time of acquisition that show its condition;
- Written description of the conditions in the easement area;
- Any correspondence with the landowner; and
- Annual monitoring reports and photos.

These data should have been assembled in a permanent file at the time the easement was acquired, but if this was not done, there is no time like the present to prepare baseline documentation. Useful forms and information may be found on the websites of the Land Conservation Stewardship Program (LCIP, Office of Planning and Energy Programs www.nh.gov/oep) and Land and Heritage Conservation Investment Program (www.lchip.org). Information will be added to the permanent file from time to time: annual monitory reports and additional landowner correspondence, for example.

Monitoring

Easement areas need to be inspected (monitored) frequently; once a year is a good interval. Most easements held by municipalities will need to be walked to check boundaries for possible encroachments on (violations of) the easement area, although some organizations, such as the Society for the Protection of NH Forests, whose easements cover many acres, conduct inspections by airplane.

Before the annual monitoring visit, commission members should review the terms of the easement and file documentation on the condition of the property. The original file should remain in a secure location; any information needed on a field visit should be a copy of, not the original, document.

During the inspection, members have an opportunity to talk with the landowner, acquaint a new landowner with the terms of the easement, answer any questions about the easement, document through photographs and a report the condition or changes in the easement area, and deal with compliance problems before they escalate. The photos and report should be added to the original file on the property. These records can be valuable should a violation occur in the future, and should be prepared with that eventuality in mind.

Enforcement

Easement violations will occur. Some will be easy to resolve, such as a landowner misunderstanding easement terms and accidentally violating them; others will need court enforcement. Commissions should be prepared to deal with either situation and should adopt an enforcement policy before it is needed. Such a policy might include:

- Ensuring at the outset that what appears to be a violation is indeed one by carefully rereading the easement document;
- Following enforcement procedures specified in the conservation easement, which may include:
  - o Writing to the landowner to point out the violation and requesting that it be corrected; and, if the situation remains unresolved,
  - o Hiring an attorney with experience in easement stewardship to assist with and pursue enforcement of the terms of the easement.

If an easement violation ends up in court, reports and photos from monitoring visits will be needed to document past and present conditions.

Funding enforcement

If court action is needed to resolve an easement violation, it must be paid for. A commission should discuss this potential cost with the town fathers and determine how to fund it should the need arise. In larger municipalities, this cost may be covered by annual appropriations for legal costs. In smaller places, limited legal budgets may

make selectmen reluctant to use them to enforce easement conditions.

Funding for enforcement may come from the conservation fund as a cost of managing land. A concern with using the conservation fund for this purpose is that reserving a portion of the fund for enforcement may cause residents to question the amount in the fund and lead to reluctance to appropriate additional funds to it, even if the funds are requested for land acquisition or another valid purpose. One way to avoid this may be to account for the easement monitoring funds as a separate account under the conservation fund. This requires the cooperation of the town treasurer, and will no doubt need explaining to town meeting.

Resources

Land Trust Alliance, *The Conservation Easement Handbook: Managing Land Conservation and Historic Preservation Easement Programs,* Land Trust Alliance, Washington, DC, 269 pp.

Land Trust Alliance, *The Standards and Practices Guidebook: an Operating Manual for Land Trusts,* Land Trust Alliance, Washington, DC, 564 pp.

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Chapter 13

Town and City Forests

A town or city forest is one or more tracts of land owned by a municipality and dedicated to conservation – the wise use of a natural resource. The Town of Newington, New Hampshire established the first town forest in the United States in 1710.

Historically, the purpose of a town forest was to provide a reliable source of timber and fuel wood for a town. Today, town and city forests can not only provide timber and revenue from its sale, but also protect wildlife habitat and water supplies, provide locations for outdoor recreational and educational activities, and demonstrate proper forest management by example.

Establishing a Town Forest

A municipality may acquire land for a town or city forest in any of the ways described in Chapter 11. Town meeting or the city council also may vote to designate land already owned by the municipality as a town or city forest.

If land is to be purchased for a town forest or other conservation purposes, a conservation commission should remember that much of New Hampshire's undeveloped land was neglected in the past, particularly in areas where access or site conditions are difficult. As a result, boundaries may not have been maintained. Municipal tax maps do not always depict lot lines and sizes accurately. Therefore, hiring a licensed surveyor to determine the size and precise location of the parcel to be acquired is well worth the cost.

A conservation commission should not anticipate that a timber sale held immediately after acquisition will generate sufficient income to cover the purchase price of the parcel. This is rarely the case, although future timber sales may eventually produce revenue equal to the purchase price of the land. Further, stripping the timber in order to buy the land may defeat the purpose of the acquisition, since it will take decades to restore such a parcel to a well-managed forest.

A conservation commission can encourage donations of land for a town forest. Continuing recognition of the source of donated land may be achieved by naming the parcel in honor of its donor, or as he or she wishes, and by considering the desires of the donor in developing a management plan for the land. In addition, keeping a donor informed of management activities can convey the commission's appreciation for and wise use of the gift. A happy donor may inspire others to donate land as well.

Although forest management may be practiced on any town-owned wooded parcel, official designation by a vote of town meeting or the city council has several advantages. First, the vote sets official municipal policy on the intended use of the property. This makes subsequent sale or use for purposes other than conservation more difficult because another vote will be needed to change the town forest designation.

Second, the statute authorizing the establishment of town and city forests also provides that the income from the forest "...shall be placed in a special forest maintenance fund and shall be allowed to accumulate from year to year, unless otherwise voted by the legislative body of such city or town." (RSA 31:113) If the parcel is not officially designated, a conservation commission will have to persuade a town meeting or city council that the income should be used for forest management. This may be more difficult than pointing to a state statute that assumes continued forest management is the appropriate priority for town forest income.

RSA 31:110-112 offers a choice of two managers for a town or city forest: (1) a forestry committee of between 3 and 5 members appointed by the selectmen or mayor and city council or (2) the conservation commission. A conservation commission manages most New Hampshire town forests, although some towns, particularly in the northern part of the state, use a forestry committee.

A warrant article to designate a town forest and provide for its management might

also reinforce the statutory provision for the disposition of income from the forest. Such a multi-purpose article might be worded:

"To see if the Town will vote to establish as town forest under RSA 31:110 the following tract(s) or parcel(s) of land: (insert description of the parcels, including the tax map numbers), to authorize the conservation commission to manage the town forest(s) under the provision of RSA 31:112, II, and to authorize the placement of any proceeds that may accrue from this forest management in a separate forest maintenance fund, which shall be allowed to accumulate from year to year as provided by RSA 31:113."

Inventory and management plan

The general goals and objectives for managing town-owned land contained in a conservation plan (ideally part of the master plan, see Chapter 6) probably embrace the concept of multiple use management, in which timber, recreation, education, wildlife, and watershed concerns receive equal attention. These general goals and objectives must be considered in light of the resources of a particular parcel. For example, a municipality cannot expect much timber revenue from a lot that is primarily wetland.

Consulting the UNH Cooperative Extension County Forester at the outset can be helpful to a commission whose members are inexperienced in forest management and have numerous questions on management practices, potential revenue, and procedures. A County Forester may be able to provide an initial assessment, at no cost to the town, of the general condition of the forest, the various management options that a conservation commission might consider, and how to proceed. (See Appendix 2 for the addresses and telephone numbers of county foresters and all other sources of assistance mentioned in this chapter.)

Once a conservation commission has a general idea of the resources of a town forest, a forest inventory is in order. The inventory should include:

1. a timber cruise to determine timber and cordwood volumes and values and silvicultural needs,
2. an assessment of wildlife habitats, soil, and site capabilities, and
3. identification of potential recreational and educational opportunities.

The product of the inventory should be a legible map showing:

1. the location and designation of various timber types;
2. streams, ponds, and wetlands;
3. roads, trails, and boundaries;
4. natural features such as caves or ledges; and
5. any points of historic interest, such as old home sites or cemeteries.

A management plan for the forest combines the information from the inventory with municipal goals and objectives. The plan should prescribe the long-term management of the lot, yet have some flexibility to adapt to changing conditions and public desires. Professional foresters can provide or coordinate multiple use management plans, but the conservation commission's goals will provide direction and focus for the plan. Inviting public comments can be helpful in preparing the plan because the public will be the beneficiary of the town forest.

A conservation commission probably will need to contract with a consulting forester for preparation of a forest inventory and management plan. The Board of Licensure for Foresters, part of the NH Joint Board of Licensure, has a list of licensed foresters on its website. The UNH Cooperative Extension County Forester should be able to help identify those who are consulting foresters, since the list also includes industrial foresters and those who work for government agencies.

Implementing the plan

A good plan is a tool for forest management, but the mere existence of a plan does not mean that a forest is managed. The activities recommended in the plan must be carried out. While a management plan should have the flexibility to accommodate minor changes, major deviations from its recommendations may render the plan obsolete. Time and money spent on a plan can be justified only if subsequent activities adhere to the plan's recommendations.

To implement a management plan, a conservation commission will need the services of a consulting forester. Some activities, such as marking boundaries, timber stand improvement (weeding and thinning), and road

and trail construction cost money without producing revenue. These costs, as well as the fees of a consulting forester, usually will be covered by income from timber and cordwood sales.

Any management activities in the town forest require a formal contract between the municipality and whoever is to provide the services. Such a contract should include:

1. a description of the work to be accomplished,
2. a specific fee schedule,
3. insurance requirements, and
4. a reasonable timetable for completing the project(s).

Timber sales require a comprehensive contract, which professional foresters can provide and administer. Sample contracts are also available from the UNH Cooperative Extension and NH Timberland Owners Association.

State statutes described in Chapter 7 regulate several aspects of a timber harvest, such as the disposal of slash and the basal area allowed to be cut in certain areas (RSA 227-J:9-10). If a logging road crosses a stream or wetland, a fill and dredge permit must be obtained from the Wetlands Bureau (see Chapter 10). Further, a logging operation must not pollute surface waters. A conservation commission should see that town forest harvesting activities comply with all applicable regulations.

Public awareness

A town forest management plan may include some projects that can be carried out by local groups, such as the Boy or Girl Scouts, or as a part of school programs. The more that people are involved in the implementation of a plan, the more use, interest, and respect the town forest will receive.

A forest management plan will need continual updating as projects are completed. An up-to-date plan displayed at town meeting will serve as publicity for the town forest and its successful management program.

The best method of publicizing forest management activities is to encourage the public to visit the town or city forest on commission-sponsored tours or self-guided tours. A town forest should be regarded as a demonstration forest that sets an example for town residents in managing their own woodlots. A town forest also may be designated a Tree Farm, provided that its management plans and practices meet Tree Farm standards. The Tree Farm designation and its accompanying sign can help make the public aware of the town forest as a good example of forest management.

Finances

Initial costs of a forest management program can be financed in several ways. As noted above, RSA 31:113 provides for a forest maintenance fund for the revenue from town or city forests. However, there will be expenses for an inventory and management plan before any revenue will be generated. These can be funded through an appropriation to the conservation commission from the general fund of the municipality, or, if a conservation fund has been established, money from this fund can pay the start-up costs.

Once the forest inventory and management plan are prepared and a commission starts an active forestry program, the income from timber and cordwood sales should cover the costs of activities that do not produce revenue, such as marking boundaries, laying out roads, and fees for a consulting forester. Setting up a long-range plan and budget can help a commission balance the costs and income in an annual work program that will keep the forest in the black.

Provision for the disposition of revenue from the forest should be made at the beginning of a management program, particularly if the forest is not an officially designated town or city forest. Then the forest can become self-supporting after the initial costs are paid.

If the forest resource allows, it may be good politics to return some of the revenue from a timber sale to the general fund of the town or city. However, the general fund of the town or city will receive timber tax revenue from the sale of timber or cordwood from the town forest, just as it does from a private individual.

Public benefits

A properly managed town forest should be self-supporting, offer wildlife habitat, and be used by town residents for a variety of activities. It should also provide an example for private landowners of a well-managed woodlot.

Resources:

Cullen, J. B., *Best Management Practices for Erosion Control of Timber Harvesting Operations in New Hampshire,* Division of Forests and Lands, DRED, in cooperation with UNH Cooperative Extension, February 2000, 65 pp.

University of NH Cooperative Extension, Division of Forests and Lands, Department of Resources and Economic Development and NH Timberland Owners Association, *Guide to New Hampshire Timber Harvesting Laws,* Spring 2000, second printing January 2001, 31 pp.

Jones, Geoffrey T. *A Guide to Logging Aesthetics: Practical Tips for Loggers, Foresters and Landowners,* Northeast Regional Agricultural Engineering Service, Ithaca, NY 1993, 28 pp.

NH Forest Sustainability Standards Work Team, *Good Forestry in the Granite State: Recommended Voluntary Forest Management Practices for New Hampshire,* Society for the Protection of NH Forests, Concord, NH, 1997.

Williamson, Scot J., second edition revised and edited by David E. Langley, *Forester's Guide to Wildlife Habitat Improvement,* UNH Cooperative Extension, Durham NH, undated, 42 pp.

Chapter 14

Other Conservation Issues and Projects

The preceding chapters describe conservation commissions and how they operate, then focus on natural resource inventories and conservation plans and the two ways of implementing these plans: regulation and acquisition and subsequent management of land and easements. However, New Hampshire commissions have been and will continue to be involved in issues and projects that do not fit tidily under these headings. This chapter touches on some other ways in which conservation commissions may pursue "... proper utilization and protection of the natural resources...of said city or town." Appendix 2 lists the addresses and telephone numbers of all organizations and agencies mentioned.

Water quality

Conservation commissions are often concerned about the quality of water, both surface and ground. The overall quality of NH surface waters is considerably better than it was 25 years ago, but problems and potential for degradation remain.

The Legislature has classified all NH surface waters as A or B. Most are Class B, commonly called "fishable/swimmable" waters. Class A surface waters are usually water supplies with a few exceptions, such as the Blackwater River. The classifications do not necessarily reflect actual surface water quality, but are instead goals. The Department of Environmental Services (DES) Water Division is responsible for establishing water quality standards for each classification and for administering pollution abatement programs to assure that surface waters eventually meet the goals set by the Legislative classifications. An "antidegradation" provision prohibits lowering the quality of any surface waters.

Past efforts to clean surface waters focused primarily on point sources (especially municipal sewage and industrial wastewater piped to surface waters) that were the major polluters of rivers and streams. Now that most of these have been or are scheduled to be eliminated, emphasis has shifted to nonpoint sources, or those without a pipe or "point" discharge.

Nonpoint pollution sources include: onsite wastewater disposal, soil erosion, sedimentation, underground tanks for petroleum and hazardous materials, leachate from landfills, residential and agricultural use of pesticides, herbicides and fertilizers, urban runoff, and the like. The Watershed Assistance Section in DES Water Division can provide information on minimizing or eliminating nonpoint sources of pollution. It recently published *Best Management Practices to Control Nonpoint Source Pollution: A Guide For Citizens and Town Officials* that provides a good starting point for commissions concerned with local water quality issues. In addition, the Office of State Planning, DES, and the Department of Agriculture Markets and Food published a small handbook, *Best Management Practices for Construction Site Chemical Control*, that also covers briefly pesticides, nutrients, petroleum products, solid waste and wash water.

Monitoring

Some New Hampshire commissions participate in water quality monitoring programs for local lakes and streams. Conservation commissions, lake associations, and river organizations have taken advantage of the UNH Lake Lay Monitoring Program and similar programs at DES (Volunteer Lake Assessment Program and Volunteer River Assessment Program). The programs rely on volunteers to make observations and to take water samples on a regular basis at fixed sampling locations, thereby collecting data on the health of a lake or stream that would not otherwise be available. Algal blooms, invasive aquatic plants, dissolved oxygen problems, elevated nutrient levels, and turbidity may be closely watched under such a program and trends in water quality tracked. The volunteer programs can result in early detection of water quality changes

that enable DES to deal with violations early and avoid more serious impacts.

A related program at DES, Volunteer Biological Assessment Program, involves volunteers in collecting aquatic freshwater macroinvertebrates from streams. Identifying what lives in a stream is another way of assessing its water quality (biological monitoring or biomonitoring). Scientists at UNH and at DES can help set up a program and with equipment, analyses, data interpretations, and reports.

Conservation commissions may receive complaints about pollution of wetlands or other surface waters. Any sanitary complaints should be referred to the health officer (see below). However, if the concern is runoff from a logging operation or housing construction that is causing siltation, a commission, in addition to reporting the apparent violation to DES Site Specific Program, may provide a useful service by documenting turbidity violations of water quality standards. Turbidity is the measure of suspended and dissolved solids in water. Silt can smother fish habitat, clog fish gills, and raise the temperature of surface waters. Inadequate erosion control is the major source of turbidity violations.

The important point in sampling for turbidity violations is to document natural conditions as close as possible to the site of the suspected violation. If the problem is runoff down a steep slope to a brook, it is necessary to sample not only downstream but also upstream from the problem area to note undisturbed conditions. During a storm, soil in the bed of a stream may become suspended in the water, resulting in a "natural turbidity level". Therefore, sampling should bracket the problem area to allow subtraction of natural turbidity.

Septic systems, junkyards and solid waste

A conservation commission may be asked to look into complaints of suspected discharges of septic systems to streams or wetlands, to respond to junkyard complaints, or to recommend a solution to a stump dump problem. Faulty septic systems are a health problem that a conservation commission should refer immediately to the local health officer, who has authority to deal with them under RSA 147:17-a.

Junkyards are primarily a municipal responsibility, although some are also regulated by the state. As with the excavation of sand and gravel, regulation of junkyards is not optional. RSA 236:114 and 115 state clearly that no one shall operate a junkyard without an operating license and "certificate of approval for the location", both of which are to be obtained from the governing body of the municipality after a public hearing.

In addition, NH Department of Transportation regulates junkyards on roads that are part of the National Highway System and former federal aid primary highways. NH DES regulates some junkyards and auto salvage facilities under RSA 149-M. Complaints alleging illegal junkyards should be referred to the code enforcement officer or the selectmen.

Although a conservation commission has no role in regulating junkyards, it can contribute by helping draft or revise local regulations, for example to include setbacks from surface waters. The statute regulating junkyards (RSA 236:111-129) provides: "Specific local ordinances shall control when in conflict with this subdivision." (RSA 236:124) Local regulations may, but need not, be part of the zoning ordinance.

Solid waste disposal is a continuing problem. Solid wastes include household and yard refuse, septage (material pumped from septic tanks), biosolids (byproducts of a wastewater treatment plant), ash from incinerators, stumps, brush, construction debris, and commercial and industrial wastes. Municipalities used to site open dumps adjacent to wetlands or streams for fire control. When these were closed and replaced by landfills, the result was groundwater contamination.

DES Division of Waste Management regulates landfills and other disposal facilities. The Division also can assist, with information and partial funding, in hazardous household waste collection days. The Northeast Resource Recovery Association is a good source of information on recycling methods and markets.

Conservation commission members can participate in the process of finding solutions to this problem by: attending or volunteering to serve on a local solid waste committee; participating in, publicizing, or

helping initiate or organize local recycling and household hazardous waste collection efforts; and educating the public to think before purchase about the ultimate disposal of containers and their contents.

Groundwater

The Legislature has declared that all groundwater in NH shall be suitable for drinking (Class A). In addition to efforts to prevent groundwater contamination through local regulations described in Chapters 7 and 8, a conservation commission can initiate or assist with local efforts to identify existing sources of potential groundwater pollution, so that possible problems may be addressed. For instance, a salt pile can be covered or relocated if its present location threatens wells.

DES Water Division has an inventory of potential point and nonpoint sources of groundwater contamination on its website. The information on the inventory can be updated and, when compared with DES aquifer maps (see Chapter 5), can be used to set priorities for municipal action. For example, areas capable of yielding large quantities of groundwater that are also the location of sources of potential pollution might be scheduled for sewer line extensions sooner than areas of less concern. But if the area is not fully built out, extending a sewer line might encourage new development, increase the potential for nonpoint source pollution from lawns, driveways, and parking lots, and reduce aquifer recharge.

Road salt and snow dumping

It appears that concern about problems caused by road salt has diminished somewhat, as the rising price of salt has resulted in more judicious application and storage practices. Salt can cause health problems in some individuals, well contamination, rust on cars and bridges, and the demise of roadside trees. The State of New Hampshire and some municipalities have "dry roads" policies for major routes; salting roads is the only practical way to accomplish this traffic safety objective. Higher salt prices have made covered storage of salt and purchase of equipment to mix and meter sand and salt cost more effective for both state and municipal governments. However, as development increases the number of roads to be maintained, the total quantity of salt used in a municipality may also increase.

Some municipalities do not use road salt on town roads at all. In other towns, salt is used only on heavily traveled roads and school bus routes. Some conservation commissions have studied local salt use and storage and then worked to modify local practices. A commission should remember that sanding roads, the principal alternative to salting them, could clog culverts and cause sedimentation in surface waters. In addition, sand is obtained by strip mining that destroys habitats.

Another winter problem is snow disposal. It is illegal to dump snow removed from urban areas into surface waters because RSA 485-A:13 prohibits disposal of any waste in surface or groundwater without a permit. Plowed snow contains wastes, such as trash, metals, pathogens, petroleum products, and other road-related contaminants. DES considers that snow dumps are more likely to cause long-term harm to groundwater, and therefore suggests that snow be stored near, but at least 25 feet from the high water mark of, flowing surface water with a silt fence or other barrier between the snow dump and the high water mark. A conservation commission can seek alternate sites if the current disposal area fails to comply with recommendations outlined in DES' *Best Management Practices to Control Nonpoint Source Pollution: A Guide For Citizens and Town Officials.*

Other water issues

Watershed Planning and Protection

Instead of focusing on a single source of pollution or a single waterbody, looking at an entire watershed is the most comprehensive approach to addressing existing or potential water quality problems. Depending upon the size of the watershed, such an effort may involve working with other municipalities and organizations as well as numerous individuals.

Watershed planning should help identify and prioritize problems. If the watershed is that of a surface public water supply, one outcome might be an effort to acquire easements to prevent uses that could potentially contaminate the water.

If the problem is multiple sources of nonpoint pollution, solutions might include regulatory ones, such as setbacks from surface water or persuading numerous landowners to use best management practices.

Water conservation

Historically water conservation has not been an important issue in New Hampshire due to the relative abundance of surface and groundwater supplies. The issues of conflicting uses and the allocation of available supplies for recreation, drinking, industrial, and wastewater assimilation needs are relatively new to NH, but unlikely to disappear.

Growth, especially in southern and coastal New Hampshire, has placed tremendous stress on groundwater resources, forcing communities to search for new supplies and to worry about competing uses. Even communities further north have been faced with crises and restrictions on water use and new connections. In some cases this is due to contamination of existing supplies; in others it is due to insufficient sources.

Water conservation, or reducing the demand for water, is one response to water shortages; the other is increasing water supplies. Plumbing fixtures are available that reduce the quantity of water used by showers and toilets, but water users must buy such devices. By universal metering, raising the price of water to cover system expansion and improvements, and eliminating lower rates for large volume users, public water suppliers have inspired voluntary conservation practices among their customers. Water conservation is more difficult to achieve in areas without public water supply use restrictions and price increases.

Lawns and landscaping, particularly in newer suburban neighborhoods with large lots and lawns, seasonally increase demands on water supplies. Public education is needed. Encouraging developers to provide six inches of topsoil in areas to be planted and the use of native vegetation in landscaping can help conserve water. DES has fact sheets and fliers on many aspects of water, including conservation. A conservation commission might work with school officials to add water concerns to the curriculum.

Access to surface waters

The state has jurisdiction over activities on public waters (see Chapter 7), but the public has no right to cross private land to reach those waters. A conservation plan may include acquisition and development of access sites. If a town owns land with water frontage, a conservation commission may be asked for recommendations on developing recreational facilities along streams or on a pond or lake that may be sensitive to human impact. Sites in or adjacent to valuable wetlands should be avoided. Other potential impacts to consider are gasoline spills; erosion from the wake of boats; parking for vehicles and boat trailers; the provision of picnic tables, trash receptacles, restrooms, and changing facilities if swimming is to be allowed. The carrying capacity of the access site as well as the water body should be considered.

Dams

There are dams on many of New Hampshire's rivers and water bodies. The safety of all dams regardless of ownership is the responsibility of the Dam Bureau, Water Division, DES, which has authority to order repair of unsafe dams. If the owner chooses not to repair a dam, DES can and does order the dam to be breached. Some conservation commissions have participated in fund-raising efforts to repair unsafe dams because breaching can cause loss of a recreational resource and wildlife habitat. Other commissions have worked toward dam removal to improve instream habitat and recreation.

Many New Hampshire water bodies with dams are drawn down annually to protect shoreline structures from ice damage, to provide added storage for spring runoff to reduce flooding, and to improve water quality. This fluctuation in water levels can adversely impact wildlife and vegetation. On the other hand, periodic drying out of some wetland areas can encourage the growth of some plants that provide food for migratory species. Dams can pose problems for fish, fishermen, and boaters. In some instances, altering dam operations can accommodate varied uses with little negative impact.

Removal of unneeded dams in order to restore rivers and streams to their free-flowing state has increased to the point that

DES has published a guide to the process. Conservation commissions have been involved in the range of issues associated with dams.

Restoration projects

Some commissions have undertaken pond and marsh restoration and erosion control projects. Manchester Conservation Commission has undertaken an Urban Ponds Restoration Project, cleaning up its ponds physically by removing trash and chemically by identifying and remediating sources of nonpoint pollution. Several commissions in the seacoast area have worked successfully on projects to restore degraded saltmarshes.

Goffstown Commission restored a town beach and park area to reduce erosion, improve safety and provide a more attractive town facility. Lyme Commission carried out a stream bank stabilization project. Most of these projects involved working with other organizations, including DES, USDA Natural Resources Conservation Service, and the US Army Corps of Engineers.

Other issues and projects

Class VI roads and trails

Numerous conservation commissions have taken on issues related to Class VI roads (see also Chapters 7 and 12). In many municipalities, Class VI roads are used for non-motorized recreational purposes. The local governing body has the authority to regulate the use of Class VI roads by all-terrain vehicles (ATVs), which are forbidden to use the right-of-way of any roads, including Class VI, without explicit permission of the governing body (RSA 215-A:6) in the form of an ordinance allowing ATV use of public ways; some, but not all, municipalities have granted this permission.

However, a municipality may not repair or maintain road that has become Class VI due to failure to maintain it without running the risk of its returning to Class V status after 5 successive years of maintenance (RSA 229:5, VI.). The solution may be for the legislative body to vote to make the road a Class A or B trail (see Chapter 12), both of which are public rights-of-way that may be maintained for recreational trail uses without fear that maintenance may result in upgrading to Class V status with increased maintenance requirements.

Education

Education is not one of the purposes listed in RSA 36-A for a conservation commission, but it is needed for almost every project undertaken by a commission. As an advisory body, a commission must rely on persuasion to accomplish its goals. Public education is a primary ingredient and may involve explaining directly to voters the nature of a problem and the reasons for the solution proposed by the commission.

Some commissions use a more subtle approach, keeping the community abreast of projects from the outset through newsletters, town reports, programs for adults and schoolchildren, field trips, etc. If a commission project is to study wetlands, perhaps with the ultimate goal of designating "prime wetlands" (see Chapter 10) or a zoning amendment to protect wetlands (see Chapter 8), the educational efforts might include programs on the value of wetlands for community groups and schools, field trips for adults and children, regular progress reports to townspeople, etc. When the commission proposes town action to protect wetlands, residents should have a better understanding of reasons for the proposal as a result of the commission's educational efforts.

Some commissions arrange educational talks on issues of current concern unrelated to commission projects. Some commissions write regular articles in town newspapers or newsletters. Some have produced or arranged for cable television programs on environmental topics.

Some commissions conduct regular field trips, hikes or walks to familiarize residents with the natural resources in the area. Some walks are on existing or proposed conservation lands with a view to gaining support for the commission and its projects; others may focus on wildlife tracking and gaining a general appreciation for the outdoors.

Some commissions have developed nature trails for use by school children and adults. Some have helped teachers with environmental curricula or special events, such as Arbor and Earth Day celebrations.

Some offer camperships to students attending conservation camps. One provided for an educational tour for school children of a commission timber harvest in progress on land near the school.

A number of commissions have created displays for town meeting, Old Home Days, or other town events and celebrations. Some commissions have an area in the library or town hall where informational material is available to residents.

Regional cooperation

Conservation commissions have initiated the formation of area groups and organizations to work cooperatively on natural resources that extend beyond the boundaries of a single town. Such efforts can result in the creation of an independent organization to carry out protection efforts; the Piscataquog and Lamprey Watershed Associations and BearPaw Regional Greenways are examples.

Less formal arrangements may also be effective. Commissions in various parts of the state periodically get together to listen to speakers on and discuss issues of common concern. Sometimes commissions themselves organize the meetings; sometimes regional planning commissions or land trusts take the lead. Although groups without a formal structure may not persist, they provide an opportunity for commissioners from neighboring towns to get to know one another, enhancing the probability of regional cooperation should an occasion arise.

Sprucing up

Many conservation commissions are involved in projects to improve the appearance of their municipalities. Some sponsor a spring cleanup day after the snow has melted to remove roadside debris that has accumulated during the winter. Several commissions have sponsored community gardens on town-owned land. Some commissions plant and maintain street trees, landscape the grounds of public buildings, and organize Earth and Arbor Day celebrations that include planting trees.

A city commission designed a program to share costs of purchase and planting street trees between the city and property owners who request trees. The program has been operating for a number of years without further involvement of the conservation commission. Annual requests for trees exceed those available, and the trees receive better care because property owners have a financial investment in them.

Miscellaneous activities and projects

Conservation commissions have undertaken numerous other projects. At the request of the selectmen, one commission reviews applications for current use assessment to ascertain the appropriate classification of the land within the current use categories. Others have sponsored or participated in historical research projects or researched sign ordinances. Several commissions have initiated projects to identify and try to avoid or control invasive plant species, both aquatic and terrestrial, in their communities. Some commissions construct or erect duck or bluebird boxes. Some work to develop municipal policies on particular issues.

The activities and projects described in this chapter, although they may represent a byway on the road to wise use of natural resources, can build good will in the community for a conservation commission. This can be useful when a commission embarks on less popular endeavors.

New Hampshire conservation commissions have taken advantage of the latitude provided in the enabling act to tailor their activities to local needs and interests. The quarterly newsletter of the New Hampshire Association of Conservation Commissions includes regular reports of commission activities and can serve as a source of ideas worth emulating.

Resources:

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NH Association of Conservation Commissions, *Conservation Commission News,* Concord, NH, published quarterly.

NH Department of Environmental Services, *Guidelines to Regulatory Requirements for Dam Removal Projects in New Hamp-*

shire, Concord, NH, 2003, (DES website www.des.state.nh.us/dam/).

NH Office of State Planning, Department of Environmental Services, Department of Agriculture, Markets & Food, *Best Management Practices for Construction Site Chemical Control,* Concord, NH, 2000, 21 pp.

Watershed Assistance Section, NH DES. *Best Management Practices to Control Nonpoint Source Pollution: A Guide For Citizens and Town Officials,* Concord, NH, Department of Environmental Services, January 2004, 64 pp.

Glossary

aerobic: With oxygen; life or processes that require, or are not destroyed by, oxygen.

anaerobic: Without oxygen; life or processes that occur in, or are not destroyed by, the absence of oxygen.

aquifer: A geological formation, such as fractured bedrock, sand or gravel deposit, that contains water and allows sufficient water to pass through it to be useful as a water supply.

basal area: The area of a cross-section of a tree measured 4 ½ feet from the ground, usually expressed in square feet per acre.

bedrock: Solid or fractured rock underlying the soil.

best management practices (BMPs): A practice or combination of practices determined to most effective and practical (considering technological, economic and institutional factors) for accomplishing a particular task, such as farming or forestry, with the least environmental impact.

biodiversity (also biological diversity): the totality of hereditary variation in life forms, across all levels of biological organization, from genes and chromosomes within individual species to the array of species themselves and, at the highest level, the living communities of ecosystems.

biomass: All the living material (usually vegetative) in an area.

biosolids: Sludge from a wastewater treatment plant that meets DES' sludge quality certification standards and complies with federal standards for pathogen and vector reduction and may therefore be land-applied.

biota: All plants and animals in an area.

bog: An acidic, nutrient-poor wetland characterized by peat deposits, poor drainage, and vegetation consisting largely of sedges, stunted evergreen trees and shrubs.

buffer: An area that separates and protects one type of land use from the adverse effects of adjacent land use. Buffers may protect natural areas, such as streams or wetlands, from development or may protect residential neighborhoods from commercial areas.

carrying capacity: The capability of a system to absorb population and development while maintaining an acceptable environment. For example: in recreation, the amount of use a recreation area can sustain without deterioration; for wildlife, the maximum number of animals an area can support during a given period of the year; in land use planning, the maximum development density an area can sustain without overtaxing water supplies or other critical resources.

cluster development: A subdivision design with the same overall density as a conventional subdivision but with smaller building lots grouped to leave land open for recreational, agricultural or conservation purposes; sometimes called an open space subdivision.

conservation easement: Property right(s), usually the right to develop, held by someone other than the property owner.

condemnation: Taking private property for public use by eminent domain.

DAMF: NH Department of Agriculture, Markets and Food.

DES: NH Department of Environmental Services.

detention basin: A normally dry impoundment area for temporary storage of stormwater to reduce flooding.

DOT: NH Department of Transportation.

DRED: NH Department of Resources and Economic Development.

easement: A right in real property held by another, for example a right of way, utility easement, or conservation easement.

ecology: The study of interactions between living things and their environment.

ecosystem The interaction of a community of plants and animals with its physical environment.

emergent plant: An erect plant that tolerates flooded soil but not extended periods of being completely submerged, such as cattails and reeds.

Environmental Assessment (EA): An environmental analysis required by federal law (NEPA, National Environmental Policy Act) to determine if a project of a federal agency or needing a federal permit would significantly affect the environment and therefore need an Environmental Impact Statement.

Environmental Impact Statement (EIS): A document detailing anticipated environmental impacts of a proposed project and how the project proponent intends to mitigate these impacts. EIS are required under federal law (NEPA, National Environmental Policy Act) for major projects of federal agencies or needing federal permits.

EPA: U.S. Environmental Protection Agency.

erosion: The wearing away of land by wind or water.

fauna: Animal life of a region.

FERC: Federal Energy Regulatory Commission

F & G: NH Fish and Game Department

floodplain: Land along a river or stream that floods during storms.

floodway: The stream channel and adjacent parts of the floodplain that carry the bulk of the flood flow during storms.

flora: Plant life of a region.

forested wetland: A wetland dominated by trees, also called a swamp.

geology: The scientific study of the origin, history and structure of the earth.

governing body: Board of selectmen, town council, city council, board of aldermen, village district commissioners.

GIS (Geographic Information System): Computer-based data system that displays data on maps.

GRANIT (Geographically Referenced Analysis and Information Transfer): The NH GIS based at Complex Systems at UNH.

groundwater: Water found at and beneath the water table in soil and fractured bedrock.

groundwater discharge: Groundwater that emerges at the land surface in springs, seeps, wetlands, rivers and streams.

groundwater recharge: Surface water and precipitation that infiltrates the ground and replenishes groundwater supplies.

habitat: The environment that meets the needs of a plant or animal.

hazardous substance: Any material that is toxic, flammable, corrosive, reactive, explosive, infectious and/or radioactive.

hydric soil: A soil saturated or flooded long enough during the growing season to develop anaerobic conditions in its upper layers.

hydrologic cycle: The circuit of water movement from the atmosphere to the earth and back to the atmosphere through various stages or processes, as precipitation, runoff, infiltration, storage, evaporation and transpiration.

infrastructure: Public facilities and services provided by government to support the population of an area, such as highways, public transportation, schools, wastewater treatment, water supplies, storm drainage, parks, and utilities.

intermittent stream: A stream that flows long enough to develop a channel but that might not flow during dry seasons.

legislative body: Town meeting, village district or precinct, town council, city council, mayor and council, mayor and board of aldermen, county convention.

marsh: A wetland with emergent plants that is flooded seasonally or permanently.

mitigation: Measures taken to reduce or compensate for adverse environmental impacts.

natural resource inventory: An inventory of the baseline environmental characteristics of a community, including geology, climate, soils, hydrology, vegetation and wildlife.

NH DAMF: NH Department of Agriculture, Markets and Food.

NH DES: NH Department of Environmental Services.

NH DOT: NH Department of Transportation.

NH DRED: NH Department of Resources and Economic Development.

NPDES permit (National Pollution Discharge Elimination System permit): A permit issued jointly by EPA and NH DES for point source discharges into surface water.

NH OSP: NH Office of State Planning.

nonpoint source pollution: A contributing factor to surface water pollution that cannot be traced to a specific point source or pipe; it includes surface runoff from roads, parking lots, farms, forestry, construction projects, and suburban and urban development.

NRCS: USDA Natural Resources Conservation Service, formerly Soil Conservation Service.

ordinance: A law enacted by the governing body of a municipality or, for unincorporated places, a county, limited to such topics and actions as state law permits.

OEP: NH Office of Planning and Energy Programs

parliamentary procedure: Rules adopted by an organization to govern its meetings.

perennial stream: A stream that normally flows throughout the year.

pesticide: Any substance used to control pests ranging from rodents, weeds, and insects to algae and fungi.

PUC: NH Public Utilities Commission.

PUD: (Planned Unit Development) A development design that includes a mix of uses, densities, and building types.

radioactive: Substances that emit radiation either naturally or as a result of scientific manipulation.

RCRA: U.S. Resource Conservation and Recovery Act.

recharge: Process by which water is added to the zone of saturation, as recharge of an aquifer.

reverter clause: A clause in a deed or easement that returns ownership of real property on or interest in real property to its former owner or transfers it to a third party if the land is no longer used as intended by its seller or donor.

riparian area: The area along the bank of a river.

RSA: New Hampshire Revised Statutes Annotated, or NH laws.

runoff or storm runoff: Water from rain, snowmelt or irrigation that flows without a defined channel over the ground to surface waters.

SARA: U.S. Superfund Amendments and Reauthorization Act.

scrub-shrub wetland: A wetland dominated by small trees and shrubs.

seasonal stream: *See intermittent stream.*

sediment: Solid mineral or organic material that: is in suspension; is being transported; or has been moved from its origin by air, water, ice, or gravity and has come to rest on the earth's surface either above or below water.

septage: Material pumped from septic tanks.

site plan: A scaled, visual representation of on site conditions and proposed changes used to describe a development.

sludge: A semisolid residue from wastewater or air treatment or other processes.

soil profile: A vertical section of the soil through all its horizons and extending into parent material.

statute: A state law.

steep slope: A slope usually exceeding 15 degrees.

stratified drift: Glacial meltwater deposits in layers by particle size consisting of gravel, sand, silt and clay.

stream corridor: The land area that directly impacts the quantity and quality of the water in a stream. It may include wetlands, steep slopes, and forested areas of highly erodible areas adjacent to a stream.

subdivision: The division or re-division of a parcel of land into two or more smaller parcels.

surface water: The water in streams, rivers, ponds, lakes, and wetlands.

swamp: *See forested wetland*

topography: The art of describing on a map relative positions and elevations of natural or man-made physical features.

toxic: A characteristic of a chemical or mixture of chemicals that may present an unreasonable risk of injury to health or the environment.

urban runoff: Stormwater from streets, parking lots, and other impervious surfaces.

USDA: US Department of Agriculture.

USDOI: US Department of the Interior.

USEPA: US Environmental Protection Agency.

USFWS: US Fish and Wildlife Service.

USGS: U.S. Geological Survey.

watershed: The land area drained by a single river system or surface water body.

water table: The upper level of groundwater, below which the soil is completely saturated. The water table may be at, near or below the land surface, and usually fluctuates seasonally.

wetland: An area sufficiently saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal conditions does support, a prevalence of vegetation adapted for life in saturated soil conditions.

Appendices

Appendix 1 New Hampshire's Natural Resources: Who Is Responsible?

Appendix 2 Sources of Assistance

Appendix 3 Selected New Hampshire Revised Statutes Annotated

RSA 21-O:5-a Wetlands Council

RSA 31:19-19-a Trust Funds

RSA 31:110-113 Town and City Forests

RSA 35:1 & 15 Capital Reserve Funds

RSA 36-A Conservation Commissions

RSA 41:14-a–c Acquisition or Sale of Land

RSA 79-A:25–25-b Disposition of Revenues (Current Use)

RSA 79-C Discretionary Easements

RSA 91-A Access to Public Records ("Right-to-Know")

RSA 155-E Local Regulation Excavation

RSA 215-A Off Highway Recreational Vehicles and Trails

RSA 227-J Timber Harvesting

RSA 231:157-158 Scenic Roads

RSA 231-A Municipal Trails

RSA 482-A Fill and Dredge in Wetlands

RSA 483-B Comprehensive Shoreland Protection Act

Liability: RSA 212:34; 216-F:3; 507-B:2-b; 508:14; 508:17

Appendix 4 Sample Warrant Articles

Appendix 5 Brief History of Conservation Commissions in New Hampshire

Appendix 1

New Hampshire's Natural Resources: Who Is Responsible?

The following table lists some typical natural resources issues and indicates the agency or agencies responsible for dealing with each, the statutory basis of authority, and the type of action which may be involved. The Department of Environmental Services has a Public Information and Permitting Section that can provide information on all permits issued by the Department and is establishing a tracking system for permit applications. Agency websites may also be helpful in describing programs, providing rules, and the like.

Under their zoning powers, municipalities may establish zones especially designed for environmental protection. These may be administered by the planning board, the board of adjustment, or another local agency as determined by the local governing body. (RSA 674:21)

The duties and authorizing statutes of federal, state, and local agencies are listed in Appendix II with addresses and telephone numbers.

Acronyms used in the table are:

DAMF	Department of Agriculture, Markets and Food
DOT	NH Department of Transportation
DES	Department of Environmental Services
DRED	Department of Resources and Economic Development
EPA	United States Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
F&G	NH Fish and Game Department
FWPCA	Federal Water Pollution Control Act (also called Clean Water Act)
NPDES	National Pollution Discharge Elimination System (part of FWPCA)
NHGS	NH Geological Survey (in DES)
OEP	NH Office of Energy and Planning
PUC	Public Utilities Commission
Safety	Division of Safety Services, Department of Safety
USFWS	US Fish and Wildlife Service
WB	Wetlands Bureau, Water Division, DES
WMD	Waste Management Division, DES
WD	Water Division, DES

Question or Problem	Agency & Source of Authority	Action
Aquifers: see Groundwater		
ATVs (all terrain vehicles): see OHRVs		
Billboards: see Signs		
Boat moorings: Newfound, Ossipee, Squam, Sunapee, Winnipesaukee, Winnisquam	Safety: RSA 270:59-72	Issues permit
Boat moorings: tidal water	Harbormaster: RSA 271-A	Issues permit
Boat ramps	F&G: RSA 233-A	Constructs, maintains
Boats: pollution from	WD: RSA 487	Registers; inspects; enforces
Boats: speed, see Speed		
Construction setback from surface waters	WD RSA 483-B, Shoreland Act WD RSA 485-A (for septic systems)	Educates, enforces Issues permit
Dams & impoundments: construction, maintenance, safety	WD: RSA 482 FERC (hydropower)	Issues permit, inspects Licenses
Dredge and fill in public waters (includes construction of docks and breakwaters)	WB: RSA 482-A WD: RSA 485-A:17 Governor & Council: RSA 482-A:16-25 Conservation commission: RSA 482-A, 36-A US Army Corps of Engineers: FWPCA §404, Rivers & Harbors Act of 1899 §10	Issues permit Issues joint permit with WB Approve major dock projects Grant right to use State property Investigates & reports to WB Issues permit
Dredge & fill in wetlands	WB: RSA 482-A WD: RSA 485-A:17 Conservation commission: RSA 482-A, 36-A US Army Corps of Engineers: FWPCA §404 Planning board, building inspector/ selectmen, board of adjustment	Issues permit Issues permit (usually with WB) Investigates & reports to WB Issues permit Administer local wetlands ordinance

Question or Problem	Agency & Source of Authority	Action
Endangered species: fauna	F&G: RSA 212-A USFWS: Endangered Species Act	Provide information, conduct research, enforce
	Audubon Society of NH	Provides information
Endangered species: flora	Natural Heritage Bureau, DRED: RSA 217-A	Provides information, conducts research, enforces
Erosion control: agriculture	Soil Conservation District: RSA 432	Provides information and advice
Erosion control: building and road construction, gravel pits	WD: RSA 485-A:17	Issues permit if 100,000+ sq ft (or 50,000+ sq ft in shoreland) disturbed
	Planning board or board of adjustment	Administers steep slope ordinance, excavation regulations
Erosion control: logging operations	DRED: RSA 227-J	Enforces
	Planning board or board of adjustment	Administers steep slope ordinance
	Soil Conservation District	Provides information & advice
	WD: RSA 485-A:17	Enforces
Excavation: see Sand & Gravel and Mining		
Fishing	F&G: RSA 206:10	Regulates, enforces
	Legislature	Regulates
Flooding; flood plain development	WD: RSA 481, 482	Regulates lake levels
	US Army Corps of Engineers	Provides information, maps
	NH Office of Emergency Management	Provides information, maps
	Municipality	Adopts & enforces flood-plain zoning, building code
	Soil Conservation District	Provides information, maps
	Regional planning commission	Provides information
Fluoridation	Municipality: RSA 485:14	Adopts, enforces ordinance
Groundwater: discharge to & protection of	WD: RSA 485-A:13; 485	Issues permit, enforces
Groundwater: maps	US Geological Survey; NHGS; WD	Provide information & assistance
Groundwater: withdrawal	WD: RSA 482:3	Monitors
	WD: RSA 485-C	Issues permits for large withdrawals

Question or Problem	Agency & Source of Authority	Action
Hunting	F&G: RSA 206:10	Regulates, enforces
	Legislature	Regulates
Invasive species	DAMF: RSA 430:51-57	Regulates sale, cultivation, transport
Junkyards on interstate, turnpike & National Highway System highways	DOT: RSA 236:90-110	Issues permit
	WD: RSA 485-A	Reviews applications for compliance with water quality standards
Junkyards on all highways	Municipal zoning: RSA 674	Prescribes location, conditions
	Local governing body: RSA 236:111-129	Issues permit
Logging near water and roads	For timber management: DRED: RSA 227-J	Enforces
	For development: WD: RSA 483-B	Enforces
Logging slash disposal	DRED: RSA 227-J	Enforces
Maps	Conservation Districts	Provide soils map
	Regional planning commissions	Produce GIS maps
	Complex Systems, UNH	Develops & maintains GRANIT (NH GIS database)
Mining (other than sand & gravel)	DRED: RSA 12-E	Issues permit, requires reclamation
	WD: RSA 485-A:17	Issues permit
Off highway recreational vehicles (OHRVs)	DRED: RSA 215-A	Establishes trails, regulations
	F&G: RSA 215-A:16	Enforces regulations
Oil spills	WMD: RSA 146-A	Cleans up, reimburses cleanup costs
Ordinances	OEP; DES	Samples, some models
Pesticides	Pesticides Control, DAMF: RSA 430:28-48	Regulates appliers
		Issues permits for aerial spraying
	WD: RSA 485-A:4 XI	Monitors for residual pesticides
Petroleum storage: underground tanks	WMD: RSA 146-C	Issues permits for 1100+ gal. tanks
	WMD: RSA 146-A	Requires & funds cleanup of oil spills

Question or Problem	Agency & Source of Authority	Action
Petroleum storage: above ground	Fire Marshal: NH Fire Code (NFPA #30)	Regulate design & installation
	Local fire department	May adopt stricter standards than those in NFPA #30 & NH Fire Code
	WMD: RSA 146-A	Requires & funds cleanup of oil spills
Prime wetlands	Conservation commission, planning board, & local governing body: RSA 482-A:15	Designate prime wetlands
	WB: RSA 482-A:15	Adopts rules, regulates
Private water supply: contamination	WD: RSA 485	Issue cease & desist order
	Municipal health officer: RSA 147	
Public water supply: contamination	WD: RSA 485	Investigate; require remediation; issue cease & desist order
	Municipal health officer: RSA 147	
Public water supply: development & expansion	WD: RSA 485	Regulates & approves system
	PUC: RSA 362-366, 369-371, 374, 378	Regulates systems & rates of public water utilities
	Municipality: RSA 38; village district: RSA 52; private water system: RSA 362:4	Constructs & operates
Public water supply: protection	WD: RSA 485	Adopts regulations
	Water supplier (public or private)	Implements management plan
Road construction: damage to water supply from	NH DOT: RSA 228:34 (state roads); municipal road agent & health Officer (town roads)	Repairs or replaces water supply
	WD: RSA 485:9 (roads in public water supply watersheds)	Approves prior to construction
Road salt: contamination of water supply	NH DOT: RSA 228:34 (state roads)	Repairs or replaces supply
	Municipal health officer	
Roads: scenic	Municipality: RSA 231:157-158	Designates, may adopt additional regulations
Road use: municipal	Governing body: RSA 41:11, 47:17, 215-A:15	Regulate use public ways by ordinance

Question or Problem	Agency & Source of Authority	Action
Sand & gravel excavation	WD: RSA 485-A:17	Issues permit
	Planning board: RSA 155-E	Issues permit that requires reclamation
	Municipality: RSA 31:41-b	Adopts hazardous slopes ordinance
Septic systems: pollution from	WD: RSA 485:27-30; municipal health officer: RSA 147	Issues permit, cease & desist order, repair order
	Local building code: RSA 48-A, 673-677	Requires building permit
Septic system: design & installation	WD: RSA 485-A:29-46	Issues permit
	Municipality: RSA 485-A:32, 147; planning board: RSA 672-677	May regulate more strictly than state
Sewage: municipal	WD: RSA 485, 485-A, 486	Sets standards, helps finance
	Municipality: RSA 31:39	Constructs & operates
Sewage: private	WD: RSA 485-A	Issues permit
	Municipal health officer RSA 485-A: 32	May regulate more strictly than state
Shoreland uses	WD: RSA 483-B	Educates, enforces
Signs: off premise, on interstate, turnpike, National Highway System roads	DOT: RSA 236:69-89	Issues permits
Signs: all	Municipal zoning: RSA 674	Prescribes size & location
Sludge and Septage, including land application	WD: RSA 485-A; US EPA: FWPCA	Regulate
Speed: boats, fresh water	Safety: RSA 270:12, 270-D	Sets & enforces speed limits
	Legislature	Sets speed limits
Speed: boats, tidal water	Harbormaster: RSA 271-A; US Coast Guard	Set & enforce speed limits
Speed: off highway recreational vehicles on frozen public water bodies	Legislature	Sets speed limits
	F&G: RSA 215-A	Regulates and enforces
Surface water: point sources of pollution	WD: RSA 485-A:12-16; EPA: FWPCA	Issue NPDES permit
Surface water: nonpoint sources of pollution (see also erosion control)	WD: RSA 485-A:17	Issues permit
Town forests: assistance with	UNH Cooperative Extension (County) foresters	Advice on management plans
Town forests: designation	Local legislative body: RSA 31:110	Adopts

Question or Problem	Agency & Source of Authority	Action
Town forests: income from	Forest Management Fund: RSA 31:113	
Town forests: management	Conservation commission or forestry committee: RSA 31:112	
Violation of permit or activity without permit	Responsible agency, selectmen/ enforcement officer Environmental Protection Bureau, Dept. of Justice: RSA 21-M:10	Issue cease & desist order, initiate court action Initiates court action
Waste disposal in groundwater	WD: RSA 485-A:12-16	Issues permit
Waste disposal: hazardous & facility siting	WMD: RSA 147-A, 147-B, 147-C, 147-D Municipal Review Committee: RSA 147-C	Issues permit Investigates, advises WMD
Waste disposal: solid	WMD: RSA 147:45 et seq. Municipality: RSA 31:39 I (f), 147:45-47	Issues permit Contracts for or constructs and maintains disposal facility
Water level in lakes & streams	WD: RSA 482	Monitors; in some cases controls
Water pollution: see discharge into water, erosion control, pesticides		
Water testing	DES Laboratory: RSA 131; private laboratories	
Water use	WD, NHGS: RSA 482:3	Collect data
Water well: construction, siting	Water Well Board: RSA 482-B	Licenses water well contractors & pump installers; sets construction requirements
Weeds, algae, aquatic nuisances	WD: RSA 487:15-25 UNH, DES	Provides grants for control Conducts research on control
Wetlands maps: See also dredge & fill	Conservation Districts Regional planning commissions USFWS Complex Systems, UNH	Provide soils map Produce GIS maps Prepares National Wetlands Inventory (NWI) maps Develops & maintains GRANIT (NH GIS database)

Appendix 2

Sources of Assistance

Federal Government Agencies

Army Corps of Engineers, Department of the Army

New England District (978)318-8673
696 Virginia Road, Concord, MA 01742-2751 1-800-343-4789
website: www.usace.army.mil

- Oversees planning and implementation of water resource and environmental remediation projects.
- Manages and maintains federal flood control projects.
- Conducts regional, interstate and intrastate water supply/water resources studies at the request of Congress.
- Issues permits for dredge and fill in "waters of the U.S." Clean Water Act §404, River and Harbor Act of 1899 §9 and §10

Cold Regions Research and Engineering Laboratory, 72 Lyme Rd., Hanover, NH 646-4100

- Conducts research on problems in cold regions of the world

Environmental Protection Agency Region I

1 Congress St. Suite 1100, Boston, MA 02114-2023 1-888-372-7341;(617)918-1111
website: www.epa.gov/ne

- Primarily a regulatory agency administering federal environmental protection laws.
- Issues and enforces permits, regulations and standards.
- Wetlands Hotline provides information on wetlands and their protection, referrals, and information on wetlands publications. 1-800-832-7828

Fish and Wildlife Service, US Department of Interior

70 Commercial Street, Suite 300, Concord, NH 03301 225-1411
website: www.fws.gov

- Reviews and comments on plans for federal aid highways, federal agency projects for development in and near water bodies, and applications for Corps Permits. Fish & Wildlife Coordination Act
- Conserves, protects, and enhances fish and wildlife and their habitats; responsible for migratory birds and fish, nongame and endangered species.
- Oversees wildlife refuges, including Great Bay National Wildlife Refuge (431-7511), Lake Umbagog National Fish and Wildlife Refuge (482-3415), and Sylvio O. Conte Wildlife Refuge (413-863-0209).

Forest Service, US Department of Agriculture

PO Box 640, Durham, NH 03824 868-7600
website: www.fs.fed.us

- State and Private Forestry section provides cooperative forestry assistance and public information.
- Forest Research section oversees Bartlett and Hubbard Brook Experimental Forests and conducts and provides information on forestry research.

White Mountain National Forest, 719 North Main St., Laconia, NH 03246 528-8721
website: www.fs.fed.us/r9/white/

- The Forest Service manages the White Mountain National Forest for the multiple uses of recreation, timber, clean water, wildlife and wilderness.

National Park Service, US Department of Interior

Rivers, Trails and Conservation Assistance, 15 State St., Boston, MA 02109 (617)223-5051
NH Field Office, 18 Low Avenue, Concord, NH 03301 226-3240

website: www.nps.gov

- Provides technical assistance with local or state river and trail planning and projects.

Natural Resource Conservation Service, US Department of Agriculture

Federal Building, 2 Madbury Road, Durham, NH 03824 1-800-582-7235, 868-7581

website: www.nh.nrcs.usda.gov

- Conducts soil surveys.
- Provides technical assistance and advice on soil and water resource management and protection. (See also Conservation Districts)

US Geological Survey, Department of Interior

361 Commerce Way, Pembroke, NH 03275 226-7800

website: www.usgs.gov

- Gathers, maps, and disseminates information on geologic, mineral, and water resources
- Provides matching funds to DES for surficial mapping, stream flow gauging and water quantity and quality investigations, including aquifer mapping.

State Government Agencies

Department of Agriculture, Markets and Food

25 Capitol Street, PO Box 2042, Concord, NH 03302 271-3550

website: http://agriculture.nh.gov/

Pesticides Control Board

- Composed of representatives of state agencies, including Agriculture, Fish and Game, and Environmental Services.
- Registers commercial pesticides applicators and issues permits. RSA 430:28-48

Invasive Species Committee

- Advises the Department on regulations governing the sale, cultivation and transport of invasive species. RSA 430:51-57

Connecticut River Joint Commissions RSA 227-E

PO Box 1182, Charlestown, NH 03603 826-4800

website: www.crjc.org

- Comprised of NH's Connecticut River Valley Resource Commission and its Vermont counterpart, the Connecticut River Watershed Advisory Commission
- Prepares comprehensive inventory of resources to preserve visual and ecological integrity of the Connecticut River Valley.
- Promotes recreational facilities, resources, and services.
- Protects agricultural, historic, and natural resources.
- Works with municipalities, regional planning commissions, state and federal agencies.

Council on Resources and Development (CORD)

Office of Planning & Energy Programs, 57 Regional Dr., Concord, NH 03301 271-2155

website: www.nh.gov/oep

- Fosters coordination and cooperation among state agencies and investigates natural resource development issues. RSA 162-C
- Resolves or, if appropriate, submits recommendations to the Governor and Council or to the Legislature for resolving differences concerning water management or supply resulting from agency plans or programs affecting water allocation. RSA 162-C:2 V.
- Decisions are binding on member agencies but advisory to the Legislature and Governor and Council.

Bureau of Emergency Management, Department of Safety RSA 107-C

33 Hazen Drive, Concord, NH 03301 271-2231

website: www.nhoem.state.nh.us

- Plans for and coordinates state response to natural and manmade disasters.
- State coordinating agency for National Flood Insurance Program.

Department of Environmental Services (DES) RSA 21-O

29 Hazen Drive, PO Box 95, Concord, NH 03302-0095 271-3503

website: www.des.state.nh.us

- **NH Geological Survey** (NHGS 271-6482), led by the State Geologist, gathers and interprets data on the geologic, mineral, and water resources of the state, including information on surficial and bedrock geology. RSA 21-O:12
- **Laboratory Services Unit** (271-3445) analyzes air, drinking water and wastes.
- **Public Information and Permitting** (271-2975) provides information on and tracks permits in all divisions of DES; distributes fact sheets and information on DES programs.
- **Pollution Prevention Program** (P^2) (271-3503) provides non-regulatory technical and compliance assistance to businesses and others; maintains an information clearinghouse; conducts on-site pollution prevention opportunity assessments; and organizes workshops and conferences. RSA 21-O:15-22

Air Resources Division, 29 Hazen Drive, PO Box 2033, Concord, NH 03302-2033 271-1370

- Administers programs under Clean Air Act, Resource Recovery and Conservation Act's Hazardous Waste Incineration provisions, and Toxic Substances Control Act's PCB Inspection requirements.
- Regulates and monitors emissions. RSA 125-C
- Regulates release of toxic chemicals into the air. RSA 125-I

Waste Management Division, 29 Hazen Drive, Concord, NH 03302-6509 271-2900

- Regulates solid waste disposal and permits disposal facilities. RSA 149-M
- Implements federal hazardous waste program. Resource Conservation and Recovery Act (RCRA)
- Regulates hazardous waste storage, transport, and disposal, including permits for hazardous waste facility siting. RSA 147-A, 147-C, 147-D
- Administers federal "Superfund" (CERCLA) hazardous waste cleanup program.
- Administers NH Hazardous Waste Fund, which provides some funding to clean up hazardous waste sites and to collect hazardous domestic waste. RSA 147-B
- Regulates petroleum storage tanks of 1,100 gallons or more.
- Investigates and monitors oil spills and other leaks; administers NH Oil Pollution Control Fund. RSA 146-A

Water Division, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095 271-3503

- Regulates water-testing laboratories. RSA 485
- Regulates dams, wastewater treatment including septic systems, water supplies, wetlands, and water quality; has responsibilities under various federal laws, such as Safe Drinking Water and Clean Water Acts.

Dam Bureau 271-3406

- Regulates construction, operation and maintenance of dams. RSA 481, 482
- Regulates flow and levels of inland waters. RSA 482
- Maintains state-owned dams. RSA 482

Land Resources Management Programs 271-2951

Shoreland Protection Section 271-7109

- Provides information on and enforces Comprehensive Shoreland Protection Act. RSA 483-B

Subsurface Bureau 271-3501

- Regulates subdivision of lots 5 acres or smaller without public sewer. RSA 485-A
- Regulates design and installation of subsurface disposal systems. RSA 485-A
- Licenses septic system designers and installers. RSA 485-A

Water Quality Engineering Section 271-2513

- Regulates surface drainage and sedimentation and erosion control in construction projects of 100,000 square feet or more, or 50,000 square feet or more in shoreland areas. RSA 485-A:17, RSA 483-B

Water Supply Engineering Bureau 271-3503

- Cooperates with the US Geological Survey in maintaining stream flow gauging stations, conducting groundwater research, and preparing groundwater availability maps. RSA 482:85 and Chapter 376, Laws of 1955

- Monitors use of surface and groundwater. RSA 482:3
- Investigates water supply contamination and makes rules to protect public water supplies. RSA 485
- Regulates large groundwater withdrawals. RSA 485-C
- Oversees construction, operation and maintenance of public water supply systems; investigates water supply needs of groups of communities. RSA 485
- Administers state revolving loan funds for water supply systems and grants for water supply land protection. RSA 486-A
- Administers groundwater and wellhead protection program. RSA 485-C

Wetlands Bureau 29 Hazen Dr., PO Box 95, Concord, NH 03302-0095 271-2147
Coastal Office: 601 Spaulding Turnpike Suite 53, Portsmouth, NH 03801433-6183

- Regulates all projects to excavate, remove, dredge, fill or construct any structure in or on any bank, flat, marsh, bog or swamp as well as in any surface fresh or tidal waters within or bordering the state. RSA 482-A
- For major excavation, dredge, fill or construction project applications in state-owned waters, makes recommendations to the Governor and Council, who make the final decision. RSA 482-A

Wastewater Engineering Bureau 271-3908

- Establishes criteria for and certifies wastewater system operators. RSA 485-A
- Oversees design, construction, operation and maintenance of wastewater treatment plants. RSA 485-A
- Administers state revolving loan fund and state aid grants for construction and upgrading wastewater treatment plants. RSA 486
- Regulates sludge and septage. RSA 485-A

Watershed Management Bureau 271-2457

- Sponsors volunteer lake and river assessment programs.

Coastal Program Coastal Zone Management Act 431-9366

- Prevents and abates coastal pollution
- Provides public access to coastal lands and waters
- Protects, restores and encourages community stewardship of coastal resources

Limnology 271-3414

- Monitors water and biological quality of lakes.
- Monitors biological quality of rivers.

Lakes Management and Protection Program RSA 483-A 271-2959

- Required to recommend state level lakes management criteria to the Legislature and to adopt standards for and encourage development and implementation of local and regional lake and shoreland management and protection plans.

Rivers Management and Protection Program RSA 483 271-8801

- Provides for legislative designation of rivers or river segments.
- Protects water flow and quality in designated rivers.
- Encourages development and implementation of river corridor management plans.

Watershed Planning 271-2358

- Administers nonpoint source pollution programs including federal grants.

Water Quality Planning 271-2457

- Establishes water quality standards. RSA 485-A
- Regulates industrial discharges and discharges to groundwater. RSA 485-A
- Regulates water quality impact of dredge/fill in or adjacent to surface waters. Clean Water Act

Water Well Board RSA 482-B
29 Hazen Drive, Concord, NH 03301 271-1974

- Composed of representatives from the industry (water well contractors and pump installers), Water Division, and State Geologist; administered by the Water Division.
- Licenses water well contractors and pump installers.
- Sets well construction standards.

- Collects information from well construction logs to add to the data on groundwater availability maintained by NHGS.

Fish and Game Department

11 Hazen Drive, Concord, NH 03301 271-3421

website: www.wildlife.state.nh.us

- Enforces fish and game laws; adopts and enforces rules.
- Conservation officers may enforce laws relating to protection of the environment and dumping and littering. RSA 206:26 XI
- May acquire and manage wildlife conservation areas.

Nongame Program

- Responsible for nongame and endangered species of fauna. RSA 212-A, 212-B

Historic Preservation Office, Division of Historical Resources, Department of Cultural Affairs

19 Pillsbury Street, 2nd Floor, Concord, NH 03301 271-3558

website: www. nh.gov/nhdhr

- Conducts historical, architectural, and archaeological research and provides technical assistance to government agencies. RSA 227-C

Department of Justice (Attorney General) RSA 21-M

33 Capitol Street, Concord, NH 03301 271-3658

website: www.state.nh.us/nhdoj

- Reviews state agreements and contracts.
- Enforces regulatory authority of state agencies.
- Reviews intergovernmental agreements (including agreements between municipalities to supply water) to see that they meet the requirements of the statute. RSA 53-A
- Initiates legal action against those whose activities affect environmental quality, such as illegal dumping or dredge and fill.

Department of Labor

Spaulding Building, 95 Pleasant Street, Concord, NH 03301 271-3176

- Enforces "Worker's Right to Know Act", which requires employers to notify their employees and the local fire department of toxic substances in the workplace. RSA 277-A

NH Estuaries Project

50 International Drive, Suite 200, Pease Tradeport, Portsmouth, NH 03801 559-1500

website: www.nhgov/nhep

- A local, state and federal partnership established under §320 of the Clean Water Act as part of EPA's National Estuary Program to promote protection and enhancement of NH estuaries and to develop and implement a comprehensive conservation and management plan for the estuaries.

NH Natural Heritage Bureau, DRED RSA 217-A

172 Pembroke Road, PO Box 1856, Concord, NH 03302-1856 271-3623

website: www.nhdfl.org/organization/div_nhnhi.htm

- Adopts list of and plans protection for endangered and threatened plant species.
- Maintains the NH Natural Heritage Inventory, which consists of data on the status of rare plant and animal species and exemplary natural communities in NH.
- Conducts research on endangered and threatened plant species.

Office of Planning and Energy Programs

57 Regional Drive, Concord, NH 03301 271-2155

website: www.nh.gov/oep

- Collects and organizes demographic and other statistics. RSA 4-C:3
- Prepares comprehensive state development plan. RSA 9-A
- Assists regions and municipalities with planning and resource protection. RSA 4-C:7-8
- Administers water protection assistance program. RSA 4-C:19-22

Division of Public Health Services, Department of Health and Human Services

29 Hazen Drive, Concord, NH 03301 271-4501

website: www.dhhs.state.nh.us

- Makes and enforces rules to protect public health. RSA 125, 126-A
- Makes and enforces rules to protect the public from nuisances and wastes. RSA 147

Public Utilities Commission (PUC)
21 South Fruit St., Suite 10, Concord, NH 03301 271-2431
website: www.puc.state.nh.us
- Sets standards for such things as strength of water pipes and accuracy of water meters. RSA 370
- Grants public utilities the right of eminent domain to acquire property for reservoirs, wells or water pipes for a public water supply. RSA 371
- Supervises the services of public utilities. RSA 374
- Reviews rate changes proposed by public utilities, including non-municipal water companies. RSA 378

Department of Resources and Economic Development (DRED)
172 Pembroke Road, PO Box 1856, Concord, NH 03302-1856 271-2411
Division of Forests and Lands 271-2214
website: www.nhdfl.org
- Issues permits for mineral prospecting and mining of minerals. RSA 12-E
- Regulates timber cutting and slash disposal near surface water and roads. RSA 227-J
- Manages State Forests and the State Nursery. RSA 227-H
- Investigates, protects and improves forest resources. RSA 227-G, 227-I, 227-K, 227-L
- Natural Heritage Bureau, Urban Forestry Center: See separate listings

Division of Parks and Recreation 271-3556
website: www.nhstateparks.org
- Administers federal Land and Water Conservation Fund money for NH.
- Trails Bureau (271-3254) is responsible for a multiple use state trail system and administers grant programs for construction and maintenance of trails. RSA 215-A, 216-F

Department of Revenue Administration
45 Chenell Drive, PO Box 457, Concord, NH 03302-0457 271-2191
website: www.nh.gov/revenue
- Sets local property tax rates after ensuring all appropriations are properly authorized.
- Administers current use (RSA 79-A) & conservation restriction assessments (RSA 79-B).
- Provides assistance to municipalities on finance and budget.

Department of Safety
State Fire Marshal, Rte 106, Concord (mail: 33 Hazen Drive, Concord, NH 03301) 271-3294
- Enforces standards of the National Fire Protection Association (NFPA) for installation and closure of petroleum storage tanks. NFPA #30.

Division of Safety Services, 31 Dock Road, Gilford, NH 03246 293-0091
website: www.nh.gov/safety/ss
- Regulates boats and navigation on waters of the state. RSA 270
- Regulates moorings on Winnipesaukee, Squam, Sunapee, Winnisquam, Newfound and Ossipee Lakes. RSA 270:59-71

Site Evaluation Committee RSA 162-H
Public Utilities Commission, 21 South Fruit St., Suite 10, Concord, NH 03301 271-2431
- Composed of representatives of state agencies, chaired by DES Commissioner.
- Evaluates impacts of proposed bulk (30 megawatts or more) electric power plants and other energy related facilities. Must find that a proposed facility is consistent with state energy policy, will not interfere with orderly development of the region, and does not unreasonably affect aesthetics, historic sites, air and water quality, the natural environment, and public health and safety before the facility may be constructed.

State Conservation Committee
c/o Department of Agriculture, Markets & Food
25 Capitol St., PO Box 2042, Concord, NH 03302 679-2790

- Composed of 6 state agency representatives, 5 present or former Conservation District (see below) supervisors, and the executive director of the NH Association of Conservation Commissions. RSA 432:10
- Appoints conservation district supervisors and provides assistance to, coordination of, and communications between Conservation Districts. RSA 432:8-13
- Administers the Conservation License Plate Grant Program. RSA 261:97

Department of Transportation

7 Hazen Drive, PO Box 483, Concord, NH 03302-0483 271-3734
website: www.nh.gov/dot/

- Administers federal transportation funds.
- Plans for all forms of transportation.
- Has right of first refusal for all abandoned railroad rights-of-way.
- Required to repair or replace private wells that are adversely affected by construction or maintenance of state highways, including those contaminated by de-icing salts. RSA 228:34
- Required to submit plans for a highway to be built in a public water supply watershed to the Water Division for review and approval prior to construction. RSA 148:25-a
- Regulates curb cuts (streets and driveways) on state roads. RSA 236:13-14
- Issues permits for junkyards and off premise signs on interstate, turnpike, and National Highway System highways. RSA 236:69-110

Urban Forestry Center, DRED

45 Elwyn Rd., Portsmouth, NH 03801 431-6774
website: www.nhdfl.org

- Established by John Elwyn Stone's gift to the State of NH of 150 acres and a trust fund; managed by the Division of Forests and Lands.
- Provides a demonstration area for urban forestry education and research programs.
- Provides advice on and technical assistance with urban trees and shrubs.

County and Regional

Conservation Districts

- Established in each county, in cooperation with the US Department of Agriculture, for research, planning and promotion of conservation and development of soil, water and related natural resources. RSA 432:8-17
- The Natural Resource Conservation Service provides technical advice, personnel and materials to help Districts carry out programs. Each county has a Natural Resource Conservation Service conservationist to assist municipalities and landowners with conservation-related projects.

Belknap County Conservation District
719 North Main Street, Room 203, Laconia, NH 03246 527-5880; 527-9146

Carroll County Conservation District
73 Main Street, PO Box 533, Conway, NH 03818 447-2771

Cheshire County Conservation District
11 Industrial Park Drive, Walpole, NH 03608 756-2988

Coos County Conservation District
4 Mayberry Lane, Lancaster, NH 03584 788-4651

Grafton County Conservation District
250 Swiftwater Road Room 6, Woodsville, NH 03785 747-2001

Hillsborough County Conservation District
468 Route 13 South, Milford, NH 03055 673-2409

Merrimack County Conservation District
The Concord Center, 10 Ferry Street Box 312, Concord, NH 03301 223-6023

Rockingham County Conservation District
110 North Road, Brentwood, NH 03833 679-2790

NRCS Rockingham County Field Office

243 Calef Highway, Epping, NH 03042 679-1587

Strafford County Conservation District
259 County Farm Road Unit #3, Dover, NH 03820 749-3037

Sullivan County Conservation District
24 Main Street, Newport, NH 03773 863-4297

Resource Conservation and Development (RC&D) Areas

- Sponsored by the USDA Natural Resource Conservation Service to encourage economic growth through development, conservation and utilization of natural resources.
- Undertake projects such as erosion and sedimentation control, flood prevention, soil and water management, and special resource studies.

North Country RC&D Area
719 North Main Street Room 220, Laconia, NH 03246-2772 527-2093
- Covers Belknap, Carroll, Coos and Grafton Counties.

Southern NH RC&D Area
10 Ferry Street Box 4, Concord, NH 03301 223-0083
- Covers Cheshire, Hillsborough, Merrimack, Rockingham, Strafford and Sullivan Counties.

UNH Cooperative Extension, USDA

Natural Resources Program, Nesmith Hall, 131 Main St., Durham, NH 03824 862-1029
- Provides information and technical assistance to individuals and municipalities on wise use and management of natural resources. Programs include community assistance, water resources, forestry, agriculture, and waste management. (See Post-Secondary Education)

Belknap County UNH Cooperative Extension
36 County Drive, Laconia, NH 03246 527-5475

Carroll County UNH Cooperative Extension
75 Main Street, Center Ossipee, NH 03814 539-3331

Cheshire County UNH Cooperative Extension
800 Park Ave., Keene, NH 03431 352-4550

Coos County UNH Cooperative Extension
629A Main Street, Lancaster, NH 03584 788-4961

Grafton County UNH Cooperative Extension
3785 Dartmouth College Hwy, North Haverhill, NH 03774 787-6944

Hillsborough County UNH Cooperative Extension
329 Mast Rd, Goffstown, NH 03045 641-6060

Merrimack County UNH Cooperative Extension
327 Daniel Webster Hwy., Boscawen, NH 03303 225-5505/796-2151

Rockingham County UNH Cooperative Extension
113 North Road, Brentwood, NH 03833-6623 679-5616

Strafford County UNH Cooperative Extension
259 County Farm Road, Dover, NH 03820 749-4445

Sullivan County UNH Cooperative Extension
24 Main St., Newport, NH 03773 863-9200

Farm Service Agency, USDA

22 Bridge Street, Suite 4, PO Box 1398, Concord, NH 03302-1398 224-7941
website: www.fsa.usda.gov/nh/
- Assists forest and agricultural landowners, by providing funds toward the cost of projects to conserve natural resources and enhance future productivity such as timber stand improvement, tree planting, forest plans, and manure management facilities.
- Sells aerial photographs at cost.

Cheshire/Sullivan: 11 Industrial Park Drive, Walpole, NH 03608 756-2970
Coos/Carroll: 4 Mayberry Lane, Lancaster, NH 03584 788-4602
Grafton: 250 Swiftwater Road, Woodsville, NH 03785 747-3751
Hillsborough: 468 Route 13 South, Milford, NH 03055 673-1222
Merrimack/Belknap: 10 Ferry St., Box 22, Suite 212, Concord, NH 03301 223-6003

Rockingham/Strafford: 243 Calef Highway, Route 125, Epping, NH 03042 679-1587

Regional Planning Commissions RSA 36:45-53

- Prepare comprehensive master plans for the development of the region and assist municipalities with planning.
- Assist local planning boards with mapping, access to GRANIT GIS, resource development, master plans, and drafting ordinances and regulations.

Central New Hampshire Regional Planning Commission
28 Commercial Street, Concord, NH 03301 226-6020

Lakes Region Planning Commission
103 Main Street, Suite 3, Meredith, NH 03253 279-8171

Nashua Regional Planning Commission
115 Main Street, PO Box 847, Nashua, NH 03061 883-0366

North Country Council
107 Glessner Road, Bethlehem, NH 03574 444-6303

Rockingham Planning Commission
156 Water Street, Exeter, NH 03833 778-0885

Southern New Hampshire Planning Commission
438 Dubuque Street, Manchester, NH 03102 669-4664

Southwest Region Planning Commission
20 Central Square, Keene, NH 03431-3707 357-0557

Strafford Regional Planning Commission
2 Ridge Street, Suite 4, Dover, NH 03820-2505 742-2523

Upper Valley Lake Sunapee Regional Planning Commission
77 Bank Street, Lebanon, NH 03766 448-1680

Local

Building Inspectors RSA 673-677

- Issue building permits complying with zoning ordinance and building code.

Conservation Commissions RSA 36-A

- Advise on "proper utilization and protection of the natural...and...watershed resources of the municipality."
- May acquire and manage land or interests therein.
- May manage town forests. RSA 31:110-113
- May review dredge and fill permit applications and make recommendations to the Wetlands Bureau. RSA 482-A:11
- May report violations to the Wetlands Bureau in writing and to law enforcement officials. RSA 482-A:14
- May research and map prime wetlands for municipal approval and filing with the Wetlands Bureau. RSA 482-A:15

Fire Departments

- Maintain data on toxic substances in the workplace. RSA 277-A
- Regulate installation and closure of all underground petroleum storage tanks in accordance with National Fire Protection Association (NFPA) standards. NFPA #30.

Health Officers RSA 147

- Make and enforce regulations for prevention of and removal of nuisances.
- May require repairs to faulty septic systems with the costs to be paid by the owner. RSA 147:17-a and -b
- May adopt septic system regulations stricter than those of the state.

Heritage Commissions RSA 674:44-a–44-d

- Advise on "proper recognition, use, and protection of resources ... primarily man-made, that are valued for their historic, cultural, aesthetic, or community significance..."
- May acquire and manage real property.
- May have powers and duties of historic district commissions, if so authorized by vote of the local legislative body.

Historic District Commissions RSA 674:45-50

- May research and prepare an historic district ordinance.
- Administer historic district zoning ordinance by reviewing building permit applications. RSA 676:8-10

Municipal Water Departments RSA 38

- May be established by city, town or village district.
- Maintain and operate public water supply systems.

Planning Boards RSA 672-677

- Develop and adopt a master plan to guide community development.
- Draft, adopt, and administer subdivision and site plan review regulations.
- Recommend zoning ordinance and amendments for consideration by town meeting or city council. Hold required public hearing(s).

Police Departments

- May prosecute as a violation work in a wetland without a posted permit. RSA 482-A:14

Recreation/Parks RSA 35-B

- Various local arrangements authorized to provide recreation facilities and programs.
- May acquire land and develop facilities.

Zoning Board of Adjustment RSA 672-677

- Quasi-judicial body that decides on special exceptions to and variances from the zoning ordinance and appeals from decisions of the zoning administrator.

Other Sources of Assistance and Information

Private and Interstate Organizations

American Farmland Trust Northeastern Field Office

1 Short Street, Northampton, MA 01060 (413)586-9330
website: www.farmland.org

- Information and technical assistance with farmland preservation

Audubon Society of New Hampshire

3 Silk Farm Road, Concord, NH 03301 224-9909
website: www.nhaudubon.org

- Nature interpretation, habitat preservation, research, education, and environmental action.
- Maintains several centers with educational programs; runs Odiorne Point Science Center under contract with DRED.

Center for Land Conservation Assistance

54 Portsmouth Street, Concord, NH 03301 717-7045; 224-9945 ext. 361
website: www.forestsociety.org

- A program of the Society for the Protection of NH Forests
- Assists local and regional land trusts

Conservation Law Foundation NH Advocacy Center

27 North Main Street, Concord, NH 03301-4930 225-3060
website: www.clf.org

- Nonprofit organization that uses law to improve resource management, environmental protection, and public health.
- Some current areas of interest are energy, transportation, water quality and quantity.

Lake associations

- Organizations interested in a various issues related to a particular lake and its surrounding environment, e.g. Lake Sunapee Protective Association, Squam Lakes Association.
- For information on existing associations or formation of an association, contact the NH Lake Association.

Land Trust Alliance
1319 F St. NW, Suite 501, Washington DC 20004-1106 (202)638-4725
website: www.lta.org
- National network and service center to improve effectiveness of local and regional land conservation groups.

Local Land Trusts
- Non-profit organizations interested in land protection.
- Some acquire and hold land and easements, others do not.
- For information on existing land trusts, contact the Center for Land Conservation Assistance at Society for the Protection of New Hampshire Forests or the Land Trust Alliance.

Loon Preservation Committee
Lees Mills Rd., PO Box 604, Moultonborough, NH 03254 476-5666
website: www.loon.org
- Research, management and education related to the common loon.

New England Interstate Water Pollution Control Commission
100 Foot of John Street, Lowell, MA 01852-1124 (978)323-7929
website: www.neiwpcc.org
- Composed of New England states plus New York
- Purpose is to address water pollution issues of mutual concern.
- Provides training for people who run water-related facilities
- Provides forum for collaboration and information sharing.

New Hampshire Association of Conservation Commissions
54 Portsmouth Street, Concord, NH 03301 224-7867
website: www.nhacc.org
- Information and assistance to municipal conservation commissions.

New Hampshire Association of Conservation Districts
PO Box 2311, Concord, NH 03302-2311 796-2615
website: www.nhacd.org
- A federation of county conservation districts that represents districts before the legislature, develops statewide policy recommendations, and serves as an information exchange.

New Hampshire Association of Natural Resource Scientists
PO Box 110, Concord, NH 03302-0100
website: www.nhanrs.org
- A professional organization of soil and wetland scientists.

New Hampshire Consulting Foresters Association
54 Portsmouth Street, Concord, NH 03301 224-9699
- Professional organization of private consulting foresters.
- Can provide names of members for part or all of NH.

New Hampshire Historical Society
30 Park Street, Concord, NH 03301 225-3381
website: www.nhhistory.org
- Organized collection of NH historical documents and artifacts.

New Hampshire Lakes Association
7 South State Street, Concord, NH 03301 226-0299
website: www.nhlakes.org
- An association of organizations and individuals interested in lakes.

New Hampshire Municipal Association
PO Box 617, Concord, NH 03302 224-7447
website: www.nhmunicipal.org
- Membership organization composed of municipalities.
- Information, service and technical assistance to municipalities.

New Hampshire Rivers Council
54 Portsmouth St., Concord, NH 03301 228-6472
website: nhrivers.org
- Advocates river conservation and assists NH river and watershed associations.

New Hampshire Timber Harvesting Council
54 Portsmouth Street, Concord, NH 03301 224-9699
website: www.nhtoa.org/timberharv
- Joint program of NH Timberland Owners Association, UNH Thompson School, and UNH Cooperative Extension to encourage safe and responsible timber harvesting and trucking through education.

New Hampshire Timberland Owners Association
54 Portsmouth Street, Concord, NH 03301 224-9699
website: www.nhtoa.org
- Association of landowners, loggers, foresters, mill owners and other forest users working for sound public forestry practices, promoting proper forest management, and encouraging a healthy forest products industry.

New Hampshire Tree Farm Committee
54 Portsmouth St., Concord, NH 03301 224-9945/224-9699
website: www.nhtoa.org/nhtreeprog
- Cosponsored by the NH Timberland Owners Association and the Society for the Protection of NH Forests.
- Volunteer inspecting foresters certify as Tree Farms, eligible to display the green and white Tree Farm sign, wooded land of at least 10 acres whose owners practice multiple-use forestry under a management plan prepared by a professional forester. Town and city forests may be certified Tree Farms.

New Hampshire Wildlife Federation
54 Portsmouth Street, PO Box 239, Concord, NH 03302 224-2984
website: www.nhwf.org
- State affiliate of the National Wildlife Federation.

Northeast Resource Recovery Association
9 Bailey Road, Chichester, NH 03258 798-5777
website: www.recyclewithus.org
- Assists municipalities with recycling and marketing recyclables.

River and watershed organizations
- Organizations interested in issues related to a particular river or watershed, e.g. Merrimack River Watershed Council, Nashua River Watershed Association.
- For information on existing groups, call DES Rivers Management Program (271-1152).

RCAP Solutions (Resources for Communities and People)
218 Central Street, Box 429, Winchendon, MA 01475-0429 (800)488-1969; (978)297-5300
website: www.rcapsolutions.org
- Provides technical assistance to rural low-income communities on water supply and wastewater issues.

Society for the Protection of New Hampshire Forests
54 Portsmouth Street, Concord, NH 03301 224-9945
website: www.forestsociety.org
- Land protection and management, conservation research and education, natural resources conservation advocacy.

Society of Soil Scientists of Northern New England
PO Box 986, Durham, NH 03824
website: www.sssnne.org
- A professional organization of soil scientists.
- Publishes *Site Specific Soil Mapping Standards for New Hampshire and Vermont.*

SPACE: Statewide Program of Action to Conserve our Environment
54 Portsmouth Street, Concord, NH 03301 224-3306
website: www.nhspace.org
- Education and advocacy on current use assessment (RSA 79-A) program.

Student Conservation Association
PO Box 550, Charlestown, NH 03603 543-1700
website: www.thesca.org
- Recruits, fields, and supports national and international volunteers for full-time conservation work on public and private lands, including AmeriCorps participants.
- Runs NH Conservation Corps: NH high school students who work on NH conservation projects, such as trail and bridge construction and revegetation.

The Nature Conservancy, NH Chapter
22 Bridge Street, 4th Floor, Concord, NH 03301 224-5853
website: www.tnc.org
- A national organization dedicated to preserving biological diversity and to identification, protection, and stewardship of unique natural areas.

Trust for Public Land, Northern New England Office
3 Shipman Place, Montpelier, VT 05602 (802)223-1373
NH Field Office: 54 Portsmouth Street, Concord, NH 03301 224-0103
website: www.tpl.org
- A national organization founded in 1972 to conserve land by helping government agencies with real estate transactions, planning, coalition building, financing strategies, and acquiring land or options on land to allow time to raise funds for public acquisition.

Private Foundations

Concord Public Library
45 Green St., Concord, NH 03301 225-8670
website: www.onconcord.com
- Maintains a library, originally assembled by NH Charitable Foundation, available to the public for foundation grant research.

NH Department of Justice Charitable Trust Division
33 Capitol Street, Concord, NH 03301 271-6641
- Publishes a booklet listing NH foundations and their purposes.

John F. and Dorothy H. McCabe Environmental Fund
415 North River Road, Manchester, NH 03104 647-8081
- Provides grants ($5,000-$20,000) to support land and natural resource conservation and education programs of NH environmental organizations, including conservation commissions.

New England Grassroots Environmental Fund
PO Box 1057, Montpelier, VT 05601 (802)223-4622
website: www.grassrootsfund.org
- Provides small ($500-$2,500) grants for "grassroots" projects, including those of conservation commissions.

New Hampshire Charitable Foundation
37 Pleasant St., Concord, NH 03301-4005 225-6641
website: www. nhcf.org
- Manages a number of funds, some of which make grants for conservation projects or land acquisition.

Sweetwater Trust
294 Washington St., Suite 312, Boston, MA 02108 (617)482-5998
website: www.sweetwatertrust.org
- Land acquisition funding for natural areas, particularly for large tracts, significant natural communities, biodiversity, watershed of wild streams, rivers, and wetlands.

Post-Secondary Education -- Institutions and Programs

Antioch/New England Graduate School

40 Avon Street, Keene, NH 03431 357-3122

website: www.antiochne.edu

- Environmental Studies Program, a graduate program in environmental subjects.
- Resources Management Administration, a graduate program in natural resources management.

Dartmouth College

website: www.dartmouth.edu

Environmental Studies Program, 314 Murdough Center, Hanover, NH 03755 646-2838

- Undergraduate program involving work on regional environmental and energy problems.

Resource Policy Center, Thayer School of Engineering, Hanover, NH 03755 646-3551

- Consulting research institute on resource issues, including water; also graduate degree program.

University of New Hampshire, Durham, NH 03824

website: www.unh.edu

Civil Engineering Department, Kingsbury Hall 862-1428

- University courses in environmental engineering and hydrology.

Community Environmental Outreach Program, 11 Brook Way, Durham 03824 862-4984

- Community Environmental Outreach Program (CEOP): Recruits environmentally oriented students, regardless of major or year, and organizes teams of 2-4 students to work on a local environmental project for an academic year. Local cost: c. $300-$800.
- Senior Project (Course NR775): Required of all senior natural resource majors; teams of 4-6 students work on an environmental project for 1 semester. Local cost: c. $50-$300.

Earth Sciences Department, 56 College Rd., James Hall 862-1020

- University courses and graduate program in hydrology, forestry and water resources management.

Natural Resources Department, 56 College Rd., 325 James Hall 862-1020

- University unit engaged in natural resource and community economics.

Resource Economics and Development Department, 56 College Rd., 310 James Hall 862-1700

- University unit focused on natural resource and community economics.

UNH Cooperative Extension, 131 Main St., Nesmith Hall 862-1029

website: ceinfo.unh.edu

- Responsible for the educational programs of the US Department of Agriculture, making available the results of research on management and use of natural resources. (See County and Regional for county offices)
- Sponsors a Lake Lay Monitoring Program with UNH Freshwater Biology Group. 862-3848
- Coordinates NH Forest Stewardship Program, which encourages long range comprehensive forest planning and management on private lands. 862-2512
- Offers a Community Conservation Assistance Program that assists community and private conservation groups with land and water conservation planning projects 364-5324

Water Resources Research Center

218 Morse Hall, UNH, Durham, NH 03824 862-2144

website: www.wrrc.unh.edu

- Research on state and regional water resource issues.

Undergraduate colleges and many secondary schools, both public and private, have programs in which students study and do research and field work in subjects dealing with the environment. Some may be able to help with municipal projects.

Appendix 4

Warrant Articles

To Place an Article on the Town Meeting Warrant

1. Ask the Selectmen to insert it, *or*

2. Present a petition to the selectmen signed by 25 registered voters asking that the article be placed on the warrant. Get a few additional signatures in case any are challenged. *Petitioned articles must be presented to the selectmen before the deadline, which varies with the kind of article, date of town meeting, and whether the town is an SB 2 town, but in no case is the deadline later than the 5th Tuesday prior to town meeting. Zoning articles must be submitted earlier than other warrant articles. Check well in advance with the planning board, selectmen, regional planning commission, or NHMA website for deadlines.*

Sample Petition

"The undersigned registered voters in the Town of _____ hereby petition the Board of Selectmen of _____ to place the following article on the warrant (official ballot) for the 20____ annual meeting."

Sample Warrant Articles

These are only examples. To be sure that a warrant article is worded correctly and in the proper form, consult the town moderator, selectmen, attorney, or bond counsel.

To establish a conservation commission

To see if the town will vote to establish a conservation commission of___ (3 to 7) members and ___ alternate members in accordance with RSA 36-A, said members to be appointed within ___ days of the annual meeting by the selectmen, who also shall designate a temporary chairman for the purpose of calling the first meeting of the commission.

To create a conservation fund

To see if the town will vote to establish a conservation fund account as authorized by RSA 36-A:5, with the fund to be held by the municipal treasurer (RSA 41:29).

To create a conservation fund by appropriating unexpended operating funds

To see if the town will vote to authorize the conservation commission to retain the unexpended portion of its _____(year) appropriation as authorized by RSA 36-A:5, said funds to be placed in a conservation fund account held by the municipal treasurer (RSA 41:29). (This article should be submitted each year.)

To allocate the use change tax to the conservation fund

To see if the town will vote to deposit _____ [percentage and/or amount] of the revenues collected pursuant to RSA 79-A (the land use change tax) in the conservation fund in accordance with RSA 36-A:5 III as authorized by RSA 79-A:25 II.

To raise and appropriate money for land/easement acquisition to the conservation fund

To see if the town will vote to raise and appropriate $_____(insert dollar amount) to be placed in the conservation fund for the future purchase of conservation easements and conservation land as authorized by RSA 36-A:5.

To create a capital reserve fund to acquire conservation land and easements

To see if the town will vote to establish a Capital Reserve Fund under the provisions of RSA 35:1 for the purpose of acquiring conservation land and easements, to raise and appropriate $____ (insert dollar amount) to be placed in this fund, and to authorize the selectmen to serve as agents to expend money from this fund.

To authorize issuing a bond to acquire conservation land and easements

Municipalities that have passed bonds to acquire conservation land and easements have used varying language depending on circumstances and local wishes. Some have authorized bonds to acquire particular parcels; some have been for future, unspecified acquisitions; some have required a vote at a special (or regular, if the timing is right) town meeting for each purchase; some bond authorizations lapse at the end of the fiscal year if unexpended. Please ask the Center for Land Conservation Assistance at the Society for the Protection of NH Forests or the NHACC office for examples of bond language that towns have used and *always consult bond counsel* in advance on precise wording.

To designate and authorize the conservation commission to manage the town forests

To see if the Town will vote to establish as town forest under RSA 31:110 the following tract(s) or parcel(s) of land: _____ (insert description of the parcels, including the tax map numbers), to authorize the conservation commission to manage the town forest(s) under the provision of RSA 31:112, II, and to authorize the placement of any proceeds that may accrue from this forest management in a separate forest maintenance fund, which shall be allowed to accumulate from year to year as provided by RSA 31:113.

To review tax title lands

To see if the town will vote to require that the selectmen, before disposing of real property acquired by tax collector's deed, first ask the conservation commission to recommend whether or not the retention of such real property would be in the best interests of the town as provided in RSA 80:80, V, subject to the final ratification of the next annual or special town meeting.

N.B. If your town is one of the very few that still uses the tax sale instead of the tax lien process, the citation in this warrant article should be *RSA 80:42-a.*

To retain tax title lands

To see if the town will vote to retain ownership of _____ (insert description of parcel(s), including their tax map numbers) as authorized by RSA 80:80,V and to authorize the conservation commission to manage the property(ies).

N.B. If your town is one of the very few that still uses the tax sale instead of the tax lien process, the citation in this warrant article should be *RSA 80:42-a.*

To place a conservation easement on town-owned land

To see if the town will vote to place a conservation easement on _____ (insert description of parcel(s), including their tax map numbers), said easement to be held by _____ (insert name of qualified organization).

To designate prime wetlands under RSA 482-a:15

To see if the town will vote to designate certain areas in the Town of _____ as prime wetlands as authorized in RSA 482-A:15 and described in documents and maps filed by the planning board and conservation commission with the town clerk as required by RSA 675:3.

An article designating prime wetlands MUST be adopted in the same way as a zoning ordinance with hearing(s) held by the planning board at prescribed intervals and a vote on the ballot used for the election of local officials. (RSA 482-A:15, RSA 675:2-3)

To establish class A or B trails on town-owned land

To see if the town will vote to authorize the conservation commission to establish class A or class B trails as full public rights of way on town land/in the Town Forest/on town-owned

conservation land/on town-owned land managed by the conservation commission and to manage any such class A or class B trails in accordance with RSA 231-A.

To reclassify a class V or VI road to a class A or B trail

To see if the Town will vote to change the classification of _____ from a class VI highway to a class A (or B) trail as authorized by RSA 231-A.

To express an opinion

To see if the town will vote to send the following resolution to the New Hampshire General Court: Resolved, New Hampshire's natural, cultural and historic resources in this town and throughout the state are worthy of protection and, therefore, the State of New Hampshire should fund the Land and Community Heritage Investment Program for the voluntary conservation of these important resources.

This article may be adapted to any subject over which the town meeting has no authority but on which it may wish to express its opinion for transmission to those with authority to regulate or legislate on the topic.

Appendix 5

Brief History of NH Conservation Commissions

A 1956 proposal in Ipswich, Massachusetts to fill a marsh for housing highlighted the need for a local governmental body responsible for conserving natural resources. A group of residents successfully used a state law authorizing creation of local commissions for industrial development as the basis of their argument "for the acquisition and protection of the marsh on the grounds that it would enhance community values". (*Grass-Roots Environmentalists*, p. 5) They then approached the Legislature; in 1957 Massachusetts passed the first law enabling a municipality to establish a conservation commission. By the end of 1958, Massachusetts had 11 conservation commissions. (*Conservation Commissions in Massachusetts*, p. 30-31)

Other northeastern states followed Massachusetts' lead: Rhode Island passed enabling legislation in 1960, Connecticut in 1961, New Hampshire in 1963, Maine in 1965, New York in 1967 and New Jersey in 1968. ("Background and Evaluation of New Hampshire's Conservation Commissions", p. 43) Vermont adopted enabling legislation in 1977. Municipal conservation commissions exist today in all six New England states, New York, and New Jersey.

NH Conservation Commissions

On April 6, 1960 Leslie Clark, education director of the Society for the Protection of New Hampshire Forests (SPNHF), attended the first New England Conservation Conference, which focused on projects and problems of the new conservation commissions. In the Summer 1960 issue of the Society's *Forest Notes*, Les wrote: "This grass roots level attempt to promote conservation in local areas is commendable and points to the fact that many of our conservation problems can be approached from the local level." (*Forest Notes*, Summer 1960, p. 40)

In 1963, Governor John King signed the Conservation Commission Enabling Act, now RSA 36-A. But few municipalities knew of the statute, so no commissions were created in 1964. In December 1964, SPNHF urged Society members to propose commissions in their municipalities.

At March 1965 town meetings 18 towns established conservation commissions: Bedford, Center Harbor, Durham, Epsom, Exeter, Francestown, Gilford, Hampton, Hampton Falls, Hollis, Hooksett, Littleton, Meredith, New London, Rindge, Rye, Salem and Sunapee. In 1966 sixteen additional towns created conservation commissions. That year NH Department of Resources and Economic Development (DRED) and SPNHF co-authored the first handbook for conservation commissions.

Les Clark organized the first statewide meeting of conservation commissions in February 1967. One result of this meeting was the quarterly *Conservation Commission News* newsletter for conservation commissioners, edited by Les Clark and first published by SPNHF in March 1967. At town meetings that month, 23 more towns voted to establish conservation commissions.

Later in 1967 representatives of state and federal natural resource agencies met to find ways to help commissions. Thanks to a grant from Spaulding-Potter Charitable Trusts, UNH Cooperative Extension offered the expert assistance of Floyd V. Barker. Spaulding-Potter also provided a small "seed money" grant to Deerfield Conservation Commission. Subsequently the Foundation established a program to match money raised locally for a conservation fund as well as a more extensive "seed money" grant program administered by SPNHF.

In April 1968, Keene became the first New Hampshire city to establish a conservation commission. At about the same time, SPNHF hired Malcolm "Tink" Taylor, whose duties included helping establish and working with municipal conservation commissions.

By 2003, 213 of 234 NH municipalities had voted to create conservation commissions, but not all commissions are active.

NHACC

In November 1970 at the Second Congress of New England Conservation Commissions in

Bedford, NH, NH conservation commissioners formed the New Hampshire Association of Conservation Commissions (NHACC) and elected Lee Conservation Commission chairman Pat Bruns president of the new organization. A 3-year grant from Spaulding-Potter Charitable Trusts enabled NHACC to assume responsibility for *Conservation Commission News* and to hire executive secretary Malcolm "Tink" Taylor of Holderness.

NHACC incorporated on March 26, 1971, became an affiliate of NH Municipal Association in October 1971, and was granted 501(c)(3) non-profit status by the Internal Revenue Service in 1974. NHACC's purpose is to foster conservation and appropriate use of NH's natural resources by providing assistance to conservation commissions, facilitating communication and cooperation among commissions, and helping to create a climate in which commissions can be successful.

In 1971, Tink Taylor submitted a successful proposal to the Ford Foundation for a program of small grants to assist municipal conservation commissions. Ford Foundation's two year Program of Assistance to Municipal Conservation Commissions began in January 1972 and ultimately provided $600,000 to commissions in seven states: Maine, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, and New Jersey. In New Hampshire, 68 conservation commissions received a total of $94,379 in grants for projects that included natural resources inventories and open space planning and protection. (*Grass-Roots Environmentalists*, p. 31)

While Ford Foundation provided financial assistance to some New Hampshire conservation commissions, NHACC began activities it continues today: encouraging establishment of new commissions, providing information and advice to commission members, publishing *Conservation Commission News*, and holding an annual meeting and workshops.

Over the years, NHACC publications have included the quarterly *Conservation Commission News,* a periodic *Conservation News Bulletin* with the status of bills before the NH Legislature, *Handbooks for New Hampshire's Municipal Conservation Commissions* (a 1974 edition with a 1977 supplement on Wetlands and a 1988 edition with updates in 1991, 1992, 1994 and 1997); two publications on lakes (1979-1980); a publication on hazardous wastes (1981), a water quality guide (1982), and *Guide to the Designation of Prime Wetlands* (1983). NHACC assisted with numerous publications, among them *Method for the Comparative Evaluation of Nontidal Wetlands in New Hampshire* (1991), *Municipal Guide to Wetlands Protection* (1993), and *Buffers for Wetlands and Surface Waters* (1995).

The Association's executive director is a statutory member of the Current Use Board and State Conservation Committee. NHACC has and continues to cosponsor, participate in, and advise on a number of endeavors with other groups, organizations, and state agencies, such as the Citizens Task Force on Acid Rain, Natural Areas Council, Citizens Advisory Committee on Pesticides, NH Heritage Trail Committee, NH Ecological Reserve System Committee, Citizens for NH Land and Community Heritage, and state agency rules advisory committees.

For its first decade, Malcolm "Tink" Taylor of Holderness was NHACC's part-time executive secretary. Cynthia M. Ivey of Waterville Valley served as NHACC wetlands advocate from 1977-1982 and started an NHACC service still provided: monitoring dredge and fill applications and reporting outcomes to conservation commission chairmen. When Tink left in 1980, the Board of Directors decided NHACC needed a full-time executive director to improve services to municipal commissions and hired Kristina Peterson. After less than a year; Kris left, and the Board hired Marjory Swope of Concord in October 1981.

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[1] Appendices 1 and 2 are not indexed