MAINE STATE LEGISLATURE

Report to the Joint Standing Committee on Natural Resources

Concerning the Provisions of Resolve 2003, Chapter 14

Relating to the Consideration of the Cumulative Effect

On Protected Natural Resources

Submitted by:

The Maine Department of Environmental Protection

January, 2004

Introduction

This report is submitted to the Joint Standing Committee on Natural Resources pursuant to Resolve 2003, Chapter 14, Resolve Relating to the Consideration of the Cumulative Effect on Protected Natural Resources. The resolve is attached to this report as **Appendix A**. The resolve required that the Department:

1. within existing resources, convene a working group of interested parties to design a method for considering the cumulative effects of activities on protected natural resources permitted under the Natural Resources Protection Act (NRPA), 38 M.R.S.A., Sections 480-A to 480-Z;

2. submit a proposal for considering the cumulative effects of permitted activities, including any draft legislation necessary to implement the proposal, to the Joint Standing Committee on Natural Resources by January 5, 2004.

The Department convened a workgroup of interested individuals representing state natural resource, planning and transportation agencies, municipal and regional governments, and consulting, business, and environmental interests. The Department sought comment and recommendations from the workgroup participants on various options for designing a methodology for assessing cumulative impacts under the Natural Resources Protection Act (NRPA). The entire workgroup met 3 times between September and November, 2003. A list of the participants on the workgroup is attached as **Appendix B**.

Statutory and Regulatory Background

In Section 480-A, Findings; purpose, of the Natural Resources Protection Act (Title 38 M.R.S.A., Sections 480-A to 480-Z), is the statement " The Legislature further finds and declares that the cumulative effect of frequent minor alterations and occasional major alterations of these resources poses a substantial threat to the environment and economy of the State and its quality of life."

In Section 5.D, No unreasonable Impact, of the Wetlands and Waterbodies Rules, Chapter 310, is the statement which reads in part " When considering whether a single activity is reasonable in relation to the direct and cumulative impacts on the resource, the department considers factors such as the degree of harm or benefit to the resource; the frequency of similar impacts; the duration of the activity and the ability of the resource to recover; the proximity of the activity to protected or highly developed areas; traditional uses; the ability of the activity to perform as intended; public health or safety concerns addressed by the acitivity; and the type and degree of benefit from the activity (public, commercial or personal)."

While there is clear Legislative and regulatory intent to require an assessment of the cumulative effects of activities permitted under the Natural Resources Protection Act, the Department has until now not used a systematic process to evaluate cumulative impacts under the NRPA. This has been a continuing area of concern both for the Department and the Board of Environmental Protection.

Workgroup Process

Initial efforts of the workgroup focused on:

- Reviewing the standards projects involving regulated activities must meet under the NRPA.

- Considering whether cumulative impacts should more appropriately be evaluated as a separate standard or within the context of the existing standards under the NRPA. It was the consensus of the workgroup that to be meaningful, the consideration of cumulative impacts should be directed to the existing standards for review under the NRPA.

- Establishing a common understanding of the meanings of direct, indirect and cumulative impacts. Direct effects are those that impact protected natural resources at the time of construction. Indirect impacts are those that can occur as a result of the use of a permitted activity and/or are effects that are remote in time or space from the activity. Cumulative impacts include direct and indirect impacts from past, present and reasonably foreseeable activities.

- Identifying recent and anticipated information available to assist the Department in assessing direct and cumulative impacts to protected natural resources. This discussion focused on new and anticipated data and information that is not contained in specific applications. For the past couple of years important freshwater wetland information has been obtained from the Wetland Characterization Mapping Project sponsored by the State Planning Office. The maps produced under this effort have provided staff which much useful information to identify and protect more valuable and/or vulnerable wetland types on a regional basis. The workgroup also identified a promising effort in the Beginning with Habitat education effort developed by state, federal, environmental and regional planning agencies. This is a landscape habitat approach for assessing wildlife and plant conservation needs and opportunities within individual communities. The goal of the effort is to maintain sufficient habitat to support all native plant and animal species currently breeding in the State by providing each Maine town with a collection of maps and accompanying information depicting and describing various habitats of statewide and national significance found in a particular community. In addition, the department is nearing the final stages of developing a GIS (Geographic Information System) tracking system for all permits issued under the NRPA that will identify the physical location of permitted activities on a computer database mapping system. The department currently relies on a computer database that does not contain spatial information to allow the Department to track permits.

- Identifying education, planning and outreach efforts to municipalities and the public on identifying and protecting valuable and vulnerable protected natural resources. The workgroup felt strongly that in addition to a strong education and outreach effort, there must be an equally strong effort to provide for state, regional and local planning to protect natural resources. Input into local comprehensive planning efforts to identify important resources and the means to protect those resources may be more important in the long run in curbing unreasonable cumulative impacts than through the regulatory requirements of the NRPA.

- Identifying existing cumulative impact assessment methodologies that may be useful to this process. The workgroup discussed some of the available information, that focused on assessing direct, indirect and cumulative impacts from large scale developments, such as highway construction and major energy development projects. The scope of analysis associated with these studies was considered to be well beyond the level of review pertinent to most projects under the NRPA. Subsequently there was a discussion on the previous effort by Department staff in the spring of 2003 to develop an assessment methodology for considering the scenic impacts of regulated activities reviewed under the NRPA. Department staff had developed the scenic assessment methodology during the rulemaking process for Chapter 315, "Assessing and Mitigating Impacts to Scenic and Aesthetic Uses." The assessment methodology has been very well received and has garnered the attention of many other states that have been struggling with this issue.

Department staff presented a modified version of the scenic assessment methodology to the workgroup that included specific review criteria for assessing direct and cumulative impacts on protected natural resources contained in the Department's Chapter 310, Wetlands and Waterbodies Protection Rules. The workgroup chose to proceed with working with this document as the preferred option. The remaining efforts of the workgroup were focused on clarifying terms and definitions and determining an appropriate scoring system.

Cumulative Impact Assessment Guidelines

The Cumulative Impact Assessment Methodology utilizes a two step process to determine the potential cumulative impact of a regulated activity on a protected natural resource. The methodology incorporates existing review criteria contained in Department rules. The workgroup did not identify any additional review criteria that would further enhance the cumulative impact assessment process. This process is fully described in the Guidance for Assessing Cumulative Impacts to Protected Natural Resources under the Natural Resources Protection Act, (**Appendix C**).

The first step of the methodology involves a ranking process of an application utilizing the Cumulative Impact Assessment Form which incorporates review criteria contained in Section 5(D)(2) of the Wetlands and Waterbodies Protection Rules, Chapter 310. Specific language of that section reads in part:

When considering whether a single activity is reasonable in relation to the direct and cumulative impacts on the resource, the department considers factors such as the degree of harm or benefit to the resource; the frequency of similar impacts; the duration of the activity and ability of the resource to recover; the proximity of the activity to protected or highly developed areas; traditional uses; the ability of the activity to perform as intended; public health or safety concerns addressed by the activity; and the type and degree of benefit from the activity (public, commercial or personal).

The workgroup worked extensively in clarifying the descriptors and indicators and in assigning values to the primary factors for the assessment. The form is intended for use by department staff during the review process of specific applications. However the form can be used by an applicant or members of the public in determining the feasibility of a project before a proposal is submitted to the department. This process will result in a total score that correlates to the severity of the cumulative impact on the protected natural resource, ranging from weak or negligible to severe.

The second step in the assessment process involves the consideration of the assessment form score with the degree of significance of the specific protected natural resource. This is done using the Potential Cumulative Impact of Development Matrix (**Appendix C**). The scores generated in step one are shown on the X axis of the matrix and the significance of the resource is shown on the Y axis. The significance of the resource is determined using a number of different sources of information, including site specific information provided by an applicant, staff and other state or federal assessments and wetland mapping information developed by the State Planning Office. Factoring together the project's total score and the relative significance of the resource will provide a method for department staff to determine the level of effort required for mitigation and/or whether the project should be redesigned or relocated on the property in order to satisfy the criteria and receive approval.

Department staff and members of the workgroup applied the assessment methodology to a wide range of previously reviewed applications in order to determine its effectiveness and reliability. The participants noted that the indicators and associated scores provided clear guidance for individuals to use. The individual scoring results and final assessments of degree of cumulative impact were quite consistent among the workgroup members and Department staff. All of the participants felt that the methodology provided a consistent and uniform procedure for assessing the cumulative impact of specific activities. Department staff agreed to apply the methodology for a period of time (one year) to assess its effectiveness and report back to the workgroup and Legislature with that information as well as any possible modifications.

The Cumulative Impact Workgroup supports the Methodology as a practical, easy to use and reasonable approach that utilizes appropriate criteria in existing statute and rules. In conjunction with other State, regional and local initiatives focusing on education and outreach, the methodology will be a valuable tool for preventing or minimizing the cumulative impacts from regulated activities. It is also anticipated to be a model for municipalities to use in assessing development proposals at the local level.

Recommended Legislation

Under the Natural Resources Protection Act, Section 480-X(2), projects that qualify for Tier 1 (4,300 sq. ft to 15,000 sq. ft) and Tier 2 (15,000 sq. ft. to 1 acre) review are only required to meet the standard for water quality under Section 480-D. The Department does not have the legislative authority to assess direct and cumulative impacts on such standards as habitat and fisheries and scenic impacts for projects up to one acre in size, unless the project is located in a wetland of special significance as defined in the Wetlands and Waterbodies Protection Rules, Chapter 310 (**Appendix D**).

In 2002, approximately 42% of approved freshwater wetland applications were Tier 1, approximately 7% were Tier 2 and approximately 51% required full permitting under the NRPA. The corresponding numbers of filled or altered wetlands were 18, 9 and 23 acres respectively. The general consensus of the workgroup was that a consideration should be given to include Tier 2 projects in those projects for which the Department could assess both direct and cumulative impacts for all of the standards of the law. As indicated in the 2002 data, this would represent approximately 7% of approved applications encompassing approximately 18% of the freshwater wetland acreage impacted annually. The Department would not propose that applicants be required to provide any additional information over than that currently required. The proposal would only allow the Department to consider all of the standards in the law for direct and

cumulative impacts for Tier 2 proposals. The workgroup felt that projects within the Tier 2 size range can have a potentially significant impact on freshwater wetland resources other than water quality and should be subject to additional scrutiny, particularly for such standards as wildlife and plant habitat, fisheries and existing uses.

The Department is prepared to offer specific legislative language to address this concern.

Appendix A

Legislative Resolve

PL 2003, Chapter 14

STATE OF MAINE

IN THE YEAR OF OUR LORD
TWO THOUSAND AND THREE

H.P. 197 – L.D. 242

Resolve, Relating to the Consideration of the Cumulative Effect on Protected Natural Resources

Sec. 1. Department to convene working group of interested parties. Resolved: That, within the existing resources, the Department of Environmental Protection shall convene a working group of interested parties to design a method for considering the cumulative effects of activities on protected natural resources when the activities are permitted, and be it further

Sec. 2. Proposal Resolved. That the Department of Environmental Protection shall submit a proposal for considering the cumulative effects of activities on protected natural resources, including any draft legislation necessary to implement the proposal, to the Joint Standing Committee on Natural Resources by January 5, 2004; and be it further

Sec. 3. Authority to report out legislation. Resolved: That the Joint Standing Committee on Natural Resources may report out legislation during the Second Regular Session of the 121st Legislature relating to the Department of Environmental Protection's proposal for the consideration of cumulative effects on protected natural resources.

Appendix B

Cumulative Impact Workgroup Members

Liz Hertz	Maine State Planning Office
Fred Todd	Maine Land Use Regulation Commission
Molly Docherty	Maine Department of Conservation, Natural Areas Program
Rich Dressler	Maine Department of Inland Fisheries and Wildlife
Richard Bostwick	Maine Department of Transportation
Jennifer Burns	Maine Audubon Society
Juliet Browne	Verrill and Dana
Kristine Ossenfort	Maine Chamber of Commerce and Industry
Steve Pelletier	Woodlot Alternatives, Inc.
Steve Walker	Town of Brunswick, Natural Resource Planner
Sue Schaller	Southern Maine Regional Planning Commission
Judy Gates Mary Pierce Jeff Madore	Maine Department of Environmental Protection
Susanna Liller	Facilitator, Barton and Gingold

Appendix C

Guidelines for Assessing Cumulative Impacts to Protected Natural Resources Under the Natural Resources Protection Act

COVERSHEET
GUIDELINES FOR PROCEDURES

Operation Title: **Guidance for Assessing Cumulative Impacts to Protected Natural Resources under the Natural Resources Protection Act**
Identification No.: **DEPLW0613-A2003**
Revision No.: **00**
Originator Name: **Judy Gates**
Reviser: **N/A**
Effective Date: **DRAFT (Nov 2003)**

APPROVALS:

Bureau of Land and Water Quality Director:

Andrew C. Fisk _____ _____ Date: _____
Print Name Signature

QMSC Chair:

Malcolm C. Burson _____ _____ Date: _____
Print Name Signature

DISTRIBUTION:

( ) Bureau of Air Quality ..... By: _____ Date: _____
( ) Bureau of Land and Water Quality ..... By: _____ Date: _____
( ) Bureau of Remediation and Waste Management ..... By: _____ Date: _____
( ) Office of the Commissioner ..... By: _____ Date: _____
( ) Quality Management Steering Committee ..... By: _____ Date: _____
( ) Bureau QACs and Lead auditors…… By: _____ Date: _____

Bureau of Land and Water Quality
Division of Land Resource Regulation
Licensing Unit

Guidelines for Assessing Cumulative Impacts to Protected Natural Resources
under the Natural Resources Protection Act

1. APPLICABILITY. This guidance applies to all licensing staff in the Bureau of Land and Water Quality's Division of Land Resource Regulation (Division) after [EFFECTIVE DATE]. It applies to the processing of applications filed with the Department under the Natural Resources Protection Act (NRPA).

2. PURPOSE. This guidance is intended to establish consistent procedures for staff assessments of potential cumulative impacts resulting from activities proposed in NRPA applications processed by the Division of Land Resource Regulation.

3. RESPONSIBILITIES.

3.1 COMPLIANCE. All licensing staff in the Division of Land Resource Regulation are responsible for becoming familiar, and complying with, the contents of this guidance prior to processing an application. The attached appendices are to serve as reference materials throughout the processing of applications. The appendices will be applied to the project as proposed prior to consideration of any proposed mitigation. Mitigation will be considered in terms of offsetting any potential cumulative impacts resulting from a proposed project following completion of the appendices. Supervisors are responsible for ensuring that licensing staff is familiar with and adhere to the procedures outlined in this guidance. Enforcement & Field Services staff drafting Department Orders will also adhere to this guidance.

3.2 OTHER. The Licensing Coordinator is responsible for initial development, approval, distribution, and maintenance of this guidance. Policy and Procedures staff in the Bureau of Land & Water Quality will track this guidance. The name of responsible individuals, document title, dates of last revision, and document numbers will be recorded.

4. GUIDELINES AND PROCEDURES.

4.1 ORIGINATION AND CONTENTS. Division Licensing staff will be trained in the use of the Cumulative Impact Assessment (CIA) form (Appendix A) and Cumulative Impact Assessment Matrix (Matrix) (Appendix B) associated with this guidance. The appendices will be used by Division Licensing staff to identify potential cumulative adverse impacts on protected natural resources during the processing of an NRPA application. The CIA and matrix will be used as guidance for determining whether a proposed activity will have an unreasonable cumulative impact on a protected natural resource, as described in Chapter 310, the Wetland and Waterbodies Protection Rules, Section 5(D)(2). The completed CIA and matrix will be included in the project file. Associated definitions included in this guidance apply to the CIA and matrix.

4.2 GUIDANCE DEVELOPMENT AND APPROVAL PROCESS. Approval of this guidance follows the preliminary draft cycle and final approval cycle for Bureau-specific procedures described in SOP No. OC-PE-0001, Standard Operating

Procedure Development, Format, Approval, and Distribution, dated June 15, 2001. The Director of the Bureau of Land and Water Quality and the Maine DEP's QAM approve the final guidance.

5. REFERENCES.

5.1 MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION QUALITY MANAGEMENT PLAN (JUNE 2001).

5.2 MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION STANDARD OPERATING PROCEDURE ON STANDARD OPERATING PROCEDURES (OC-PE-0001).

5.3 MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF LAND AND WATER QUALITY, STANDARD OPERATING PROCEDURE SUPPLEMENT TO OC-PE-0001 (DEPLW2001-22).

5.4 WETLAND AND WATERBODIES PROTECTION RULES, 38 M.R.S.A. 310.

Cumulative Impact* Assessment Form

PRIMARY FACTORS	DESCRIPTORS	INDICATORS	IMPACT RATINGS		IMPACT SCORES
TYPE & DEGREE OF HARM <u>TO THE RESOURCE</u>	TYPE OF IMPACT	NRPA standards affected; extent of potential direct effects* & indirect effects*	High	3	
			Moderate	2	
			Low	1	
			None	0	
	DEGREE OF IMPACT	Activity (fill, vegetation removal); significance of impact relative to resource	High	3	
			Moderate	2	
			Low	1	
			None	0	
FREQUENCY OF SIMILAR IMPACTS	PREVIOUS IMPACTS TO RESOURCE	The current condition of the resource (e.g. pristine, acceptable, impacted, degraded).	High	3	
			Moderate	2	
			Low	1	
			None	0	
	THREAT TO RESOURCE	Number of similar activities existing or proposed in the vicinity of project involving that resource.	High	3	
			Moderate	2	
			Low	1	
			None	0	
DURATION* OF ACTIVITY	PERMANENCE	Temporary* v. permanent* alteration; recovery potential; habitat conversion	Permanent	2	
			Temporary	1	
			None	0	
PROXIMITY TO PROTECTED AREAS	LOCATION IN RELATION TO WOSS OR SWH	Type of protected area; type of impact	In resource	3	
			Within 75 ft	2	
			Within 250 ft	1	
			None present	0	
PROXIMITY TO DEVELOPED AREAS	GROWTH MANAGEMENT AREA	Compatible with growth area, comprehensive plan, or approved Growth Management Plan	Incompatible w/ comp plan	3	
			Incompatible w/o comp plan	2	
			Compatible w/o comp plan	1	
			Compatible w/ comp plan	0	
TRADITIONAL USES*	USE OF AREA & RESOURCE	Degree of compatibility with traditional use of area and resource in project vicinity.	None	3	
			Low	2	
			Moderate	1	
			High	0	
ABILITY TO PERFORM AS INTENDED	STABILITY; PERSISTENCE; DESIGN	Design and construction methods appropriate for site and project; likelihood of unintended impacts to resource minimized.	No	1	
			Yes	0	
PUBLIC HEALTH & SAFETY ADDRESSED	DEGREE OF PROTECTION OR SERVICE	Project provides some public service, such as fire protection, emergency access, travel safety	None/Low	2	
			Moderate	1	
			Substantial	0	
TYPE & DEGREE OF BENEFIT FROM ACTIVITY	GAIN IN BENEFIT	Project purpose identifies public need vs. private, private/shared or commercial need.	None/minimal	2	
			Moderate	1	
			Substantial	0	
				SCORE	

TOTAL CUMULATIVE IMPACT SEVERITY →

Severe	21-28
Strong	13-20
Moderate	7-12
Weak or Negligible	0-6

*See Definitions

Definitions associated with the Guidance for Assessing Cumulative Impacts to Protected Natural Resources under the Natural Resources Protection Act.

A. Cumulative Impact. The impact on the environment, which results from the incremental impact of the activity when added to other past, present, and reasonably foreseeable future activities regardless of which entity undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant, activities taking place over a period of time.

B. Direct Effects. Those effects caused by the activity and that occur at the same time and place. Direct effects are a subset of cumulative effects.

C. Duration. The period of time in which an effect on a resource may exist or remain detectable.

D. Indirect Effects. Those effects caused by the activity or use attributed to the activity and that are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects are a subset of cumulative effects.

E. Permanent Impact. The potential long-term effects on the characteristics, or functions and values of the resource that result from a regulated activity.

F. Reasonably Foreseeable Future Activities. The activity will proceed or there is a high probability that the activity will proceed, i.e., valid permits have been granted for projects in the vicinity of the proposed project; projects are constructed or under construction, or; applications for permits to construct projects in the vicinity of the proposed project are currently under consideration.

G. Resource. The individual protected natural resource specific to the activity proposed in an application.

H. SWH. Significant Wildlife Habitat as defined in Section 480-B(10) of the Natural Resources Protection Act.

I. Temporary Impact. The potential short-term effects on the characteristics, or functions and values of the resource that result from a regulated activity or the periodic use of a structure. Temporary effects are also those potential effects that can be overcome or avoided through implementation methods during an activity or restoration of the resource following completion of an activity.

J. Traditional Uses. The dominant cultural uses of the resource that have occurred in the recent, rather than historical, past.

K. WOSS. Wetlands of Special Significance as defined in Chapter 310, Section 4.

POTENTIAL CUMULATIVE IMPACT OF DEVELOPMENT MATRIX

SIGNIFICANCE OF RESOURCE: Impact severity Rating / Resource significance	Severe 28-20	Strong 20-13	Moderate 12-7	Weak or Negligible 6-0
High				
Medium				
Low				
Unrated				

LEGEND

UNACCEPTABLE. High degree of contribution to cumulative impacts in a sensitive or significant resource. May be grounds for project denial.

MAJOR IMPACT. High degree of contribution to cumulative impacts in a resource of medium significance; moderate degree of cumulative impact on highly significant resource. May be subject to denial without project re-design or mitigation.

MODERATE IMPACT. Some modification to project siting or design, or mitigation necessary to reduce contribution to cumulative impacts.

MINIMAL IMPACT. Relatively minor adjustments to plan, siting, or mitigation may be necessary to reduce contributions to cumulative impacts.

LOW/NO IMPACT. No perceptible addition to cumulative impacts. No mitigation required.

Chart is recommended method for reviewing potential cumulative impacts and determining level of effort required for mitigation and/or reconsideration of project siting and design.

Appendix B
Cumulative Impact Assessment Matrix
DEPLW0631-A2003

Appendix D

Wetlands and Waterbodies Protection Rules
Chapter 310

Section 4. Wetlands of Special Significance. All coastal wetlands and great ponds are considered wetlands of special significance. In addition, certain freshwater wetlands are considered wetlands of special significance.

A. Freshwater Wetlands of Special Significance. A freshwater wetland of special significance has one or more of the following characteristics.

(1) Critically imperiled or imperiled community. The freshwater wetland contains a natural community that is critically imperiled (S1) or imperiled (S2) as defined by the Natural Areas Program.

(2) Significant wildlife habitat. The freshwater wetland contains significant wildlife habitat as defined by 38 M.R.S.A. § 480-B(10).

(3) Location near coastal wetland. The freshwater wetland area is located within 250 feet of a coastal wetland.

(4) Location near GPA great pond. The freshwater wetland area is located within 250 feet of the normal high water line, and within the same watershed, of any lake or pond classified as GPA under 38 M.R.S.A. § 465-A.

(5) Aquatic vegetation, emergent marsh vegetation or open water. The freshwater wetland contains under normal circumstances at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water, unless the 20,000 or more square foot area is the result of an artificial ponds or impoundment.

(6) Wetlands subject to flooding. The freshwater wetland area is inundated with floodwater during a 100-year flood event based on flood insurance maps produced by the Federal Emergency Management Agency or other site-specific information.

(7) Peatlands. The freshwater wetland is or contains peatlands, except that the department may determine that a previously mined peatland, or portion thereof, is not a wetland of special significance.

(8) River, stream or brook. The freshwater wetland area is located within 25 feet of a river, stream or brook.