FINAL REPORT

Superior Environmental Results Through Innovative Land Development Technical Assistance and Permitting in New Hampshire

(Innovative Permitting Initiative)

Cooperative Agreement # EI-97188001-0
New Hampshire Department of Environmental Services

for

U.S. Environmental Protection Agency
State Innovation Grant Program

January 2013

I. Summary

Under the Innovative Permitting Initiative (IPI), the New Hampshire Department of Environmental Services (DES) proposed to define and test an alternative approach to permitting land development projects that would provide early technical assistance and integrated/coordinated permitting review to encourage adoption of better land use and development practices (e.g., principles and practices encouraged by Smart Growth, Low Impact Development site design and stormwater management (LID), Leadership in Energy and Environmental Design Green Building Rating System (LEED), Leadership in Energy and Environmental Design Neighborhood Development Rating System (LEED-ND), Land and Natural Development (LAND) Code). The ultimate goal of the effort was to implement permanent changes to our permit processes that will reduce the environmental impact of continuing growth and development within New Hampshire.

To achieve the proposed goals, DES worked with stakeholders to understand current barriers to adoption of best practices and constraints within existing permit processes; define alternative procedures, including expanded up-front review of proposed development projects as part of the state permitting process; identify opportunities to improve communication and coordination with multiple review entities; and clarify standards and information on best practices. The suspected barriers to adoption of best practices were confirmed during the project: lack of knowledge, understanding and acceptance of value of best practices; difficulty in balancing local, state, and federal permitting requirements; late timing of permit application reviews in the development process (typically late in the design process); and separate review of projects by various DES permit programs, often at different points in project development and design.

II. Actual Versus Anticipated Outcomes and Expenditures

Table 1 presents the proposed tasks, schedule, outputs, and outcomes as well as what was achieved during the project. The original logic model for the project along with proposed measures for success are attached (see Attachment 1). DES ultimately was successful in accomplishing the proposed tasks and expected outcomes. However, early steps to understand existing permit processes and research existing "green development" standards required much more time than anticipated. The most significant setback was the less than enthusiastic response of our stakeholders, including developers as well as municipal officials, to the initial proposal for an alternative, integrated permitting approach with a formal pre-application consultation process that would be coordinated between local, state, and federal entities. As a result, the scope of our work with our pilot projects was narrowed to focus primarily on improving the pre-application consultation with DES and the coordination of multiple DES programs internally. Ultimately, we were not successful in attracting pilot projects via group presentations and had to rely on 1-on-1 conversations with potential applicants who had already initiated contact with DES.

Table 2 provides the expected and actual grant budget and match for the project. The most significant deviation from our initial proposal was a greater reliance on internal, full-time staff

(increase in personnel and benefits) rather than utilizing external contractor support to the full extent anticipated (decrease in contractor expense). Having a dedicated internal staff person proved to be more effective in advancing process improvements than bringing in an outside contractor to support such efforts. The grant budget was revised in April 2012 to reflect this change in expenditures (although indirect charges were not adjusted accordingly with the increase in personnel and benefit charges, resulting in that line running higher than budgeted).

TABLE 1 - Tasks, Outputs/Outcomes, and Lessons Learned

Task #	Task	Outputs Expected	Outputs/Outcomes Achieved	Explanation/Lessons Learned
1	Innovative Permitting Advisory Group	• Core Advisory Group Participant List • Advisory Group Meeting Summaries	• 9 member advisory group formed & remained engaged throughout project • 4 meetings plus 1 conf call held as well as additional email correspondence • Most advisory group members participated in stakeholder group formed to refine proposed legislation for new Integrated Permit Program	Continued participation of group members and follow-on participation on legislation stakeholder group demonstrated commitment to concept and work performed under grant. It was valuable to engage a small group of engaged, outside stakeholders.
2	Recruit DES Pilot Staff	• DES staff and responsibilities list	• Individual technical staff were identified from applicable programs to work with pilot project • Staff participated in all internal and pilot project meetings as requested, contributed to meeting summaries, and provided pre-application guidance to applicants. • In total over 8500 hours were recorded by DES staff in the implementation and management of this project, about 45% of those hours represent match to the grant	The role of "internal project manager" required more time than anticipated (e.g., scheduling meetings, preparing summaries, researching issues); we learned that it would difficult for existing technical permitting staff to assume these additional responsibilities on a large scale.
3	Identify Needs and Recruit Consultants	• Consultant RFP • Consultant contracts in place	• We had good response to our RFP and contracted with NH Manufacturing Extension Partnership for facilitation support for our lean events to define the new permit process.	We did not utilize our consultant support to the extent anticipated. We determined that we were more successful using internal, dedicated staff to facilitate and oversee implementation.

TABLE 1 - Tasks, Outputs/Outcomes, and Lessons Learned

Task #	Task	Outputs Expected	Outputs/Outcomes Achieved	Explanation/Lessons Learned
4	Develop a Coordinated Permitting Procedure	• Diagram of Key DES Land Resource Permit Processes and Deadlines • Results of Lean in Government Techniques (if applied) • Evaluation of DES Land Resource Permit Processes and Recommendations for Streamlining/coordinating • Detailed, coordinated permit procedures for SIG pilot projects	• All DES Land Resources Management permit program processes were mapped and evaluated using Lean "value-stream mapping" techniques • Lean proved to be a valuable approach and set of tools for pursuing process/efficiency improvements within DES programs • Proposed coordinated permit process was proposed (see Attachments 2 and 3)	The exercise of mapping out all of the DES Land Resources Management permit program application and review processes was much more time consuming than anticipated. It was valuable, however, in providing a detailed understanding of the steps involved, information required, and current difficulties. Using a Lean team was an effective approach for defining a new coordinated permit process.
5	Develop DES Pre-application Meeting Process and Requirements	• Detailed pre-application meeting procedures including required information	• Proposed pre-application meeting procedures and requirements were specified (see Attachments 2 and 3)	

TABLE 1 - Tasks, Outputs/Outcomes, and Lessons Learned

Task #	Task	Outputs Expected	Outputs/Outcomes Achieved	Explanation/Lessons Learned
6	Define Guidelines and Information on Best Practices	• Detailed standards • Guidance/informational materials	• Best Practices Guidance (draft final) prepared (see Attachment 4) • Best Practices fact sheet and references identified • Case studies of "green" projects built in NH prepared	The universe of best "green" practice standards and criteria is extensive and detailed. As a result, we focused on 4 areas: location & site design, stormwater management, energy efficiency, and water conservation. Location criteria needed to be adapted for New Hampshire's more rural development. The review and evaluation of available "best practice standards" required considerable time.
7	Develop Enhanced Technical Assistance Process	• Technical assistance procedures • Consultants contracts in place (if required)	• Conducted some evaluation of potential incentives to promote use of best development practices, including small engineering design grants • Encouraged better stormwater management approach through evaluation of expected loading using a simple spreadsheet loading analysis of alternative design options • Provided information to pilot participants on recommended best practices for 4 focus areas	In providing technical assistance to applicants, it is important to clarify what is a requirement under the permit program regulations versus what is a recommendation only. Some applicants (developers) confirmed that their level of knowledge on these best practices was increased as a result of our education efforts, although they were not completely "sold" on the economic value. Other developers (engineers) were already more informed on these "best practices," particularly for stormwater, energy, and water use. Focus groups indicated that profitability and market demand were strongest drivers for location and design factors.

TABLE 1 - Tasks, Outputs/Outcomes, and Lessons Learned

Task #	Task	Outputs Expected	Outputs/Outcomes Achieved	Explanation/Lessons Learned
8	Develop Development Project Evaluation Procedures	• Environmental performance procedures	• Procedures for evaluating the environmental benefits of incorporating best practices were identified and included within the Best Practices Guidance (see Attachment 4)	It would be difficult to effectively evaluate the energy efficiency and water use of a proposed development at the time of permitting under the land resources permit programs given that building design and specs are rarely complete at that time. The "simple spreadsheet" model we employed to evaluate stormwater management performance was relatively easy to use and was helpful in demonstrating potential water quality benefits of alternative management options.
9	Develop Pilot Program Materials and Outreach	• Materials and web-based information available • Workshops/presentations	• Innovative Permitting Factsheet and PowerPoint presentation prepared • Innovative Permitting Initiative webpage created and maintained • Pilot projects solicited through DES contacts, press release, articles in professional organization new letters, direct email to stakeholders and other DES mailing lists, and through numerous presentations.	In presenting information on a new process, we learned that it is important to keep the message simple. Participants at our initial outreach on the proposed approach were overwhelmed by the details of the proposed process and, as a result, were skeptical and reluctant to participate. Although it is important to develop the details (i.e., specifically "how" it is going to work), we learned that it is best to introduce the concept more generally, and address the details once participants are more fully engaged.

TABLE 1 - Tasks, Outputs/Outcomes, and Lessons Learned

Task #	Task	Outputs Expected	Outputs/Outcomes Achieved	Explanation/Lessons Learned
10	Identify and Recruit Participants	• List of potential participants • Example MOA for municipalities and developers (applicants) • Signed MOAs	• Prepared model MOAs for municipalities and developers for full IPI proposed process, but did not use them in our modified permit program. • No municipalities signed on as formal pilot project participants, although two municipalities did participate in joint pre-applications meetings with DES, Federal contacts, and applicants.	Because the new IPI process was viewed as "so different" from current procedures, developers and municipalities who learned about the new process through a group presentation were reticent about the pilot program. We were successful in attracting participants through 1-on-1 meetings with potential applicants.
11	Plan and Conduct Public Involvement	• Public Involvement Plan • Summary reports on key findings/issues of focus groups, individual meetings, and discussions with established advisory groups • Updated stakeholders/ participants list	• Communication/Public Involvement Plan (Attachment 10) • 10 focus groups held (approx 100 participants) • Presentations/discussions held with other state, regional, and federal agencies (NH Dept of Resources and Economic Development, Office of Energy and Planning, Regional Planning Commissions, EPA, Army Corps of Engineers) • 125 individuals on stakeholder email list, plus contacts with 16 professional organizations/agencies • Provided information (booth) or presented at over 20 workshops and conferences (over 500 participants at presentations)	Our communications efforts were extensive, but successful in ensuring that all key stakeholders were aware of our work and had sufficient opportunity to provide input. This level of communication was critical in building support for the proposed legislation to establish a new Integrated Land Development Permit program. The department received praise from several stakeholders during legislative hearings for our efforts to involve stakeholders in this project and in preparation of the proposed legislation.

TABLE 1 - Tasks, Outputs/Outcomes, and Lessons Learned

Task #	Task	Outputs Expected	Outputs/Outcomes Achieved	Explanation/Lessons Learned
12	Conduct Project Pilots	• Evaluation reports on individual pilot applicants	• Worked with 2 formal/full and 2 partial pilot projects	The involvement of an independent "inside project manager" proved to be needed and valuable to provide support to the applicant and coordinate and summarize meetings, and assist in resolving issues/questions that arise during the design process.
13	Evaluate Pilot Program, Develop Case Studies, and Transfer Innovation	• Periodic reporting on measures at key project stages (within progress reports) • Case studies on select projects • Pilot Program Evaluation Report • Workshops/presentations	• Case studies on formal/full pilot projects (Attachment 5) • Post-project evaluation interviews conducted with formal pilot projects • Case studies prepared on additional "green" development projects throughout NH (Attachment 6) • Evaluation of pilot projects and lessons learned contained in quarterly progress reports and key findings in this final report • Webinar presentation Dec 18, 2012 (EPA-hosted, with CT and MA) on improving permit processes	Due to the small number of formal/full pilot projects that participated in the pilot evaluation of the IPI process, we identified additional "green" development projects, of different types and located around NH, to evaluate. These "green" development case studies provided additional insight into the difficulties of implementing these types of projects in general and the potential benefits of the proposed approach under IPI. All pilot participants and other projects evaluated indicated there was a great value to early communication with state regulators and the provision of additional assistance and information, particularly on applicable "green" practices.
14	Report Progress and Project Administration	• Quarterly progress reports • Quality Assurance Project Plan (QAPP) • Final project summary	• All quarterly reports submitted in timely manner. • Draft QAPP prepared (Dec 2009); no final QAPP required. • Project completed on budget with 3-mo time extension.	• Final QAPP not required due to change in scope limiting hard estimates of environmental improvements due to low number of pilot projects. • Period of performance extended to complete webinar.

TABLE 2 - Proposed vs. Actual Budget

(Note: Table removed as it is Confidential Business Information)

The variation of expenditures from the revised grant budget by budget class was less than 5.6% overall. Most the variation in expenditures is explained by higher than expected benefit costs and reduced expenditures on contract support for the project. The number of hours and value of match time toward the grant exceeded our estimate.

III. Evaluation and Lessons Learned

Based on survey results, focus groups, and comments received on the proposed coordinated process, we can put forward the following conclusions:

- Survey results provide documented support for a more structured process for potential permit applicants to interact with state regulators prior to submitting a permit application (95%), but more limited support (60%) for a separate fee for pre-application review (although there was good support for requiring submission of part of the regular application fee as part of the pre-application review).
- Although applicants want more certainty as a result of their pre-application consultation, they are concerned about being forced into a very prescriptive process, having to provide a lot of information, or having the state review/approval dependent on the municipal review or input.
- Although municipalities appreciate the idea of improved communication with state regulators, they are concerned about the potential increased burden on existing volunteer boards and staff to participate in formal coordination (e.g., the additional posting of meeting summaries to a common location).
- Despite acknowledging shortcomings of current processes, developers, municipalities, and agency staff all are wary about significant changes in requirements and procedures.
- A pre-application discussion between regulators and applicants would be an effective opportunity to share information to increase understanding of and suggest design changes to promote the use of better development practices to reduce impacts to natural resources and systems provided the distinction between "suggestions" and "regulatory requirements" remains clears.

Key lessons learned regarding how an organization might approach a significant process change or other structural improvements to an existing permit program include:

- Start small. Focus initially on smaller-scale improvements to an existing process that generally already works fairly well before launching into a broader re-working or standardization of a process or an effort to define a new process.
- Involve "outsiders," including developers/applicants and other stakeholders, who are both customers and provide "fresh eyes" during evaluation and the generation of ideas for improvement.

- Communicate early and often - and convey "small bits" of information at a time - with both internal staff and management and external stakeholders. Be careful not to overwhelm your audience with too much detail on new changes too soon.
- Lean tools, particularly value-stream mapping using a small, focused team of people who DO the work, are valuable for achieving significant efficiency improvements in permit program processes.
- Substantial improvements, including improved accuracy & consistency, reduced review timeframes, and greater cross-training of staff, can be achieved by standardizing a process and documenting the process in a standard operating procedure.

IV. Dissemination of Project Information and Continuing Benefits

This project involved an extensive public communications and involvement effort. The communications plan developed at the start of the effort can be found as Attachment 10. In summary, our public involvement/communications included:

- An Advisory Committee, including municipal, development, non-governmental /environmental organization, and regulatory agency representatives
- Ten focus groups with municipal, development and environmental stakeholders coordinated with our Regional Planning Commissions
- Presentations and information booths at numerous professional meetings and conferences
- Development of a webpage on the DES website, with links from other DES programs
- Surveys of stakeholders and agency staff
- Distribution of materials and updates via stakeholder email list
- Press releases and articles in professional organization newsletters
- Stakeholder workgroup to prepare proposed Integrated Permit legislation
- EPA-sponsored webinar on experience and lessons learned for permit process improvement

Summaries were prepared for Advisory Committee meetings, focus group sessions, and surveys.

Continuing benefits of this work include two on-going efforts. The first is a DES-led effort to establish a new integrated land development permit program, which would provide for an alternative process for projects to work with DES on permitting of land development projects incorporating many of the ideas developed during this grant-funded project. Legislation was proposed in both the 2011 and 2012 sessions, and working with a stakeholder group to refine the proposal, was passed by both the House and Senate in 2012 (but died in conference due to an unrelated amendment). The legislation will be re-introduced in the 2013 session.

The second on-going effort is the formal Lean improvement team established within DES and continued focus by the department to apply lean techniques to improve program operations and serve our customers for effectively. Over 30 Lean events have been conducted across the department since the Lean approach was introduced to a core group of 20 staff as part of the implementation of this grant. Other NH state agencies, including NH DOT, were also included

in the initial Lean training conducted under this grant and also subsequently have established their own Lean teams. Several lean events have focused specifically on the land development permit programs within DES, which were the primary focus of the grant work. Attachment 7 provides case studies for three land development permit program focused lean events. Attachment 11 lists all the lean/process improvement and strategic program advancements within the land development permit programs supported, in whole or in part, by the IPI-related work and staff.

V. Materials Generated (attached)

Several documents from the project are undergoing final review in preparation for publication to the DES website; these are identified as "draft final."

Attachment 1: Logic Model and Proposed Output/Outcome Measures
Attachment 2: Final Proposed Integrated Permitting Process Document
Attachment 3: PowerPoint Presentation on Proposed Integrated Permitting Process
Attachment 4: Best Practices Guidance (draft final)
Attachment 5: Integrated Permitting Pilot Project Case Studies (draft final)
Attachment 6: Green Development Example Case Studies (draft final)
Attachment 7: Land Resources Management Process Improvement Case Studies
Attachment 8: Proposed 2013 Legislation to Establish New Integrated Land Development Permit Program
Attachment 9: Permit Process Improvement Webinar Slides
Attachment 10: Communications/Public Involvement Plan
Attachment 11: Land Resource Management Programs - Improvements 2009-2012

ATTACHMENTS
to
Final Report

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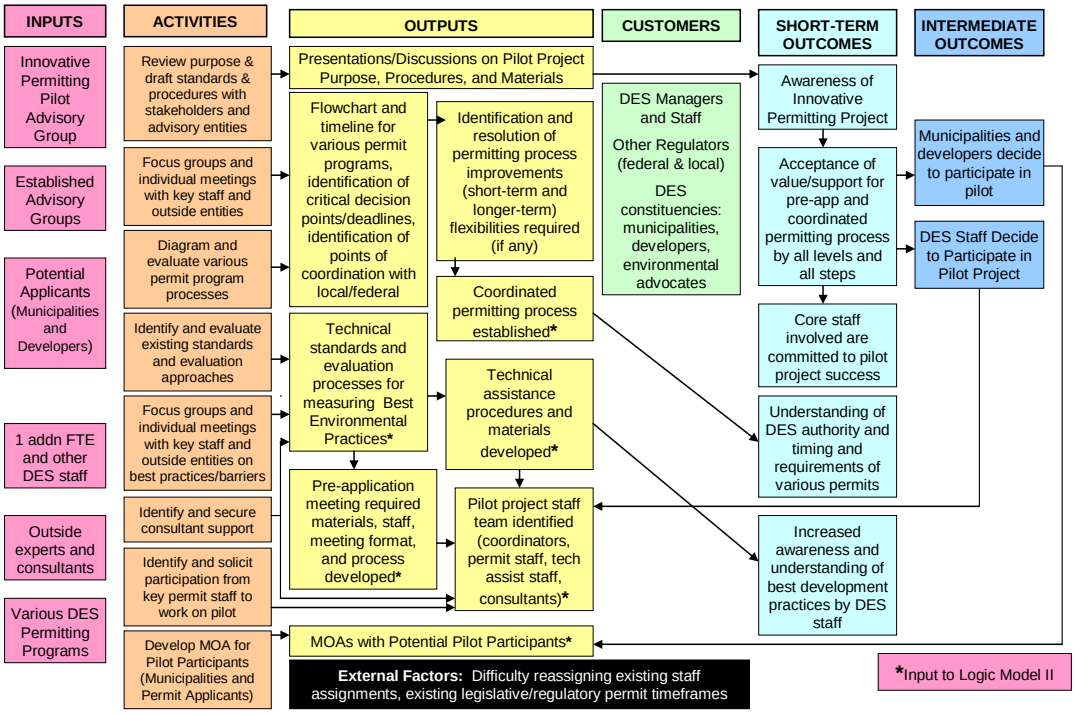
Attachment 1: Logic Model and Proposed Output/Outcome Measures

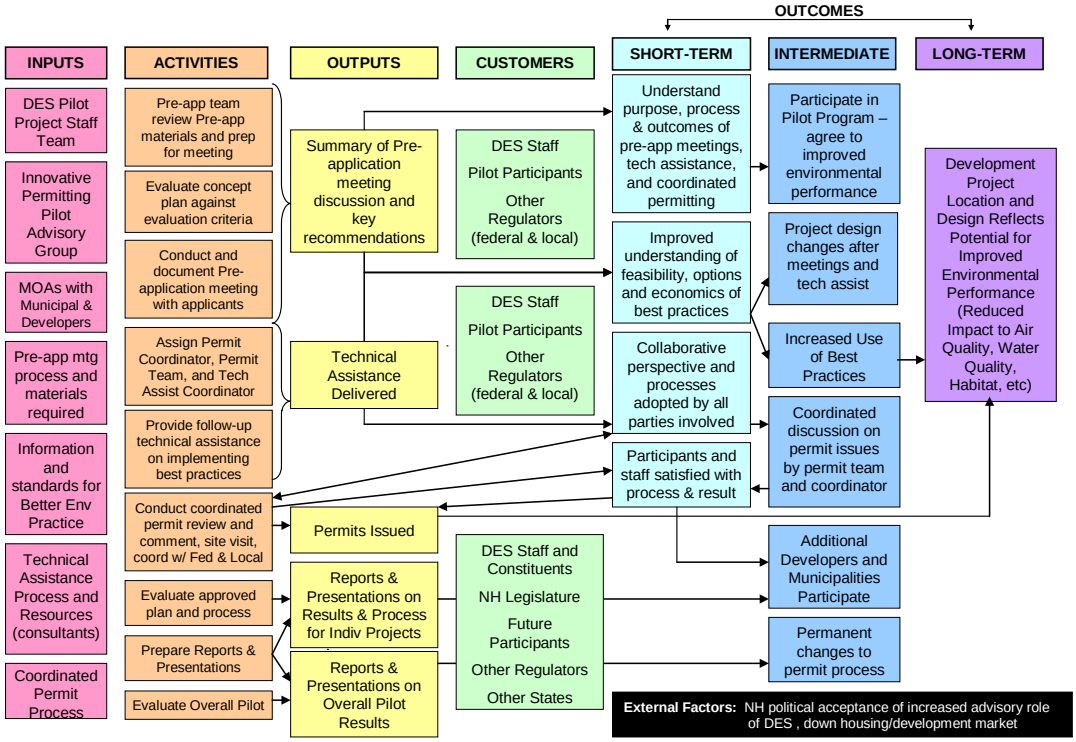
I. Project Set Up – Establishing Pre-app Meeting, Coordinated Permitting, Guidelines and Tech Assistance Materials and Procedures

Mission: To ensure strong internal and external support for pilot effort and develop materials and procedures to establish best practice guidelines and to provide up-front technical assistance and integrated/coordinated permitting for pilot applicants



II. NH Logic Model: Project Operation

Mission: To demonstrate and evaluate an innovative approach to providing up-front technical assistance and integrated/coordinated permitting to encourage adoption of better land use and development practices.



Project Element and Performance Question	Proposed Measure(s)
DES Staff Time Input to Project – How much time did the development and implementation of the pilot require?	• Staff hours (tracked with separate site code on timesheets for both development and actual pilot applicants processed) • # internal DES staffing agreements dedicating staff time to this effort • Documentation of changes in staff attitudes/support for innovative permitting approach
Stakeholder (external) Involvement – Have we involved all types of stakeholders and at an adequate level? - Do we have sufficient interest in pilot project?	• Number and affiliation of external stakeholders involved and/or consulted (individuals and groups) • # MOAs with potential pilot participants (municipalities and developers) • # of pilot applicants • Inventory/measure of stakeholder input and how it was used
General Public Outreach and Education Have we reached out broadly to all types of stakeholders? Are our target audiences aware of the availability (and in future – success) of this initiative?	• Number of presentations and/or workshops (and number of attendees)
Pre-application Meetings Conducted/Technical Assistance Provided Are permit applicants/pilot participants interested?	• Number of pre-application meetings conducted • % of pre-application participants that request follow-on technical assistance
Materials on Pilot Program, Guidelines and Procedures Is DES on track in developing the pilot program?	• Draft and final materials developed • # of document requests • # of website hits

Outcome **(short-term (ST), intermediate (I), long-term (LT))**	**Proposed Measure(s)**
Acceptance of Value of Pre-Application and Technical Assistance Process (internal and external to DES) – (ST)	• Pre- and post-project responses to questions at 1-on-1 conversations, focus groups and discussions with advisory groups • Level of interest among potential participating communities and developers (applicants) - % of those solicited that participate, # applicants participating in pre-application meeting under pilot, # applicants participating in full pilot following pre-app meeting • Letters of support/positive feedback from key organizations • Post-participation survey of participants on satisfaction with new process and likelihood of implementing similar practices in future
Increased awareness of best development practices (beyond DES permit requirements) (ST/I)	• Pre- and post-project survey of DES pilot staff and participants • Responses to questions during 1-on-1 conversations with participants – e.g., "did this new process help you identify new practices you previously were not aware of?" • Adoption of additional practices/techniques/design elements not contained in initial development design
DES permit process improvements, e.g., improved coordination (internal and with local/federal entities) (I/LT)	• Responses to questions during 1-on-1 conversations with participants – e.g., "Do you think your participation in the pilot program facilitated your project permitting and approval (at state and local levels)?") • Comparison of permitting/approval timeframes for pilot program participants compared to a sample of non-participants during the same timeframe (recognizing that the pilot project likely "pre-selects" for better performers) or to approval timeframes for participants on previous projects
Increased adoption of best environmental protection techniques, designs, etc. (I)	• Evaluation of concept plan and final permitted plan against evaluation criteria (e.g., possibly "scoring") • Documented changes in project design resulting from innovative process (by comparing concept vs. final plans and follow-up conversations with pilot participants)
Improved environmental protection and performance for pilot program projects (I/LT)	• Estimates of key parameters for pilot projects for concept plans versus final plans, and, when possible, compared to conventional approaches for similar projects (specific measures developed based on standards identified e.g., vehicle-trips generated (estimated vehicle-miles traveled and associated air emissions), % key resource areas disturbed, amount of "effective impervious cover," % stormwater infiltrated, estimated energy & water use, design/construction costs/cost savings. Measures requiring more complicated modeling or detailed information from participants may be calculated only for detailed case studies.
Reduced Environmental Impact of Development (LT)	Expected to be influenced, but changes not solely attributable to this pilot project (e.g., impervious cover per capita, VMT per capita, % of water bodies impaired, # air quality action days, # LEED-certified projects)

Innovative Land Development Technical Assistance and Coordinated Permitting Initiative

Proposed Approach for Pilot Program

New Hampshire
Department of Environmental Services

April 27, 2010

1 Introduction

The U.S. Environmental Protection Agency's (EPA) State Innovation Grant (SIG) program provides financial support for state environmental agencies to develop and evaluate innovative approaches to working with regulated entities to improve environmental performance. The SIG program also supports the development of approaches to improve state agency operations and provide time and cost savings for regulated entities that exceed minimum standards or otherwise demonstrate better environmental performance.

In 2009, the Department of Environmental Services (DES) received funding under the EPA SIG program to undertake the "Innovative Land Development Technical Assistance and Coordinated Permitting Initiative" (a.k.a. DES Innovative Permitting Initiative or IPI). The Innovative Permitting Initiative focuses on land development activities and the permit programs under the Land Resources Management section of the Water Division of DES that typically apply to land development activities: Alteration of Terrain, Subsurface Systems and Subdivisions, Shoreland Protection, and Wetlands. Over the past year, DES has conducted research, collected input, and involved numerous DES staff and outside representatives to understand existing permit processes and constraints, identify opportunities for improvement, and develop a proposed approach for the DES Innovative Permitting Initiative.

2 Goals

Under the EPA grant, DES proposed to examine our outreach, technical assistance, and permitting activities that affect development to accomplish several goals:

- Identify approaches to increase the adoption of better development practices and improve the environmental performance of new development and re-development projects.
- Provide for streamlined review and approval of projects providing superior environmental performance.
- Increase the transparency of our land development permit programs.
- Improve coordination with municipalities and other entities.

Over the long term, full implementation and broad adoption of the approach identified under this initiative would be expected to reduce the environmental impact of continuing growth and development and provide greater efficiencies for DES permitting programs.

3 Background

Over the past year, DES has conducted extensive research and outreach to gather ideas and input to design the Innovative Permitting Initiative:

- DES established and consulted frequently with an Advisory Group made up of representatives from all applicable constituencies.
- DES conducted interviews with other states regarding their permit streamlining and permit coordination efforts.
- DES, together with the Regional Planning Commissions, conducted focus groups with municipal and developer representatives.
- DES surveyed attendees at various conferences and workshops.
- DES gave presentations at several conferences.
- DES contacted sister state agencies and other organizations individually to solicit input.
- DES identified and reviewed available existing "green" development standards.

In addition, DES talked extensively with our own staff about how current permit processes work and interconnect, the requirements for applicants and DES, and opportunities they saw for streamlining procedures and improving the environmental performance of land development projects. Appendix 8.2 provides a summary of all input received and gathered. A key comment heard repeatedly from developers and municipalities related to the need to address not only the internal DES permit review process, but to evaluate and include the various interactions that DES permit programs have with municipalities as well as other agencies and entities.

The proposed Innovative Permitting approach described here reflects the cumulative input from over a hundred New Hampshire citizens and experts. But, as with any effort of this magnitude, it will benefit greatly from continued review and input. Therefore, this description of the proposed pilot program is being circulated widely as we continue to develop and refine the detailed procedures and supporting materials. Comments and suggestions are welcome and encouraged.

4 Participating Municipalities, Agencies, and Applicants

DES will test out the proposed Innovative Permitting approach by piloting the program with real projects and real applicants. To this end, DES is soliciting interested municipalities and developers, with the hope of beginning to pilot the Innovative Permitting Initiative later in 2010.

Prior to piloting the proposed approach, DES intends to put memorandums of agreement in place with the various federal and state agencies that frequently are involved with permitting under the target programs, including: U.S. EPA Region I, Wetlands Habitat Protection Program; the U.S. Army Corps of Engineers; NH Fish and Game; NH Natural Heritage Bureau; and NH Division of Historic Resources. The memorandum of agreement will lay out the expectations and requirements for each partner organization.

DES will also formalize communications in-house between the Land Resource Management permit programs, which are the primary focus of this effort, and other DES programs that also may be involved in reviewing or approving a land development project, such as Groundwater Protection, Wastewater Engineering, or Drinking Water.

DES will work with the Regional Planning Commissions to solicit municipalities from across the state to participate. Participating municipalities will also be asked to formally "sign on" through a memorandum of agreement that outlines the process and identifies their role and responsibilities under the initiative. Municipalities will be asked to identify a single, primary contact under the pilot program; this person will serve in a coordinating role for the municipality.

Finally, DES will ask applicants to sign a memorandum of agreement as well upon initiating their participation in the Innovative Permitting Initiative. This agreement will layout the expectations and responsibilities for participating applicants. IPI participants will need to demonstrate that their project will satisfy the IPI best practices standards as described in Section 6. IPI participants also will be asked to agree to the IPI review process and waive existing statutory review timelines. Although DES fully expects that final permit application reviews will be accomplished well below existing statutory time limits, it is possible that in an effort to promote increased coordination, some permit timeframes may exceed existing limits.

5 Proposed Project Development Review and Permitting

The intent of the Innovative Permitting Initiative is to identify and evaluate an alternative approach for state, federal, and local regulators to review projects subject to federal, state and/or local permitting or approval. As discussed above, the objective is to design an approach that streamlines the review and approval process for municipal approval and DES Land Resource Management permits, reduces uncertainty, increases communication between the various entities involved, and reduces rework by applicants and regulatory entities, saving everyone time and expense. Small teams made up of DES staff from the applicable programs and, when appropriate, outside representatives as well, were convened to define the IPI process and proposed procedures described below.

5.1 Overall Process

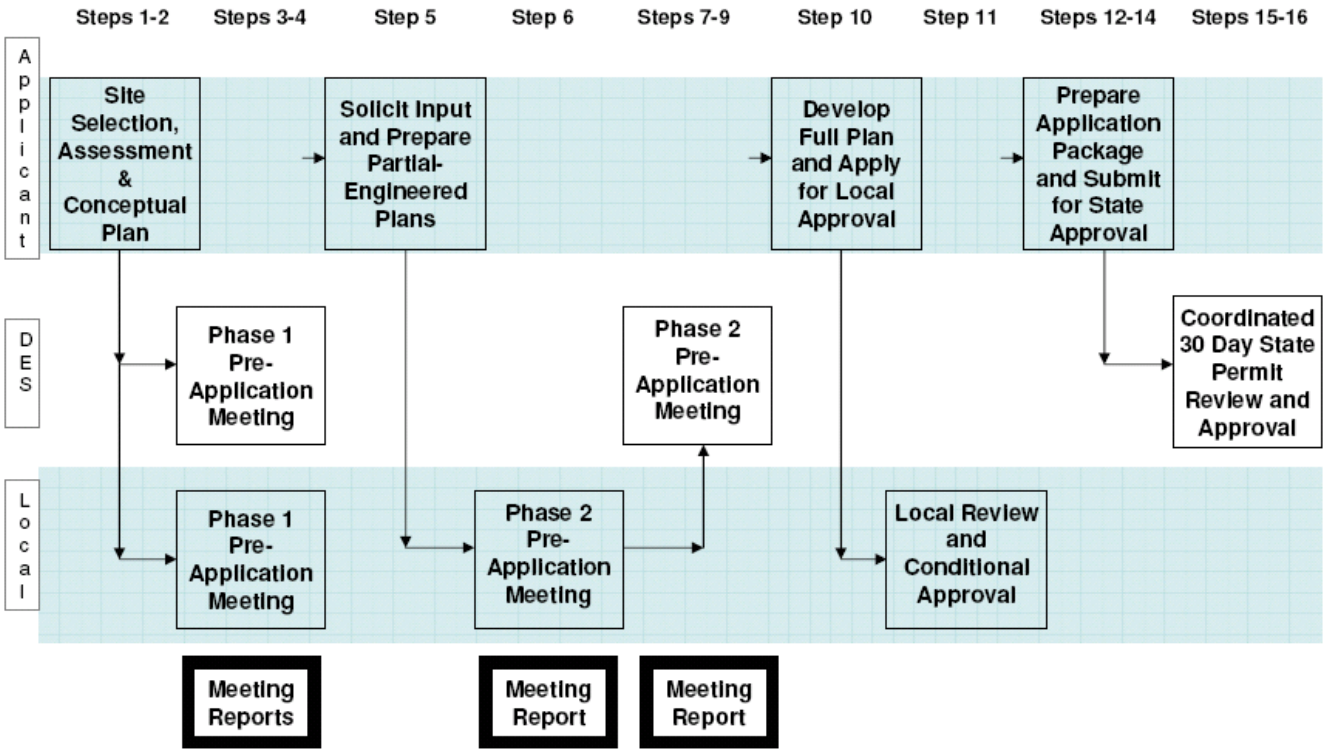
The proposed Innovative Permitting Initiative (IPI) project review process involves three distinct phases: Phase 1 Pre-Application Review; Phase 2 Pre-Application Review; and Coordinated Final Permit Application Review/Approval. Each phase has a local/municipal review component

and a state/federal review component. In addition, the proposed process specifically addresses concerns regarding the coordination between local and state/federal reviews by requiring applicants to work with each in a particular order and building in formal communication between local and state/federal entities.

Exhibit 1 illustrates the overall process proposed. The following sections discuss each phase in greater detail. Appendix 8.1 provides a detailed, step-by-step flow chart of the proposed process.

EXHIBIT 1

Innovative Permitting Initiative
Coordinated Pre-Application and Permit Review



5.2 Pre-Application Steps

Potential IPI participants are expected to consult with DES regarding the Innovative Permitting Initiative and its requirements prior to submitting their materials for the Phase 1 Pre-Application Review. During this initial consultation, DES will review the IPI process, the IPI participant Memorandum of Agreement, and the submission requirements for each step.

The proposed IPI Pre-Application Process was designed to accomplish a number of objectives:

- Provide clear and consistent direction to applicants.
- Identify and resolve conflicts between Local-State-Federal requirements.
- Improve communications between state/federal agencies and local entities.
- Ensure openness of the process.
- Reduce rework by all parties – saving time and money.
- Provide for an efficient process that provides the information needed, but only the information needed (avoid expensive, unnecessary studies), to make a decision at the best time in the project development/design process.
- Promote environmentally-sensitive land use planning.
- Provide an efficient process that serves as an incentive for applicants to pursue "environmentally-superior" designs.

There are several elements of the proposed IPI Pre-Application Process that differ significantly from current practice and are intended to ensure successful pre-application review meetings at both the state/federal and municipal level. The first key element is its Standard Operating Procedure, which was developed to provide a consistent and defined pre-application review process, including specific guidance for preparing and reviewing materials and plans.

The second key element is the use of a detailed meeting agenda and report template to ensure that all critical topics are discussed and that discussion documented at each step. A representative from DES or the municipality is expected to complete the report during each pre-application meeting, have all participants sign the document indicating that it is an accurate representation of the discussion at the meeting, and electronically post the report to a shared location.

Another key element is the requirement that the applicant submit specific information in advance of each meeting. The intent here is to ensure that necessary and sufficient information is available at each stage to provide accurate and helpful input from local, state, and federal regulators at the point in the project development and design process that provides the most benefit to the applicant and project reviewers. The pre-application submission requirements are not expected to create significant additional work for applicants. Indeed, much of the information requested is typically either developed as part of the project design process or required as part of the final application submittal.

The preliminary conclusions drawn at the pre-application meetings will be based on the best information available at the time, but must be considered "non-binding" and subject to change as new information becomes available. Direction to proceed also must not be mistaken for a guarantee of project approval or permit issuance, which can only be made after review of a complete, final application package.

5.2.1 Phase 1: Site Analysis and Initial Design Consultation

For the Phase 1 Pre-Application Meeting, the applicant may decide to meet with either the local board or the state/federal team first. During the Phase 1 Pre-Application Meeting, state/federal regulatory entities, municipal land use boards, and applicants will seek to reach a clear understanding of the site conditions, discuss the proposed project based on a conceptual design, discuss potential regulatory issues of concern, and provide recommendations for moving forward, including suggestions for minimizing impacts and improving the environmental performance of the project.

Prior to the Phase 1 Pre-Application Meeting, the applicant is expected to submit a package of information about their site and proposed development. This package will include:

- A site location information and map – identifying the selected site on a broad scale and indicating other sites considered
- Aerial imagery of the area with the project site identified
- A property map and site inventory – identifying key resources and existing conditions on the site and immediately outside the property boundaries (e.g., existing impervious surface cover)
- Wetlands delineation and classification for the site
- A report from the Natural Heritage Bureau for the site
- A description of the proposed project and any additional pertinent information
- A conceptual plan for the proposed development
- Photos of the resource areas proposed to be impacted
- A description of proposed mitigation approach (if wetlands mitigation is expected to be required)
- Evidence that the proposed project is consistent with the local Master Plan and/or zoning (for state/federal pre-application only)
- Landowner permission for a local, state, or federal agent to conduct a site visit accompanied by the applicant
- A map demonstrating that the site and specific area of proposed disturbance on the site satisfies the IPI location choice/site selection criteria
- A description of how the applicant will pursue improved energy efficiency, water conservation and stormwater management per the IPI best practice standards.

Prior to the Pre-Application Meeting, local board members or state/federal representatives will review the materials submitted and prepare comments for discussion. In addition, prior to the state/federal pre-application meeting, DES GIS staff will conduct an analysis of the project to

identify any existing permits or enforcement actions and highlight potential resources of concern. DES will establish a multi-program IPI permit team for the project and cue the appropriate sister agency and federal agency representatives assigned to assist IPI participants. As discussed earlier, DES intends to solicit the cooperation and participation of our sister state agencies and associated federal agencies to formally participate in the Innovative Permitting Initiative process and to assign one or two staff to serve on the DES/state/federal IPI permit team. The DES/state/federal IPI permit team will follow the project through the entire IPI project review and permitting process.

Discussion of the project will be captured in the Phase 1 Pre-Application Agenda and Meeting Report (see Exhibit 2). Depending on the nature of the proposed project, the applicant may be encouraged to hold an independent community meeting to involve abutters and concerned citizens in the project in the preliminary stages of project design. IPI participants will be expected to provide a summary of all comments received at such a public meeting.

At the conclusion of the Pre-Application Meeting, all hard-copy materials will be returned to the applicant. The applicant will be asked to submit updates to any information for Phase 2 and resubmit certain materials in hard copy and electronically with the final application package.

5.2.2 Phase 2: Technical Design Review

The IPI participant will be expected to meet first with the local municipality for a Phase 2 Pre-Application Meeting, and then meet with state/federal representatives. During the Phase 2 Pre-Application Meeting, state/federal regulatory entities, municipal land use boards, and applicants will review partially-engineered, technical plans for the proposed project, seek to identify and resolve any design or permit compliance issues, and again consider options for further reducing environmental impacts or improving the environmental performance of the project.

Prior to the Phase 2 Pre-Application Meeting, the applicant is expected to submit a package of information on their proposed development. This package will include:

- Updates to any information submitted for Phase 1
- Additional site information (all basic site information required to develop a technical plan), including site-specific soil maps and topography
- A 30-50% engineered plan that certain base information required for various permits, such as current and proposed contours and grading for the site, identification of areas to be blasted (if applicable), existing and estimate of proposed impervious cover, and an estimate of the total area of disturbance and the total wetland impacts.
- Proposed strategy and estimated expected performance relative to the IPI best practice standards for stormwater management, energy efficiency, and water conservation
- Copies of alternative designs evaluated by the applicant
- Summary of concerns identified from consultations with other agencies and entities and the applicant's proposal to address each concern.

After the Phase 2 information is submitted and prior to the Phase 2 Pre-application Meeting, a representative of the local board and a representative of involved state and federal entities will conduct a site visit with the applicant. The purpose of the site visit is to confirm the site assessment information compiled for Phase 1 and review the draft technical design at the actual site. The applicant will be required to flag key resource features and the proposed area of development (e.g., wetlands, road center lines, building footprints) and accompany the representative during the site visit. The individual visiting the site will complete a site visit report and electronically post the report to the shared location.

In addition, prior to the Municipal Phase 2 Pre-Application Meeting, the applicant and/or municipality shall provide full public notice and abutter notification according to the existing municipal procedures. Notice shall also be provided to the applicable Regional Planning Commission and other entities as specified by the IPI Standard Operating Procedures (e.g., DES, Local River Advisory Committees, when applicable, other municipal boards). The Municipal Phase 2 Pre-Application Meeting will be considered a pre-application "design review" per RSA 676:4, II(b).

Prior to the Phase 2 pre-application meeting with state/federal representatives, the applicant will be expected to have consulted with various agencies and entities that may have an interest or overview responsibility related to permitting of the project (as identified during the Phase 1 Pre-Application Meeting) and to provide their input, and the applicants' proposal to address any concerns, as part of the materials submitted for the Phase 2 Pre-Application Meeting.

Exhibit 3 provides a proposed Phase 2 Pre-Application Meeting Agenda and Report Template that would be used as the guide for the review of the project. At the conclusion of the meeting, all hard-copy materials will be returned to the applicant. The applicant will be asked to resubmit certain materials (or updated materials) with the final application package.

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EXHIBIT 2 – Phase 1 Pre-Application Meeting Agenda/Report Template (DRAFT)

DES Innovative Permitting Initiative
Phase 1 Pre-application Meeting Report – State/Federal (identify state/fed or local)
Month, Day, Year

IPI Applicant: _____
Project Location: _____(description including municipality, tax map and lot #)_____

Topics & Questions (responses/explanations required for each)

Appropriateness of the selected site for the proposed development

- Is the project consistent with local Master Plan & Zoning? Or otherwise approved?
- Does the site selected satisfy the wetlands site selection/alternatives analysis (does it avoid/minimize wetlands impacts)?
- Are there significant site constraints or features that limit development or approval?
- Does the location satisfy the IPI location choice/site selection criteria?

Evaluation of the site's natural resources and current condition

- Does the site inventory/assessment or other information identify resources of concern?
- Are any additional studies required to assess site conditions (e.g., vernal pool study)

Permits required and process& timeline for application

- State/Federal: wetlands, alteration of terrain, subsurface (subdivision/septic), comprehensive shoreland protection, sewer/water system connection, driveway, other?
- Local: permits/approvals, overlap with state/federal permits

Project design (general discussion on approaches to reduce/avoid impacts to natural resources or improve environmental performance)

- Any changes to eliminate permits required or meet permit conditions?
- Any issues with constructability?
- Other suggestions to minimize impacts or improve energy efficiency, water conservation, stormwater management (per IPI best practice standards)?

Additional studies or information required for permit/project review
Local or state/federal: Traffic, visual/aesthetic impacts, noise, wildlife, etc.

Sources of information or assistance or additional recommended actions (e.g., hold a community meeting)

Other comments, questions, discussion

Disclaimer: Recommendations and guidance provided at this pre-application meeting are non-binding and based on the information presented and understanding at the time. This meeting report is not a guarantee of project approval or permit issuance.

Participant Names and Signatures:

EXHIBIT 3 – Phase 2 Pre-Application Meeting Agenda/Report Template (DRAFT)

DES Innovative Permitting Initiative
Phase 2 Pre-application Meeting Report – State/Federal (identify state/fed or local)
Month, Day, Year

IPI Applicant: _____
Project Location: _____(description including municipality, tax map and lot #)_____

Topics & Questions (responses/explanations required for each)

Confirm that Phase 1 Information and Report Findings Remain Valid

- Any discrepancies identified during the site visit?
- Any new information that affects the design or approvability?
- Any new gaps in information required for permit/board review identified?

Assess compliance with regulations/permit requirements, based on current information available

- Any aspects of concern or question?
- What additional information is required to make a final determination?
- Are any special requirements applicable (e.g., variance/waiver requests, permit conditions)?

Project design (specific technical discussion on approaches to reduce/avoid impacts to natural resources or improve environmental performance)

- Review and discuss alternative designs, evaluate, and identify preferred option
- Any changes to eliminate permits required or meet permit conditions?
- Any issues regarding constructability or construction sequencing?
- Other suggestions to minimize impacts or improve energy efficiency, water conservation, stormwater management (per IPI best practice standards)?

Additional studies or information required for permit/project review
Local or state/federal: Traffic, visual/aesthetic impacts, noise, wildlife, etc.

Sources of information or assistance or additional recommended actions

Other comments, questions, discussion

Disclaimer: Recommendations and guidance provided at this pre-application meeting are non-binding and based on the information presented and understanding at the time. This meeting report is not a guarantee of project approval or permit issuance.

Participant Names and Signatures:

5.3 Final Application Review at Municipality

After the Phase 1 and Phase 2 Pre-Application Meetings are completed with both the municipality and the DES (state/federal), the applicant will prepare a complete, final application package for municipal review and approval. The applicant and the municipality will conduct this review according to locally-defined procedures. Municipalities participating in the IPI are expected to provide a mechanism for streamlined final review of proposed IPI projects, including a coordinated process for obtaining input from multiple local boards (e.g., to hold joint meetings for IPI projects or ensure staggered timing and submission timeframes for various boards to facilitate a shorter total local review timeline). The municipality will issue an approval of the project conditioned on final permit issuance from DES.

5.4 Coordinated Final Permit Application Review at DES

DES's IPI permit team, which includes a representative from the Wetlands, Shoreland Protection, Subsurface, and Alteration of Terrain programs, will provide a 30-day coordinated final review of the project for permitting following conditional approval of final plans by the municipality. It is expected that final permit review will be a confirmation of the final design, rather than the extensive review currently required, given the substantial preliminary review and interactions between the applicant and the various regulatory entities during the pre-application process.

Prior to submitting their final permit application package to DES, the applicant will obtain any necessary "sign-offs" from local, state, and federal entities required for DES to complete its permit review within 30 days. For example, if the project requires a wetland permit, the applicant will need to obtain signatures certifying that the local conservation commission and Local Rivers Advisory Committee, if applicable, as well as Fish and Game and Natural Heritage Program, are satisfied with the project as proposed and will not be submitting comments to DES. The applicant also is expected to have obtained any other DES permits required by programs outside of Land Resources Management (e.g., an Underground Injection permit if required for significant infiltration). It is expected that the approvals and permits required will be identified and comments solicited, received, and addressed during the pre-application process. This is expected to shorten the timeframes for obtaining the necessary approvals and permits.

DES is developing a joint IPI application for the participating Land Resources Management permit programs along with instructions on preparing a single plan set and the necessary supporting materials. IPI participants will complete the joint IPI application, prepare the final plan set, assemble the additional supporting materials required, and submit the application package through the applicable municipal clerk (this approach is being used to meet the statutory requirements for wetland permit submissions). Additional copies of the final application package must be provided to the municipality and to the Local Rivers Advisory Committee, when applicable, according to statutory and regulatory requirements for the individual permit programs. The municipal clerk will forward the application package to DES for review.

Once DES determines that the application package is complete, the DES IPI permit team will be notified and each program representative will review the final application for compliance with the existing statutory and regulatory requirements of each program. DES is not proposing any statutory or rule changes under the Innovative Permitting Initiative; the program is being designed to comply with existing requirements and procedures. The DES IPI team will meet to discuss the project and identify any changes or clarifications needed to meet permit requirements and prepare a joint request for more information (RFMI). IPI applicants will be expected to respond to the RFMI within 4 to 7 days and meet with the IPI permit team to review their response. Because of the extensive discussions during the pre-application phase, DES expects to rarely require any additional information or clarification and when it is needed, it is expected to be minor. Once the final individual program reviews and team review are complete, all permits will be prepared and issued as one package. Applicants will continue to receive individual permits for each program according to current statute and program rules.

5.5 Local-State-Federal Coordination and Communication

One of the primary concerns identified by both municipal representatives and state program staff is the need to have better coordination in reviews and sharing of information between programs within DES, between state agencies, and between the municipality and DES. As mentioned above, to address this concern, the IPI process requires applicants to work with the municipality and DES (including other state and federal entities) in a particular order and builds in formal communication between local and state/federal entities.

To ensure that all parties have access to the same information and increase the sharing of information between federal, state, and local entities, the IPI will utilize an internet-based service called eStudio. eStudio provides for shared access to multiple documents, collaboration of project teams, and project-management capabilities.

Upon initial submission of the Phase 1 Pre-Application materials, a project folder will be created using eStudio. During the pilot program, the tracking on eStudio will done in parallel to, not in replacement of, existing DES permit tracking databases. This parallel tracking ensures that all project data currently available via the DES OneStop site will continue to be available.

The DES IPI Coordinator will select appropriate state, federal and municipal contacts and add any project-specific contacts to eStudio for each project. Contacts will include clients (e.g., applicant, owner, agent, project engineer), DES staff (e.g., Land Resources Management permit program IPI staff, and other programs involved with permitting of LRM projects, including rivers management program, drinking water/groundwater program, 401 certification staff, and coastal program), municipal and other interested parties (e.g., conservation commission, planning board, zoning board, Local Rivers Management Advisory Committee) and non-DES regulatory staff (e.g., NH Fish & Game, NH Natural Heritage Bureau, NH Division of Historic Resources, U.S. Environmental Protection Agency, and U.S. Army Corp of Engineers). Each category of contacts will have view-only, commenting, or document posting rights appropriate for their role in the project.

The IPI Coordinator will upload any materials received electronically to the eStudio project (as .pdf files). Applicants will be required to provide their materials as hard copies and electronic files (in .pdf format). The IPI Coordinator will also scan to .pdf and upload any comment letters, pre-application meeting reports, site visit reports, DES requests for more information, or other materials associated with the project (e.g., other agency's comments).

Municipal participants will also be expected to upload .pdfs of any reports or materials they receive or produce (e.g., pre-application meeting reports, site visit reports, board meeting minutes, revised plans). Once the eStudio project is established, the applicant or its agent may also post updated materials (e.g., revised plans) or supporting documentation directly to the eStudio site. The use of eStudio will provide a single repository for all information related to the project and ensure that all interested parties have access to the most current information (e.g., the most current plan set). Municipalities and DES will continue to maintain separate hard-copy and electronic files for the project to retain whatever information they require under their existing permit processes. Once the IPI project is approved/permitted the eStudio project and all the files attached to that project will be deleted.

6 Best Practice Standards

A key objective of the Innovative Permitting Initiative is to encourage greater adoption of development practices that reduce air and water pollution, reduce energy and water consumption, and limit impacts to critical natural resource areas. In support of this objective, DES has identified best practice standards for four topics: Energy Efficiency, Water Conservation, Stormwater Management, and Location Choice/Site Selection. Additional best practice topics may be added in the future.

The proposed best practice standards are based on available national "green" standards, together with existing regulatory requirements in place in New Hampshire. Appendix 8.3 provides a list of the various "green" standards and reference documents reviewed as part of this effort. The proposed IPI best practice standards will serve as the basis for providing technical assistance to applicants and municipalities interested in superior environmental performance.

IPI pilot participants will be required to provide documentation to demonstrate that their project meets either Option A or Option B of the IPI best practice standard for location choice/site selection prior to acceptance into the IPI review process. Exhibit 4 outlines the two alternative standards for location choice/site selection and the documentation required.

In addition, IPI pilot participants must submit a description of how they intend to achieve improved energy efficiency, water conservation, and/or stormwater management for their project. IPI pilot participants complying with Option B for location choice/site selection must commit to achieve the best practice standard for at least one of the other topics, and evaluate and adopt feasible practices under the remaining two topics. Pilot participants meeting Option A for location choice/site selection will be asked to consider, evaluate, and implement feasible practices to improve their project's performance under all three remaining topics.

Exhibit 5 summarizes the IPI best practice standards for stormwater management, energy efficiency, and water conservation, and the proposed approach to document the performance of projects with respect to each topic. Applicants accepted into the pilot stage of the Innovative Permitting Initiative will be expected to engage in discussions with DES and local staff (and others) during the pre-application process and strive to improve the design of their project based on the best practice standards. IPI pilot participants also will be asked to estimate the expected environmental performance of their project with regard to energy efficiency, water conservation and stormwater management. Participants in the pilot stage of the Innovative Permitting Initiative will be asked to cooperate with DES to assess the post-construction/operational environmental performance of their project, but not required to perform the post-construction testing and reporting requirements listed in Exhibit 5. These requirements would be in place for full implementation of the Innovative Permitting approach.

6.1 Location Choice/Site Selection

The location of new development, and the resulting pattern of development across the New Hampshire landscape, is an issue of critical importance identified in both the New Hampshire Climate Action Plan (2009) and New Hampshire Water Resources Primer (2008). The location of development affects the magnitude and types of environmental impact. Sites that are distant from other development and that are not served by transit result in greater air pollution from more and longer automobile and truck trips. Sites in previously undeveloped areas often fragment forests, impact wildlife habitat and natural communities, and can reduce the ability of the natural environment to provide essential natural functions that benefit humans (e.g., clean drinking water). Sites that have to be served by new roads and driveways result in more stormwater running off these impervious surfaces. Promoting efficient and strategic use of land through redevelopment and concentration of growth in/near existing town and city center areas reduces these impacts.

Existing national "green" standards typically rely on a demonstration that the project (a) is located in or near an area of sufficient density and (b) does not impact certain types of natural resources (e.g., floodplains, critical habitat, wetlands). The proposed IPI best practice standard for location choice/site selection is consistent with the intent of the existing national "green" standards, but has been adapted to provide development opportunities under the Innovative Permitting Initiative throughout New Hampshire.

Option A of the proposed IPI location choice/site selection standard accepts any location that meets the criteria set by the most prominent national "green" standards, but also builds on existing patterns of development in New Hampshire by encouraging development in and near existing community centers (e.g., see map of Community Center Areas), in areas with significant development already, and/or in areas served by public water and/or sewer. Applicants meeting Option A for location choice/site selection will be asked to evaluate their site – and their proposed site design – for opportunities to minimize impacts to natural resources during the pre-application review process.

Option B of the proposed IPI location choice/site selection standard allows for development outside of those areas identified under Option A, but requires that the area of development avoid important natural resources as identified in the Natural Services Network data layer available through GRANIT. The Natural Services Network data layer identifies natural areas that provide critical services that benefit humans, such as flood storage, agricultural production, and water supply, and areas that represent the highest quality wildlife habitat in the state based on the NH Wildlife Action Plan (see example map for Concord). Applicants meeting Option B for location choice/site selection will be asked to estimate the driving distance from their site to the nearest Community Center Area, or other area that meets the Option A criteria.

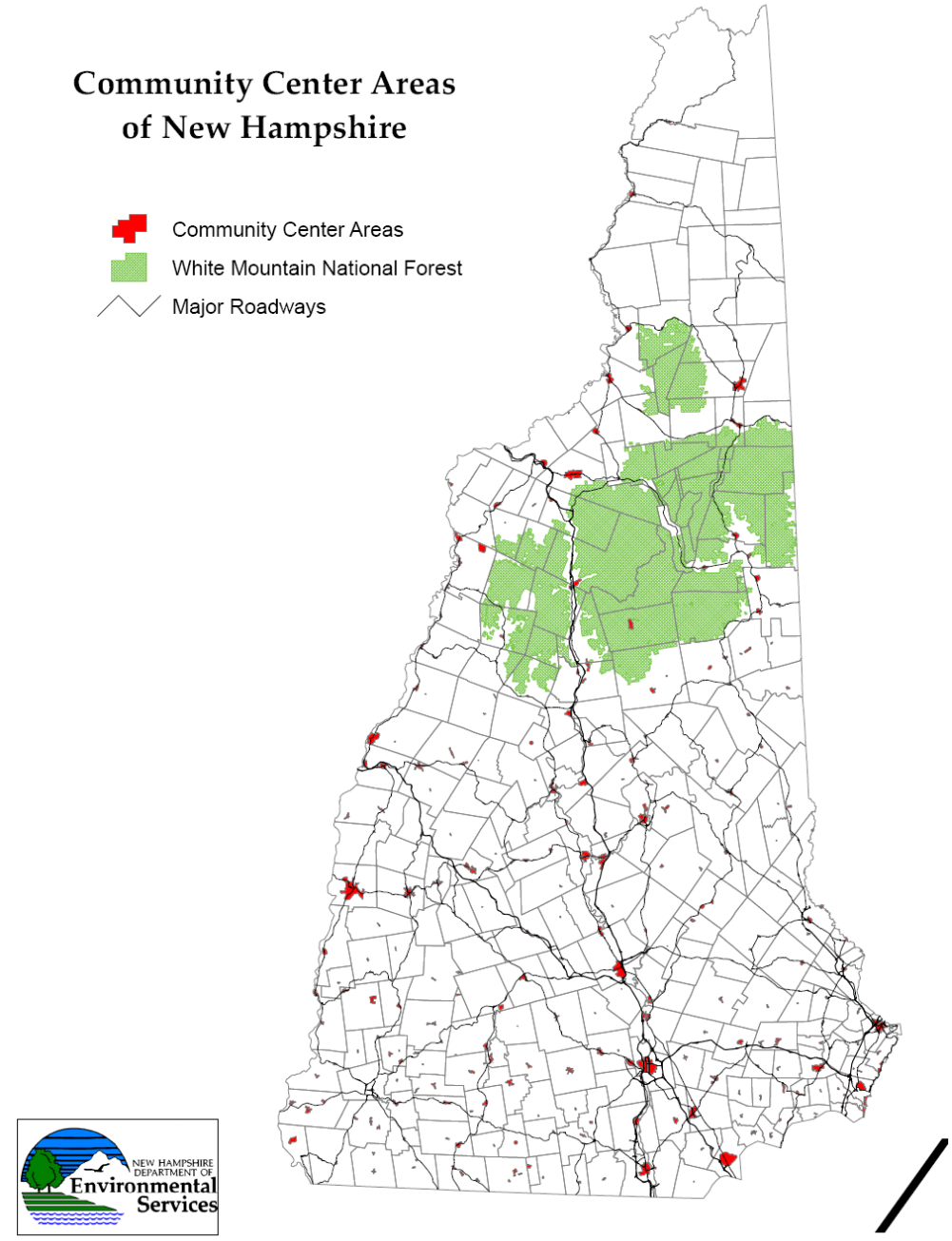


EXHIBIT 4
Location Choice/Site Selection Best Practice Options

Location Choice/Site Selection Best Practice Option	Required Documentation (Phase 1 Pre-Application)
Option A The proposed location of development meets **ONE** of the criteria below: a. In a Community Center Area (CCA) or Key Destination Polygon Area as determined by GIS data available from GRANIT; b. Located within an approved Urban Exempt Area under the Comprehensive Shoreland Protection Act; c. Within the existing service area of a public water or sewer system **AND** within ½ mile of a Community Center Area (CCA); d. Redevelopment (Brownfield, Greyfield, or Existing Building); e. Within a ¼ mile of an existing or planned rail or transit station; f. Meets Density and Linkage Requirements of LEED-ND Prerequisite #1; **or** g. Meets ASHRAE189.1-2009 Site Selection Criteria (5.3.1.1.d) or (5.3.1.1.e), namely within ½ mile of (d) an existing area of high-density residential development (≥10 units/acre) or (e) an area with pedestrian access to at least 10 basic services within ½ mile.	A map with applicable criteria (e.g., CCA, service area) and the Natural Services Network data layers, with the selected area for development delineated. A description of how the selected site meets the requirements for location choice/site selection, including photo documentation of existing development, if applicable. Calculations and map demonstrating compliance with LEED-ND or ASHRAE 189.1 standards, if using one of those criteria to satisfy the location choice/site selection criteria.
Option B Any site not meeting Option A criteria but where the proposed area for development (i.e., the actual area of disturbance for the development) excludes areas mapped within the Natural Services Network (NSN) data layers available from GRANIT.	A map with the Natural Services Network data layers, with the selected area for development delineated. A description of how the selected site meets the Option B requirement for location choice/site selection and estimated driving distance to an Option A area.

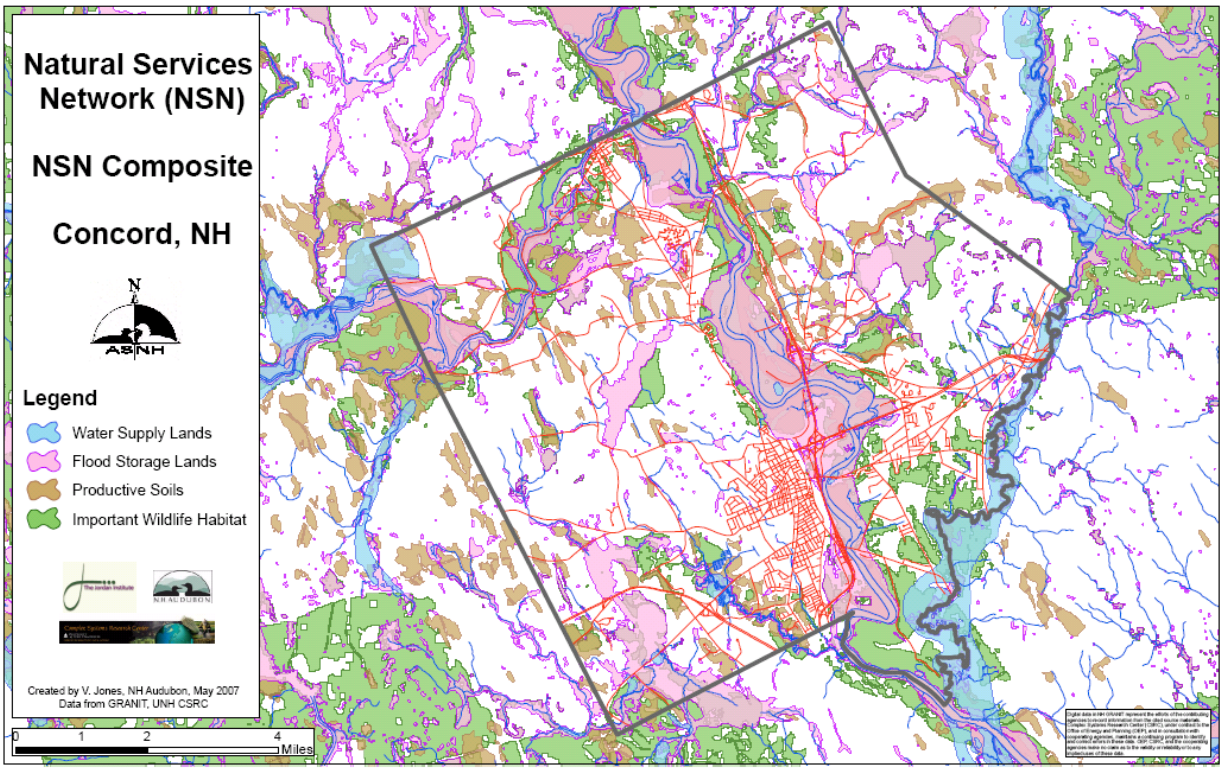
In addition to meeting one of the above location choice/site selection options, an IPI applicant will be asked to provide evidence that the proposed project is consistent with the local Master Plan and/or zoning. The applicant can submit a statement (see examples in Text Box) or copies of local board meeting minutes where the proposed project was discussed.

Example Statements of Consistency with Local Master Plan and/or Zoning

Obtain sign-off from local Planning Board or staff planner:

(a) "The project proposed for Tax Map _____ Lot _____ for the development of _____ is consistent with the stated goals and desired future land use of _____[name of municipality]_____ as articulated within its Master Plan of _____(date)_____ and implemented through its zoning."

(b) "The project proposed for Tax Map _____ Lot _____ in _____[name of municipality]_____ is allowable under current zoning."



6.2 Stormwater

Stormwater management is identified in the New Hampshire Water Resources Primer (2008) as a key issue for long-term protection of New Hampshire's water resources. Stormwater running off streets, parking lots, roofs, and other impervious surfaces transports contaminants to streams, rivers, and other waterbodies. Developed landscapes typically have reduced levels of groundwater recharge as well. Promoting reduction of stormwater generation and increased on-site management and infiltration, mimicking the natural hydrology before development, can reduce these impacts.

The IPI best practice standard for stormwater management is based primarily on The Sustainable Sites Initiative guidelines and numeric requirements specified by the DES Alteration of Terrain (AoT) rules. Some elements of other "green" standards also are incorporated (e.g., the 20% vegetation requirement is from the ASHRAE Standard 189.1). Although the available "green" standards use differing basis for their stormwater management requirements, we expect that the IPI standard as proposed will satisfy most of the existing national "green" standards.

The proposed IPI stormwater management best practice standard goes slightly beyond the existing Alteration of Terrain requirements, requiring applicants to take additional steps to fully replicate the pre-development, natural hydrology, by controlling the total volume of runoff generated, replicating pre-development evapotranspiration through vegetated treatment of stormwater on site, and managing stormwater through multiple smaller-scale, dispersed treatment facilities. The proposed IPI stormwater standard also calls for projects to estimate their pollutant load reduction using the DES simple spreadsheet method and select treatment approaches to maximize pollutant load reductions for their project and site conditions.

In addition to the standards specified in Exhibit 5, participants under the Innovative Permitting Initiative will be encouraged to minimize site disturbance, minimize the amount of impervious surfaces, and follow the minimum impact development guidelines identified in the Innovative Land Use Handbook, Post-construction (Permanent) Stormwater Management Model Ordinance. These practices include, for example, limiting site grading to a maximum cut-and-fill of 10 feet, retaining a minimum of 50 foot "no disturbance" vegetated buffer to surface waters, and ensuring that stream crossings meet the NH Fish and Game guidelines.

6.3 Energy Efficiency

Buildings consume significant amounts of energy, which can increase air pollution and greenhouse gas emissions, depending on the source of the energy. Promoting increased energy efficient design of buildings and sites (including solar orientation and landscaping) reduces these impacts. Buildings in the United States are responsible for 40 percent of energy consumption and 39 percent of CO2 emissions. As discussed in the New Hampshire Climate Action Plan (2009), to have a significant impact on energy use, buildings must improve energy efficiency dramatically.

The IPI has chosen the Energy Efficiency, Section 7, in ASHRAE Standard 189.1-2009 as the standard to strive for when constructing a new energy efficient non-residential building. Standard 189.1-2009 addresses seven major categories: envelope requirements, on-site renewable energy systems, mechanical equipment efficiencies, ventilation, energy consumption data collection, peak load control and lighting. Each of these areas has been identified as a critical component in addressing the efficient use of energy in the design of high-performance, green buildings. The energy requirements in Standard 189.1-2009 are built upon those in ASHRAE Standard 90.1-2007. The U.S. Department of Energy, through the National Renewable Energy Laboratory, has stated that applying the minimum set of prescriptive recommendations in the Standard 189.1-2009 resulted in weighted average site energy savings of 30% when compared to Standard 90.1-2007.

For residential occupancies, the IPI has chosen the Silver Level National Green Building Standard ICC-700-2008 for mixed use and residential buildings not covered under ASHRAE 189.1-2009. Many of the mandatory measures found in the National Green Building Standard are consistent with the International Energy Conservation Code (IECC). The required energy code in New Hampshire is IECC 2009. As the National Green Building Standard uses IECC 2006 (roughly EnergyStar equivalent) as a baseline, expectations for participation in the IPI were adjusted upward accordingly. The National Association of Home Builders Research Center expects a Silver Level certified home to be 30% above EnergyStar requirements (or about 15% above IECC 2006).

6.4 Water Conservation

Increased demand for water was identified as an important underlying challenge in the New Hampshire Water Resources Primer (2008). Available fresh water amounts to less than one-half of one percent of all water on earth. It is estimated that the global consumption of water is doubling every 20 years, more than twice the rate of human population growth. Locally, using excessive amounts of water can result in increased pumping and treatment rates and can also overburden sewage treatment plants when that water is discharged after use. Indiscriminate use and poorly designed water infrastructure lends to higher costs to the city, town and taxpayer. Water efficiency also helps consumers save both water and money, encourages innovation in manufacturing and private investment in water efficiency, and trims energy costs for both households and utilities by reducing the amount of energy required to pump, treat, deliver, and heat water.

The IPI has chosen to extend the use of the ASHRAE Standard 189.1-2009 (Section 6, Water Use Efficiency) to guide water conservation efforts for new and renovated non-residential buildings covered under this project. In 1992, the Energy Policy Act (EPAct) established minimum water-efficiency levels for fixtures, fittings and appliances. Compared against this baseline, the water conservation requirements in Standard 189.1-2009 are about 40% more efficient. The Standard is about 20% more efficient than the required plumbing code in New Hampshire; International Plumbing Code (IPC) 2009. In addition to plumbing fixtures, fittings and appliances, Standard 189.1-2009 addresses site design, irrigation systems, HVAC systems and equipment.

For new homes, the IPI is recommending compliance with EPA's WaterSense Single Family New Home Specification 2009 for indoor and outdoor water use and homeowner education. The new home must feature WaterSense labeled plumbing fixtures, efficient hot water delivery systems, and well designed yards using less water. The Specification, developed by working with builders, utilities, trade associations, manufacturers and landscape and irrigation professionals is expected to reduce water consumption by 20% from that of a standard new home.

EXHIBIT 5
Stormwater Management, Energy Efficiency, and Water Conservation Best Practices

Topic Area	IPI Best Practice Standard	Phase 1 Pre-App Documentation	Phase 2 Pre-App & Permit Application Documentation	Final Documentation* (After Construction)
Stormwater Management – Replicate Natural Hydrology (Volume, Runoff, Evapotranspiration)				
Volume	Replicate natural runoff volume (greenfield projects): Post-development total runoff volume = 90-110% of pre-development total runoff volume (for 2-, 10-, 25- and 50-year, 24-hour storms) Reduce runoff volume (redevelopment): Total run-off volume with redevelopment is at least 60% below run-off volume before redeveloped	Statement of intent and discussion of proposed approach to replicate natural hydrology per IPI best practice standard	Provide calculations based on NRCS method (TR 20 Storm Events), using a land use condition of "good, woods" as pre-development baseline	Final "As-Built" Plans and calculations. Photo-documentation of stormwater treatment facilities.
Peak Flow (Channel Protection)	Where natural runoff volume is maintained, post-development peak flow ≤ pre-development peak flow, otherwise post-development peak flow ≤ 50% of pre-development peak flow for 2-yr, 10-yr, and 50-yr, 24-hr storm event		Provide calculations per AoT Standards, based on NRCS methods (TR 20 or TR-55)	
Recharge (infiltration)	Maintain natural, pre-development infiltration (all projects): Infiltrate greater than or equal to annual Groundwater Recharge Volume per Env-Wq 1504.11 (unless prohibited)		Provide design and calculations, per AoT standards, to infiltrate Groundwater Recharge Volume per Env-Wq 1504.11	
Evapotrans-piration and Vegetation	Use vegetated stormwater capture/treatment (e.g., bioretention) to maintain evapotranspiration (all projects) Use dispersed, smaller-scale infiltration and/or capture/treatment stormwater facilities throughout developed area (all projects) 20% of site is vegetated with native species (required for greenfield projects only)		Provide calculations and demonstrate evapotranspiration through vegetated stormwater management. Demonstrate dispersed treatment and vegetated cover on development plan.	

EXHIBIT 5
Stormwater Management, Energy Efficiency, and Water Conservation Best Practices

Topic Area	IPI Best Practice Standard	Phase 1 Pre-App Documentation	Phase 2 Pre-App & Permit Application Documentation	Final Documentation* (After Construction)
Stormwater Management – Treatment for Pollutant Removal				
Redevelop-ment Project or Project below the AoT Permit Threshold	Implement treatment technology per design specifications in Env-Wq 1508 for treatment of Water Quality Volume (WQV) or Water Quality Flow (WQF). Select appropriate technology to treat total suspended solids (TSS), nitrogen, and/or phosphorus, as applicable.	Statement of intent and discussion of proposed approach to treat stormwater per IPI best practice standard	Compliance with AoT standards for design of stormwater treatment practices per Env-Wq 1508. Use DES Water Quality Simple Method spreadsheet to document expected treatment level (uses expected removal rates for DES-approved technologies and design specifications)	Wet-weather sampling per EPA-approved protocol conducted within one-year of completing construction (Pilot participants shall authorize DES to conduct sampling)
Projects Subject to AoT Permit	Demonstrate that proposed stormwater treatment provides for the maximum achievable reduction of total suspended solids (TSS), nitrogen, and/or phosphorus, as applicable. OR Treat at least 90% of stormwater runoff volume for TSS, nitrogen and/or phosphorus, as applicable.			
Inspection and Maintenance (All Projects)	Prepare an Inspection and Maintenance Plan, including designated authorities to conduct activities and legal authority to effect corrections.	Statement that an Inspection and Maintenance Plan will be developed.	Draft/Final Inspection and Maintenance Plan	Annual Inspection and Maintenance Report.

EXHIBIT 5
Stormwater Management, Energy Efficiency, and Water Conservation Best Practices

Topic Area	IPI Best Practice Standard	Phase 1 Pre-App Documentation	Phase 2 Pre-App & Permit Application Documentation	Final Documentation* (After Construction)
Energy Efficiency				
Commercial Buildings	Commercial building meets Chapter 7, *Energy Efficiency*; ANSI/ASHRAE/ USGBC/IES 189.1-2009 *Standard for the Design of High Performance Green Buildings (Except Low Rise Residential Buildings)*	Statement that commercial building will conform to Chapter 7, *Energy Efficiency*; ANSI/ASHRAE/ USGBC/IES 189.1-2009	Estimated Annual Energy Use, Peak Energy Demand and CO2e vs. a baseline standard (IECC 2009 or ASHRAE 90.1-2007) using International green Construction Code (IgCC) Section 603.1	Actual Annual Energy Use, Peak Energy Demand and CO2e vs. a baseline standard (IECC 2009 or ASHRAE 90.1-2007) using International green Construction Code (IgCC) Section 603.1
Residential and Mixed Use Buildings	Residential building meets Silver Level: ICC-700-2008 *National Green Building Standard for Mixed Use and Residential Occupancies* for Mixed Use and Residential Buildings not covered under ASHRAE 189.1-2009.	Statement that residential building will conform to Silver Level: ICC-700-2008 *National Green Building Standard*	Estimated Annual Energy Use, Peak Energy Demand and CO2e vs. a baseline standard (IECC 2009 or ASHRAE 90.1 2007) using International green Construction Code (IgCC) Section 603.1 **and** National Association of Home Builders (NAHB) Green Scoring Tool results demonstrating that the residential building meets Silver Level	Actual Annual Energy Use, Peak Energy Demand and CO2e vs. a baseline standard (IECC 2009 or ASHRAE 90.1-2007) using International green Construction Code (IgCC) Section 603.1 **and** National Association of Home Builders (NAHB) Green Scoring Tool results demonstrating that the residential building meets Silver Level

EXHIBIT 5
Stormwater Management, Energy Efficiency, and Water Conservation Best Practices

Topic Area	IPI Best Practice Standard	Phase 1 Pre-App Documentation	Phase 2 Pre-App & Permit Application Documentation	Final Documentation* (After Construction)
Water Conservation				
Commercial Building and Site Design	Commercial building meets Chapter 6, *Water Use Efficiency* of ANSI/ASHRAE/ USGBC/IES 189.1-2009 *Standard for the Design of High Performance Green Buildings (Except Low Rise Residential Buildings)* for potable and non-potable water use efficiency for both the site and the building.	Statement that commercial buildings will conform to ASHRAE 189.1-2009	Architect certification that commercial buildings conform to ASHRAE 189.1-2009 and estimated water savings using International green Construction Code (IgCC) Public Version 1.0, Section 702.1.1	Actual potable water use reduction, as a percentage, using International green Construction Code (IgCC) Public Version 1.0, Section 702.1.1
Residential Building and Site Design	Residential building meets *WaterSense Single Family New Home Specification 2009* for indoor and outdoor water use and homeowner education.	Statement that new home(s) will conform to WaterSense Specification for indoor and outdoor use.	Architect certification that new home(s) conform to WaterSense Specification and estimated water savings using International green Construction Code (IgCC) Public Version 1.0, Section 702.1.1	Documentation that new home(s) meet WaterSense labeling requirements and homeowner education was conducted. Actual potable water use reduction using International green Construction Code (IgCC) Public Version 1.0, Section 702.1.1
Metering of Commercial and Residential Water Use	Install metering requirements as specified in Section 705 of the *International green Construction Code* Public Version 1.0 and *Manual of Water Supply Practices, Water Meters-Selection, Installation, Testing, and Maintenance* (document AWWA M6, American WaterWorks Association, 1999).	Statement that metering requirements will conform to the IgCC and AWWA M6	Architect certification that metering requirements conforms to the International green Construction Code (IgCC) and AWWA M6	Actual annual potable water used and estimated per-capita use.
Commercial and Residential Water Audit	Conduct water audit and leak detection program in accordance with *Manual of Water Supply Practices, Water Audits and Leak Detection* (document AWWA M36, American Water Works Association (AWWA), 1999).	Statement that water audit and leak detection program will be developed in accordance with AWWA M36	Applicant certification that water audit and leak detection program has been developed in accordance with AWWA M36	Documentation that unaccounted for water use is less than 10% via water audit conducted within 365 days of occupancy.

7 Next Steps

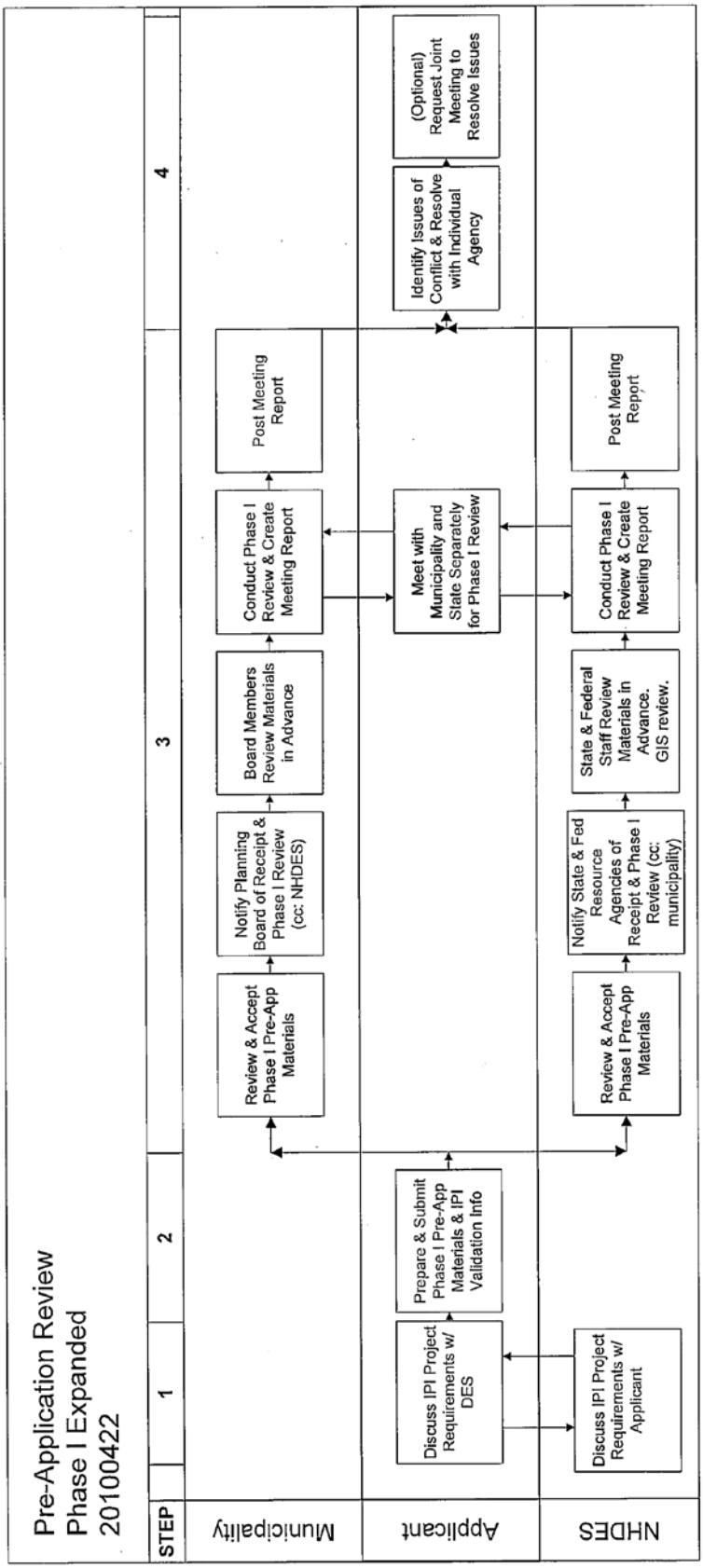
As mentioned earlier, DES is requesting comments on the proposed Innovative Permitting Initiative pilot program described here as we continue to develop and refine the detailed procedures and supporting materials. DES is preparing a detailed Standard Operating Procedure (SOP) covering the entire Innovative Permitting Initiative process. The SOP will expand on the information provided in this document and include specific forms and templates for each step. Drafts of these materials will be posted to the DES website (www.des.nh.gov, search for Innovative Permitting) as they are prepared.

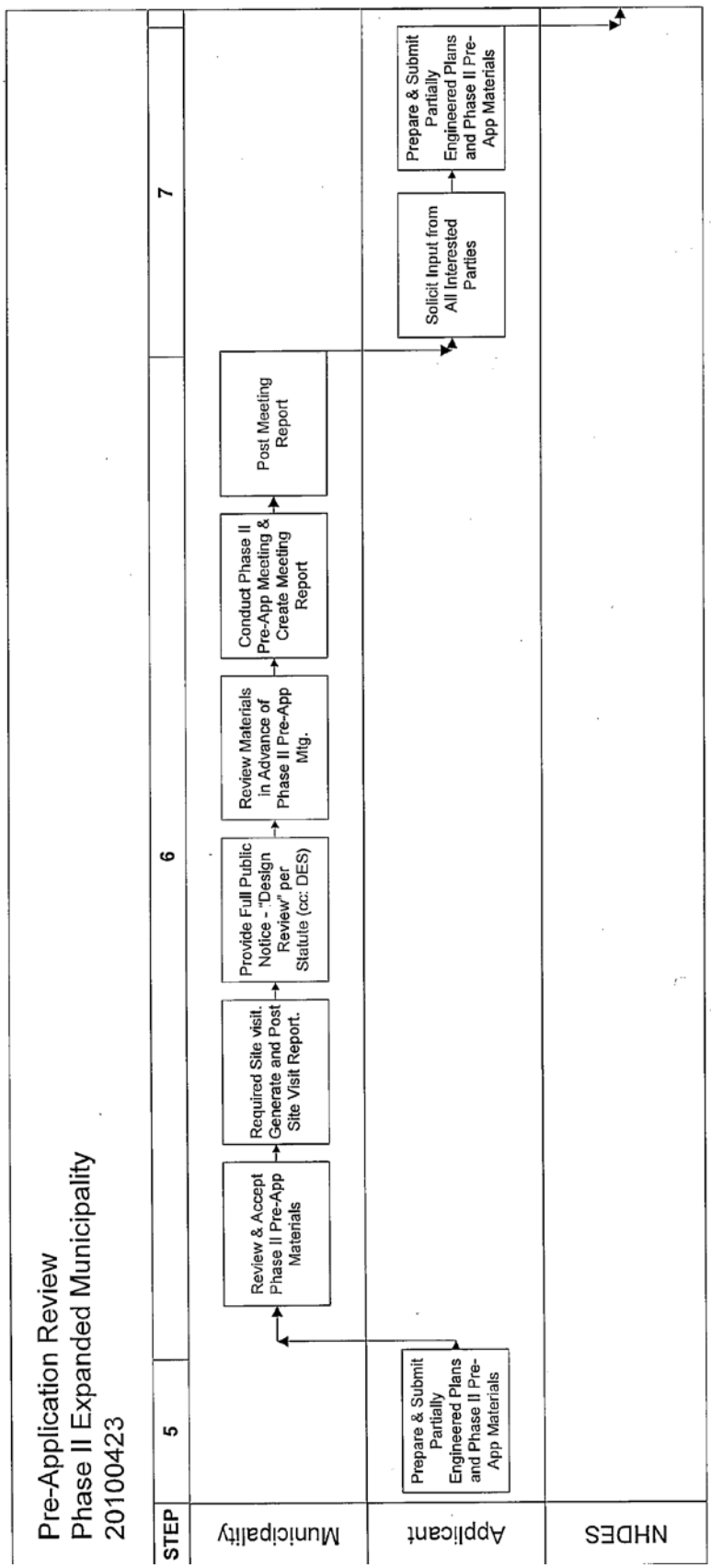
DES will distribute this draft description of the Innovative Permitting Initiative procedures broadly and solicit comments and input through June 30, 2010. DES, together with the Regional Planning Commissions, will hold a series of focus groups with municipal, developer, and environmental representatives. In addition, DES will hold a public information and comment session and meet separately with interested organizations.

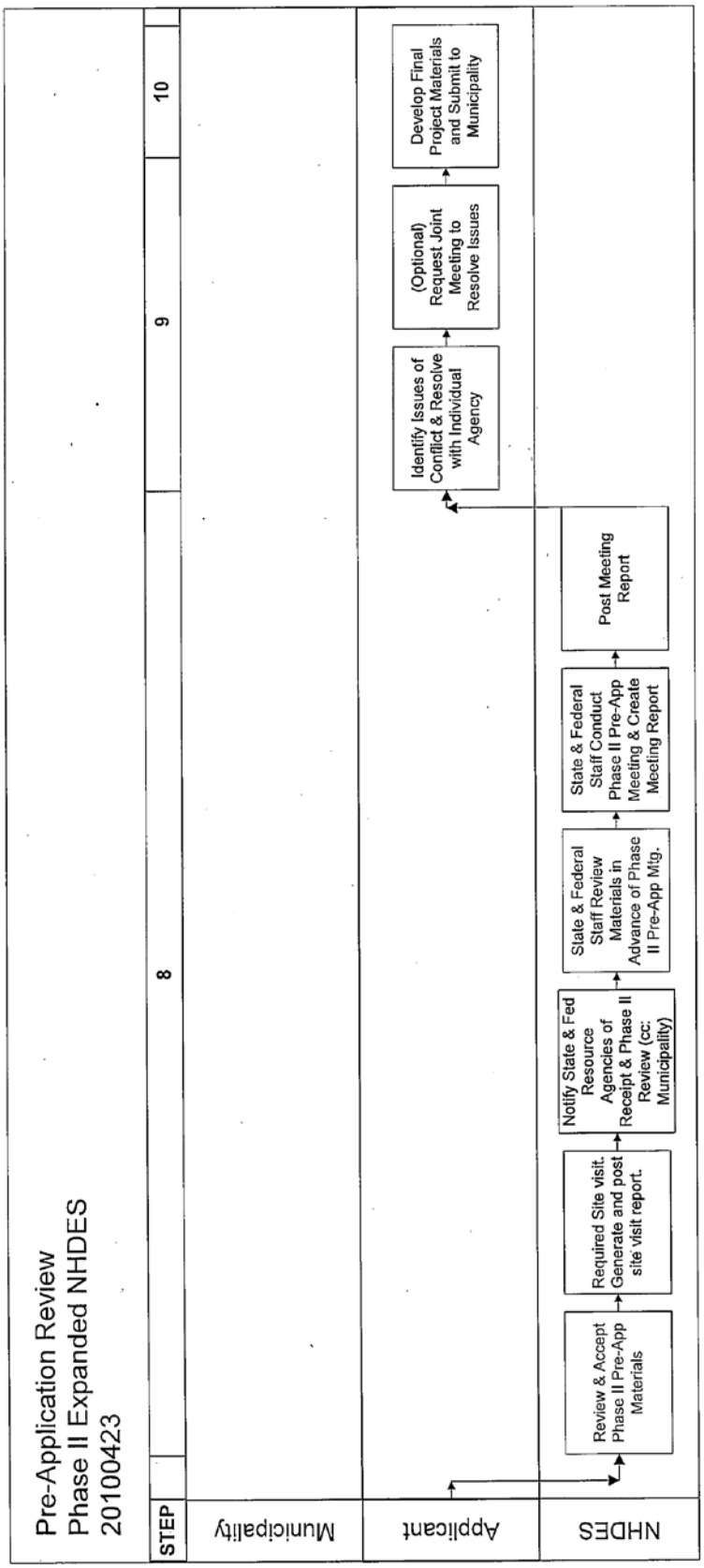
DES is beginning to solicit municipalities and developers interested in participating in the Innovative Permitting Initiative pilot program. Please contact Carolyn Russell, Senior Environment and Land Use Planner, at carolyn.russell@des.nh.gov, or Muriel Lajoie, Land Development Scientist, at muriel.lajoie@des.nh.gov, if interested.

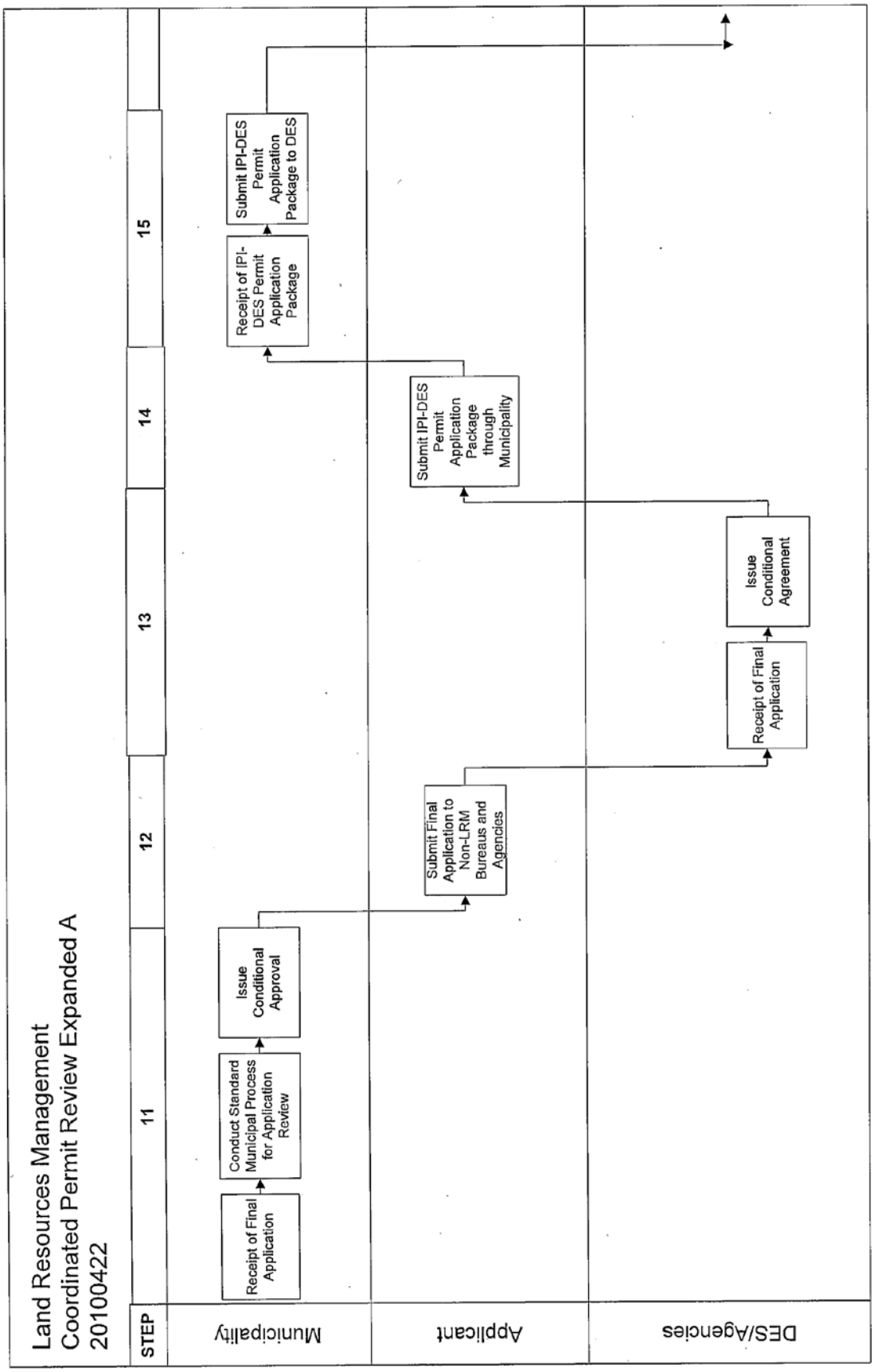
8 Appendices

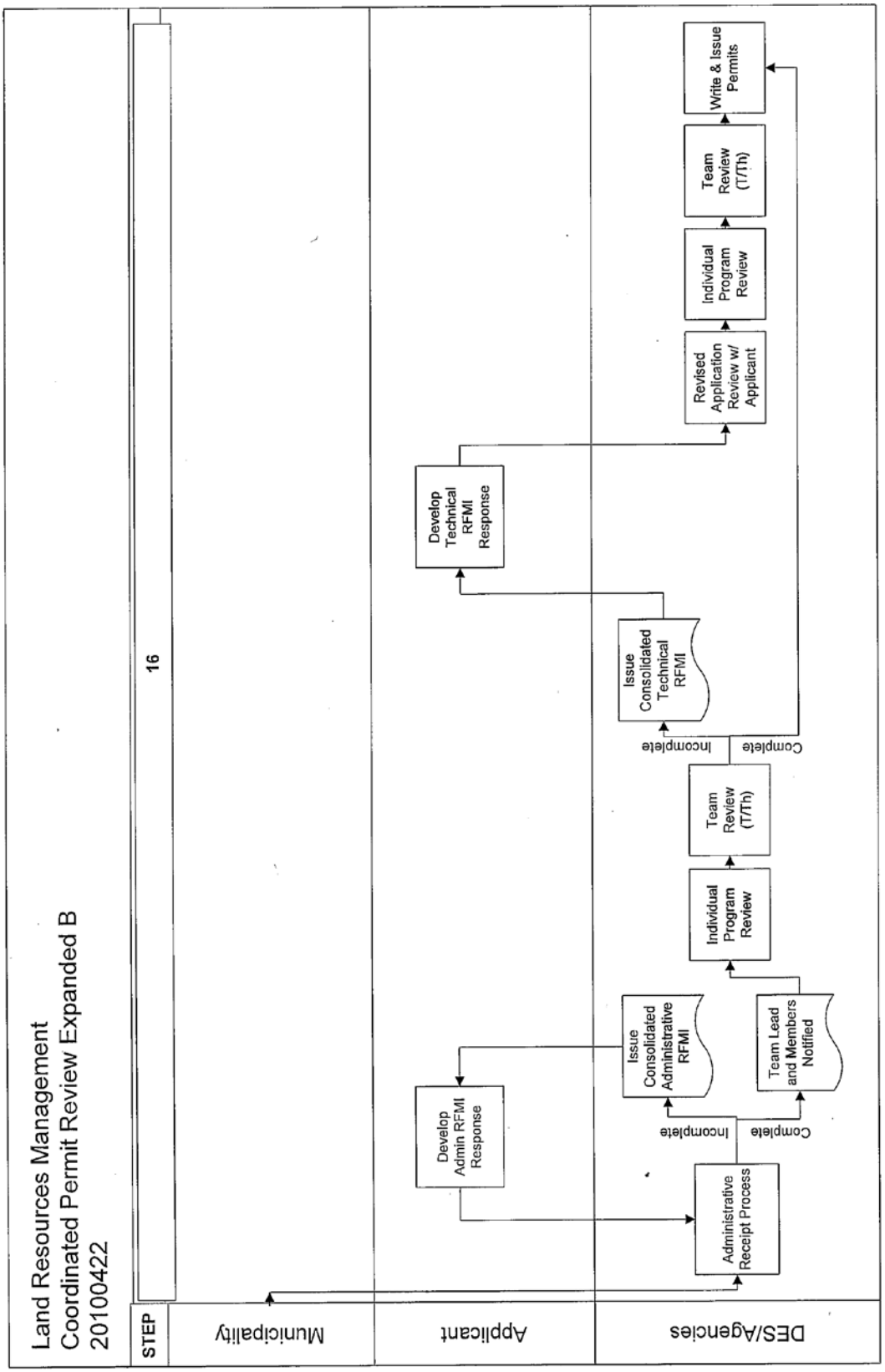
8.1 Detailed Innovative Permitting Initiative Process Map











8.2 Summary of Ideas/Concepts/Comments from Other States, IPI Advisory Group, DES Staff, Surveys, and Initial Municipal and Developer Focus Groups

April 7, 2010

Source Key:

ADV – IPI Advisory Group (meetings/conf calls: 4/14/09, 5/8/09, 9/30/09)
OEP0502 – OEP Conference Participant Surveys
MS1005 – Municipal Focus Group, Newmarket (Seacoast), October 5, 2009
MK1008 – Municipal Focus Group, Keene, October 8, 2009
DN1014 – Developer Focus Group, Nashua, October 14, 2009
DS1026 - Developer Focus Group, Rockingham, October 26, 2009
ACEC – American Council of Engineering Companies of New Hampshire Board, Nov 20, 2009
MN – Minnesota Department of Environmental Protection, staff involved with Six Sigma/Lean efforts
IA – Iowa Lean Coordinator
ME – Maine Dept of Environmental Protection, NRPA and Site Location Law (site licensing)
RI – Dept of Environmental Management
NJ – New Jersey Dept. of Environmental Protection, Office of Permit Coordination

Pre-application Activities

- Important to have DES weigh in on specifics of plan (e.g., engineering reviews, stormwater treatment, septic system design, impervious concrete) (ACEC)

- Lots of value in pre-loading of information submitted initially with applicants (e.g., soils and hydrologic analysis for groundwater discharge), versus getting more information as needed (MN, MA). Allows permit review to proceed more smoothly versus stagnating.

- Important to clearly define what is needed for permits up front, versus "tribal knowledge" (IA). Better instructions = better applications.

- ME: pre-application meetings required for certain projects (i.e., under site law or stormwater). Pre-application meetings involve staff from multiple DEP programs; meetings work from a checklist.

- Separate pre-submission meeting required for larger projects to confirm all necessary components for permit are completed prior to submission (ME).

- Critical to have more work and communication at the pre-application stage (more education for applicants on permit processes and best practices). There needs to be consistency between discussions and commitments at pre-application stage and final

permit review stage. Formalize agreements made at pre-application stage in writing. Goal = reduce/eliminate surprises. (ADV, MI)

- Consider two types of pre-application meetings: (1) independent state/local meeting for early info-gathering or for simpler projects with easily resolved issues; and (2) a more technical review, possibly as joint public meeting within municipality (potentially with extra fee for DES staff time to participate). (ADV)

- Require site flagging prior to site visit (state DEQ has a separate process available to have DEQ do the flagging for the applicant or to confirm flagging by consultant, with addn fees). (RI, MI)

- Request draft plan prior to pre-ap meeting. (MI)

- Decentralize the pre-application meeting to districts. (MI)

- Charge for pre-application meetings, variable amount: $0 for homeowner (DIY) to $1000+ for an on-site meeting. Keep fees low enough to encourage participation, but partially cover staff costs. (MI)

- Site visits should be required with application; conduct site visit during completeness review phase; have municipality conduct site visit if state cannot. (MI, ADV)

- Joint pre-application meeting is good idea (look at DOT access management approval process: general district review, then town site plan review, then full state permit). (DS1026, MS1005)

- Pre-application work should focus on getting everyone on the same page (regulatory barriers occur when there is a lack of a unified understanding of the project). (DE1026)

- Public hearings come too late in the project review process. But, some developments will be concerned by early public meetings (that "let the cat out of the bag" and allow more time for opposition to organize). (DS1026)

- Pre-application review process needs some flexibility – not one-size-fits-all approach (e.g., homeowner versus larger development); small projects should not require a lot of advance work. Size of project might not be appropriate or only determinant for pre-application activities (e.g., wetland impact, checklist for multiple criteria). (DS1026)

- Let applicant decide if wants state pre-application meeting or local pre-application meeting first or joint pre-application meeting. Or have entity with stricter standards or greater jurisdiction go first. (DS1026)

- Good to provide assistance to environmentally-superior projects that support local and state goals. (MK1008)

- Is the pre-application assistance concept workable? Difficult to spend staff time reviewing a possible project not yet submitted for formal review. (MK1008)

- Can you replicate DOT's resource agency process (where all relevant regulatory parties meet together to review projects and resolve issues during project development). (MK1008)

- Need right staff, right knowledge, and sufficient time. (DN1014)

- Identify potential issues and strategies; provide the outcome in writing; ensure that local boards cannot "renege" on agreements. Don't have state designing projects. (DN1014)

- Like the idea of joint meetings, but how can this work when many local board members are volunteers with day jobs? (MS1005)

- NJ pre-application process intended to resolve issues before applications are submitted. Applicants complete lengthy Permit Identification Form (a questionnaire), then meet with representatives from all applicable programs. Permit Coordination office develops a schedule of next steps for permit submissions and reviews (some are sequential vs. simultaneous), provides a single point of contact and is cc'd on all submissions, and works to resolve conflicts. Permit coordination is free service (initially funded with Fed grant and general $, now paid for with permit application fees). Needs to involve 3 or more programs to get permit coordination. Require a Permit Readiness Checklist before scheduling an initial pre-application meeting (note: NJ now wants projects to be fairly well-designed, close to fully-engineered, before NJ does a formal pre-app meeting with program staff; initial questions fielded by permit coordination staff). Materials are submitted 3 weeks in advance for individual programs to review prior to meeting. Twice a month, all state agencies participate in group pre-application meeting where applicants sign up to get input on permitting, grants, requirements, tax incentives, etc. (NJ)

- Input/issues from Surveys:

    - Pre-application meetings must be non-binding for municipalities.
    - Applicants want final conclusions on difficult issues that will NOT be re-visited later in the permit process.
    - A better understanding of how DES will review projects will help designers – but only if DES is consistent in pre-application discussion and permit review (this has been an issue under the current approach).
    - Record conclusions from pre-application meetings.
    - Conceptual plan review with checklist to complete highlighting design data/impact/impact areas.
    - Good to reduce review time and back-and-forth Requests for More Information.
    - Involve owners as well as agent.
    - Would be good to meet with both state and local together.
    - Involve all relevant DES departments & other agencies in review.

- Ensure that opinions/decisions don't change from pre-app meeting to final permit review.
- Great for municipality to also receive feedback from DES-applicant meetings.
- Pre-application meetings should reduce conflict between state and local requirements.
- Some municipalities require state permits to be obtained (or applications to have been submitted) prior to local review.
- Conflicts in timing between state and local reviews is an issue.
- Balancing state and local requirements is an issue.
- Need consistency in staff involved with projects during pre-application and final permit review – can be a significant amount of time elapsed.
- Wetlands mitigation is major stumbling block.
- Local review appears more subjective and longer.
- Local review longer due to limited meeting schedules.
- Local boards do not understand DES requirements.
- State permit reviews are longer.
- Multiple "Requests for More Information," long wait time from submittal to DES response, subjective interpretation of laws & regulations are issues.
- Issue is local attempt to enforce state requirements and state not agreeing with local interpretation.
- Local approval, then DES approval, then local review/approval of revisions results in long time frames.
- Third-party reviews add cost and time.
- Individual ACOE permit review is major stumbling block.
- Don't want pre-application process to expand department, extend processing time, or add substantial extra costs for permitting.
- Statutory timeframes for reviews are too long.
- Pre-application reviews need to reduce re-design required after submitting permit application.
- Pre-application review should be a higher level of review with commitments from both sides.
- Consistency of state reviews is an issue.

DES Coordination with Municipalities

- Need municipal agreement to accept new technologies and to specific timeframes for reviews (provides financial incentive for developers to participate in IPI); seek upfront municipal commitment (e.g., MOA) on key practices and review/communication processes. (ACEC; ADV)

- DEM sends copy of septic and wetlands permits to municipalities (RI).

- Right now local, state, and federal officials all look at wetlands impacts, and possibly several boards at the local level (e.g., Planning Board, Conservation Commission and Zoning Board of Adjustment). Could state issued permit trump local authority? But

municipalities believe they are making up for inferior rules at state level. Development of a unified standard state-wide would be challenging given different ideas on acceptable development – don't start with this issue. Perhaps state could assume control (e.g., zoning and environmental permitting) within certain areas, such as community center areas where the state wants to encourage growth to locate for a variety of environmental and social objectives. (ADV)

- Consider preventing municipalities from requiring all state permits before reviewing a development proposal locally. [Although getting state permit amended to address local concerns is generally easy to do (but results in more work and rework by DES).] (ADV)

- Municipality and state should issue one permit/approval of project. (ADV)

- Avoid separate state/local review of same projects – inevitably end up with different plan revisions being reviewed for the same project. Review is particularly complicated by involvement of multiple engineers reviewing plans. Better coordination of review can reduce/avoid need for amending permits. (ADV, DN1014)

- Find a better way to include local entities in state permitting processes; facilitate state-local communication and resolution of issues. Need to avoid applicant telling state and town different stories and make sure everyone is working from the same plan (ADV, MS1005)

- Ensure that projects comply with local planning objectives and vision, e.g., consistent with local zoning for use. (ADV; MK1008)

- Variations in state and local standards, review time frames, where project review needs to start, compensation required, etc present a significant challenge to development today. Encourage greater local adoption of common standards consistent with state standards. (ADV)

- Need more integration of state-local permitting; but some boards do not trust DES at all (e.g., DES does not protect local interest, such as wetland buffers). State has less leverage than locals. (DS1026)

- Communities should not require state permits before local board review = too burdensome. (DS1026)

- Public controversy is most significant barrier to bigger projects. One approach to resolve: local public meeting to review project, joint pre-application at DES with local representatives. But developers also want option to choose if they do local meeting or state meeting first. (DS1026)

- Need willingness on each part for state and local permitting entities to work together. (DS1026)

- Developers see municipalities as less constrained by what the regulations say versus what they want; DES more conscious of their limitations. (DS1026)

- Provide a concise description of state recommendations to the town; town works with State to come up with a meeting strategy. (DS1026)

- Some communities believe they already provide a fairly fast permitting process; hard to shorten unless really change the process (e.g., additional time reduction is limited by notice requirements). Joint meetings of local boards could help. (MK1008)

- Could have more done by town staff review versus planning board; but towns that lack staff may be limited in their ability to address permitting issues in a timely manner. (MK1008)

- Need incentives at both state and local level; consider raising state fees and then giving reductions to environmentally superior projects. (MK1008, MS1005)

- Not much opportunity for incentives at the local level. Changing fees or time at the local level is difficult because of perception. Fees constrained by statute (<= actual costs) and are currently too low. Density bonuses are a possibility at the local level, e.g., Keene. (MK1008, MS1005))

- Who would "sign off" at the local level to participate in the program? Oversight of projects is an issue. Who will make sure all the aspects of the superior plan are carried out? Outside reviewers/inspectors would raise the applicant's costs. (MK1008)

- Following a structured process of coordinated state and local review and communication could help. Addressing issues with the timing and scheduling of pre-application reviews could help speed up the process. (MS1005, MK1008)

- Have local review first (contingent on state permit approval) to finalize application to state. Or have state review first and pass on information on recommended best practices. Build steps in the local process where the state has sole authority (e.g., 106 reviews). (MK1008)

- Address coordination of wetlands review – when could wetlands review be conducted by the town's conservation commission? (MK1008)

- A joint state-local application and permit likely a tough sell unless for a very large project. Consider a threshold at which regional land use authorities come into play. (MK1008)

- Don't want local decision making process to be heavily influenced or "pushed" by the state's review. (MK1008, MS1005)

- Local planners need to get DES comments to participate in facilitated local review and approval after "pre-screened" by DES. (MS1005)

- Don't want the state to approve plans for a project that does not conform to the local zoning regulations (particularly for type of use); consider a short form for town approval of use to be submitted with state applications. (MK1008)

- Consider the definition of a major versus minor change to a plan and how the coordination of plan approvals at the state and local levels occurs as the plans change. (MK1008)

- Local communities need more education on what state approvals are required for different types of projects. (MK1008)

- Does the program apply differently to larger cities and towns (with staff) versus smaller, more rural communities with just a planning board? (MK1008)

- Look at NY state 109 reviews and Environmental Quality Review Process. (MK1008)

- A standardized process would help. See locals having concern when state makes a decision first. (DN1014)

- More education for town boards; avoid inconsistencies. Might need to mandate local participation in coordinated process. (DN1014)

- Consider local districts for permitting. (DN1014)

- Is there a way to use new technology to facilitate improved local-state communication? E.g., shared database? (MS1005)

- Could locals be given more (complete?) authority on wetland reviews, perhaps within certain criteria or guidelines? (MS1005)

- How is the situation where local standards are stricter than the state resolved? (MS1005)

- There is currently no way to predict how long a local board will take to review a project. (MS1005)

- Towns rely on the state but do not want to give up local authority. (MS1005)

- Permitting is not the most expensive component of a project, thus, might streamlined permitting might not be sufficient incentive. (MS1005)

- Sometimes a local board will put a project with complex issues on hold and wait for state permit approval before taking their time to review (particularly if they do not think the state will approve the project as proposed). (MS1005)

- Is there a role for the Regional Planning Commissions in the process? Look at county functions outside of New England. (MS1005)

- Consider giving local conservation commissions more authority; similar boards have greater authority in other states. (MS1005)

DES Coordination with other Agencies

- Improve the transparency of the review processes and communications between DES and others involved in project review – particularly regarding substantive issues (other agencies and municipalities, public, environmental organizations). (ADV)

- There can be difficulty and delays in getting necessary responses/information from other agencies. (ADV)

- Further clarify interactions with ACOE and streamline that process. (VA)

- Put MOUs in place with other agencies to govern process interactions. (VA) [note: DES already does this with Fish and Game and DRED]

- State fully delegated under Sect 404, except section 10 permits, eliminating Federal coordination issue for most projects. (MI)

- There is lots of confusion on Div of Historic Resources jurisdiction; application requires signature of DHR contact even when not required; DHR requirements are too burdensome and expensive. Not clear when DHR has jurisdiction on a project or not. (DS1026, DN1014)

- NHB pre-screening takes too long (a week for response). (DS1026)

- Add DHR advance data check, like NHB. (DS1026)

- Need more coordination between the different state and federal agencies involved and on timeframes to expect. (MK1008, DN1014)

- Consider a "case manager" approach to managing permitting for a specific project – one individual to assist towns or other applicants through the permitting process. (MK1008)

- See questions of jurisdiction between agencies, particularly ACOE, EPA and DES. (DN1014)

DES Coordinated/Streamlined Program/Permit Review

- Goals should include making it easier to reach full compliance than avoid requirements; providing a predictable and timely path for permitting projects providing superior environmental performance. (ADV)

- Involve the public early enough to address concerns and reduce later delays (e.g., appeals). (ADV)

- Not all projects require the same level of effort, therefore need a more specific estimate of time required by project type to balance workload (MN).

- 3-dimensional staffing structure (lateral as well as vertical) – organizing workgroups of people across programs working on specific projects (MN). Sometimes project specific (6-12 months) or by industry.

- Created a new mutual database to track projects when combined multiple wetlands programs, but issue was more personnel than process problem (IA)

- Staff trained to address multiple programs (Site Law, stormwater, NRPA) and consult with technical experts and other agencies as needed (ME). Two mentors review all permits for consistency.

- Provide for more coordinated DES review, versus silo approach (applies to appeals process as well). (ADV)

- Alternative permitting process "preliminary determination" allows applicants who follow specific guidelines and avoid/minimize impacts to wetlands with minimal encroachment on specified buffers to receive permits more quickly than formal wetlands permit process (RI).

- Projects receiving "fast-track" sign an agreement between DEP and applicant outlining requirements and agreed timeframes (MA). Projects given priority in review.

- Need to understand the drivers of the Requests for More Information (RFMIs) – then address those issues to reduce need for RFMIs. (ADV)

- Applicants can currently voluntarily waive statutory deadlines and DES can agree to shortened timeframe for review, but may eventually require legislation to cut through "Gordian knot" of current processes to establish a new, streamlined process. (ADV)

- Focus process improvement effort on most time-consuming steps. Every change in hands adds additional delay, therefore, consolidated completeness and technical review (both done by field staff with local knowledge and ready access to sites); results in consolidated

request for more information and with better understanding of the application and the site. (VA)

- Move to fully electronic applications. (VA, also done in Osceola County, FLA)
- Require applicants to submit all permit applications at the same time. (ME)
- Vary application requirements depending on the size of the project and level of projected impact. (ME, RI) Greater use of permit-by-rule and alternatives, e.g., RI Regulatory Applicability Evaluation; RI Preliminary Determination Process, that provide assurity of compliance and/or approve projects with minimal impacts without full wetlands permit process.
- Why get Request for More Information (RFMI) at the very end of the review period (e.g., 75 days)? Seems that DES knows something that is not available to the applicant (e.g., has additional non-public data) and then generates an RFMI. (DS1026)
- DES permit requirements need to be sensitive to seasonal specific field work and construction timelines. (DS1026)
- Exchange of paper correspondence (and multiple back-and-forth correspondence) versus phone conversation or face-to-face meeting becomes a barrier to project implementation. Applicants want an in-person review of information required because otherwise permit will be denied. (DS1026)
- Need more consistency in review of projects – different reviewers give different results. (DS1026)
- DES requirement of an easement holder to be identified at the time of application is pre-mature and becomes an impediment to projects with conservation land versus in lieu fee. DES won't hold easements, could they recommend conservation groups and "grease the process?" (DS1026)
- Length and uncertainty of review process is a greater barrier to development than fees, particularly for larger development projects. (DS1026)
- Look at Maine Site Law. (DN1014)
- Sort out priorities across programs at the state level. (DN1014)
- OK to give preferential treatment to A+ projects, but also should make "F" project unpermittable. (MS1005)
- All permits have separate standards and processes; state should be more coordinated. (MS1005)

- Improve communications between DES and DOT on projects. (MS1005)

Best Development Practices & Qualifying for IPI

- Pre-qualification for IPI needs to be simple (upfront, done by applicant themselves) with limited review by a regulator and using unambiguous criteria. (DS1026)

- Goal should be to change the system to emphasize "going beyond compliance" as the norm versus "compliance with minimum standards." (ADV)

- Need a high level of confidence that these are environmentally-superior projects. (ADV)

- Define superior qualified projects at state level first, then bring the towns into the program. (ADV)

- Like the point-system approach – where applicants have choices regarding what best practices they implement to qualify. (ADV)

- Establish a holistic, overall-impact approach to project evaluation, versus "piece-by-piece" evaluation. (ADV)

- Best practices need to also address the longer-term operation and maintenance required to ensure continued benefit. (ADV)

- Variability in regulations from town-to-town and lack of appropriate regulations (e.g., cluster) impair best practices. (DS1026)

- Communities still lack good understanding of best practices, e.g., stormwater management and water quality protection. Get UNH stormwater center involved – "communities think they are rock stars." (DS1026)

- Zoning and regulatory requirements can limit less-impacting design (e.g., road width, sidewalks). (DS1026)

- Barrier: still required to provide traditional infrastructure as well as LID stormwater management approach; septic system requirements not adjusted for water conservation measures. DES staff not always supportive of new technology (e.g., wetlands reviewer requires detention pond versus rain gardens for stormwater management; MA and ME more accepting of innovative septic design). (DS1026)

- Water conservation – less emphasis on reuse (e.g., greywater or cisterns for irrigation) and high-tech irrigation technology and more emphasis on appropriate landscape design. (DS1026)

- Communities are very accepting of energy efficiency improvement; developers starting to involve architects earlier in design for energy efficiency. (DS1026)

- Energy efficiency design practices OK as long as not costing more money or not affecting other critical parameters (such as view from road, parking area, square footage of building). (DS1026)

- Wetlands buffers should be based on science; towns establish buffers "out of thin air." (DS1026)

- Incorporate vegetated buffers (no disturb zones). (DS1026)

- Community building codes typically do not encourage conservation – there are often disconnects on codes, regulations, and policy at local level. (DS1026)

- Consider the connection between transportation and land use as another best practice area to include. (MK1008)

- Can municipalities themselves be participants in the program as applicants? DES permitting and program compliance issues can be significant for municipal projects (e.g., $70K cost for engineering and permitting for a $200K total cost project. (MK1008)

- Don't let antidegredation requirements for stormwater translate into lower density development; difficult now to meet no additional loading requirements even when only developing part of a large parcel. New stormwater permit requirements can be costly. (DN1014)

- Needs to be a way to limit upfront costs and/or provide for alternative financing (e.g., stormwater utility) for some better development practices that banks won't finance now. (DN1014)

- Treat infill, redevelopment and road revisions differently under the regulations to reduce the regulatory burden and need for waivers or "special treatment" by DES. (DN1014)

- Be careful to avoid excessive regulation, particularly at local level (e.g., restriction on % of lot coverage in aquifer district that can't be varied); environmental protections need to reflect site specific conditions. (DN1014)

- For redevelopment, require a decrease or no change in impervious cover. (MS1005)

- Include Brownfields redevelopment. (MS1005)

- Performance based standards make more sense than specific practices because of changing knowledge. (MS1005)

Location

- Remove barriers created by environmental regulations/restrictions to encourage better location choice (e.g., within Community Centers, infill/redevelopment), such as creating a general wetlands permit for deminimis impacts or using a point system that allows applicant to by-pass the standard process. Recognize that "avoidance" of all wetland impacts within certain areas may not be preferable to protecting areas outside of existing centers – accept greater impacts within certain areas. (ADV)

- Establishing targeted areas as preferred location choices from broad perspective has merit, but should also be confirmed with individual communities. (ADV, MS1005)

- Establish MOU/MOA with municipality on preferred growth area to withstand changing of local officials over time; get adopted into siteplan/subdiv regulations or zoning. (MS1005)

- Consider developing a set of criteria or checklist for identifying good location choices. (MS1005)

- Consider a local "sign off" process on location choice – perhaps require different boards and departments to "approve." (MS1005)

- There will be some for whom the location choice criteria is unpopular because of limited opportunity to qualify. Location choice should be one factor evaluated (heavily-weighted, particularly given climate benefits), but not a requirement of participation in IPI. There could be special "perks" for ideal location choice – e.g., applicability of wetlands general permit (ADV)

- Local acceptance is biggest barrier to density and infill; infill gets more abutter conflict. (DS1026)

- Permitting is only one factor in location choice and may not be most significant – economics is stronger driver. (DS1026)

- Developers view large lots as easier to sell. (DS1026)

- Provide guidance for towns to review environmental impacts of an infill site that does not require DES full review (e.g., stormwater management). (DS1026)

- Streamlining the permit/approval process for preferred locations could motivate better location choice. (DS1026, DN1014) OK to provide special treatment with local input to determine locations. (MS1005)

- Look at Berwick ME zoning – limits permits for low-density areas but allows unlimited permits for higher-density zoned areas. (DS1026)

- Need local buy-in for good zoning and site review requirements to support location. Perhaps make appropriate zoning a municipal requirement for participation. (DS1026)

- Local zoning and regulations is a barrier to better location choice; need more education of town boards and possibly reform on tax issues. (DN1014)

- Environmental controls can work against infill development (e.g., additional costs and studies, difficulty in meeting permit standards). (DN1014)

- Review local master plans and zoning regulations as basis for location choices. (MK1008)

- Include redevelopment of existing housing stock as an option. (MK1008)

- Clarify that state permits are not equivalent to local approval. (MK1008)

- Regulatory barriers to development along rivers may inhibit infill development within cities and town centers; reduce restrictions to promote re-development (MK1008, DN1014)

- Existing infrastructure (transportation, sewer, water) has to be recognized and used to define possible areas for development. (MK1008, DN1014)

- Focus infill in bigger cities and towns and have smaller towns contribute to big cities to offset costs. (DN1014)

- Conventional approach of encouraging commercial and industrial development along major highway routes works against objectives; encourage nodal development to address. (MK1008)

- Require higher site development standards if green space is being used for new development (don't preclude these projects from the program). (MK1008)

- Location preference maps should include more developed areas, as well as areas zoned for commercial and industrial development. (DN1014)

- Local zoning regulations are biggest hurdle to infill, redevelopment and increased density. (DN1014)

- Look at criteria for establishing Oregon's Urban Growth Boundaries. (DN1014)

- Good to have local municipality and state on the same page regarding preferred development locations. (DN1014)

- Environmental controls and concerns about historic structures can limit infill and redevelopment. (DN1014)

- State-level data is too generalized to map out preferred location areas; each site has special issues of interest. (MS1005)

- Identification of preferred growth areas by state could help move towns along; there is value to seeing the preferred locations geographically and providing early information/guidance to developers. (MS1005)

8.2 List of Available "Green" Standards and other Resources

List of Available "Green" Standards and other Resources

The following "green" standards and supplementary materials were reviewed to provide input and support to the IPI best practice standards.

LEED for Neighborhood Development 1st Public Draft – October 31, 2008
http://www.usgbc.org/DisplayPage.aspx?CMSPageID=148

The Sustainable Sites Initiative

American Society of Landscape Architects/Lady Bird Johnson Wildflower Center/United States Botanic Garden

http://www.sustainablesites.org/

Mount Washington Resort Residential Sustainability Guidelines
http://www.mountwashington.ca/en/environment-a-construction.html

New York State Department of Transportation GreenLITES Project Design Certification Program
https://www.nysdot.gov/programs/greenlites

National Consensus Green Building Investment Underwriting Standards; Commercial Buildings
http://www.capitalmarketspartnership.com/UserFiles/Admin%20Abstract%20-%20Green%20Building%20Underwriting%20Standard.pdf

The Living Building challenge V 1.3
http://ilbi.org/the-standard/version-1-3

California Energy Commission 2008 Building Energy Efficiency Standards for Residential and Nonresidential Buildings
http://www.energy.ca.gov/title24/2008standards/

ANSI/ASHRAE/IESNA 90.1-2004
ANSI/ASHRAE/IESNA 90.1-2007
American National Standards Institute/American Society of Heating Refrigeration & Air-Conditioning Engineers/Illuminating Engineering Society of North America
http://www.ashrae.org/docLib/20100315_189Column.pdf

ANSI/ASHRAE/USGBC/IESNA 189.1-2009
American National Standards Institute/American Society of Heating Refrigeration & Air-Conditioning Engineers/US Green Building Council/Illuminating Engineering Society of North America

LEED V2.2 for New Construction and Major Renovations
LEED V3 for New Construction and Major Renovations
US Green Building Council
http://www.usgbc.org/DisplayPage.aspx?CMSPageID=220

International green Conservation Code (IgCC)
American Institute of Architects (AIA)/ASTM International/Partnered withANSI, ASHRAE, USGBC, IESNA
http://www.iccsafe.org/CS/IGCC/Pages/default.aspx

Low Impact Development Information and Guidance Manuals
Available from U.S. Environmental Protection Agency
http://www.epa.gov/nps/lid/

Energy Star
US Environmental Protection Agency/US Department of Energy
http://www.energystar.gov/

ANSI approved ICC-700-2008 National Green Building Standard
International Code Council/National Association of Home Builders
http://www.nahbgreen.org/Guidelines/ansistandard.aspx

NAHB Model Home Green Building Guidelines
http://www.nahbgreen.org/Guidelines/nahbguidelines.aspx

NH Green Building Guidelines
http://www.buildgreennh.com/pages/certification-guidelines

Architecture 2030
http://www.architecture2030.org

NH Climate Action Plan
http://des.nh.gov/organization/divisions/air/tsb/tps/climate/action_plan/nh_climate_action_plan.htm

Energy Efficient Codes Coalition
http://www.thirtypercentsolution.org/

International Energy Conservation Code 2006
International Energy Conservation Code 2009
International Plumbing Code 2006

International Plumbing Code 2009
http://www.nh.gov/safety/boardsandcommissions/bldgcode/documents/BCRBwebnotice3-10.pdf

Energy Policy Act of 1992 (EPAct 1992)
http://www.ferc.gov/legal/maj-ord-reg/epa.pdf

NHDES RSA 485:61
NH Safe Drinking Water Act
http://www.gencourt.state.nh.us/rsa/html/L/485/485-61.htm

Env-Wq 2101
NH Department of Environmental Services Water Conservation, Use Registration and Reporting
http://des.nh.gov/organization/commissioner/legal/rules/documents/env-wq2101toc.pdf

NH Water Resources Primer
http://des.nh.gov/organization/divisions/water/dwgb/wrpp/primer.htm

Methods for and Estimates of 2003 Projected Water Use in the Seacoast Region, Southeastern New Hampshire
US Department of the Interior/US Geological Survey
http://pubs.usgs.gov/sir/2007/5157/

ANSI approved ICC-700-2008 National Green Building Standard
International Code Council/National Association of Home Builders
http://www.usgbc.org/DisplayPage.aspx?CMSPageID=148

WaterSense New Home
US Environmental Protection Agency
http://www.epa.gov/watersense/docs/home_finalspec508.pdf

Innovative Land Use Planning Techniques: A Handbook for Sustainable Development
NH Department of Environmental Services, New Hampshire Association of Regional Planning Commissions, New Hampshire Office of Energy and Planning, and
New Hampshire Local Government Center
http://des.nh.gov/organization/divisions/water/wmb/repp/innovative_land_use.htm

Market Barriers to Green Development Initiative
EPA Region 5
http://www.delta-institute.org/marketbarriers/

The Chicago Standard
City of Chicago, Illinois
http://future**green**chatham.com/pdf/**chicagostandard**.pdf

Attachment 3: PowerPoint Presentation on Proposed Integrated Permitting Process

DES Innovative Permitting Initiative

Goals:

- Make it Easier for Environmentally-Superior Projects to Move Through State and Local Permitting Processes
- Improve Coordination with Municipalities and Other Agencies
- Increase Consideration of Better Development Practices

Innovative Permitting Initiative Key Components:

- **Incentive:** Streamline Permitting Processes and Improve Coordination; Reduce Uncertainty
- **Assistance:** Enhance the Pre-application Process with More Technical Assistance
- **Information:** Provide Guidance on Best Practices and Evaluate Project Performance

Input (a few highlights) Focus Groups and Other States

- Improve local-state communication
- State should ensure project (use) is consistent with local Master Plan/Zoning
- Larger developments less concerned about fees, more concerned about length and uncertainty of review/permitting process - want more integration of state and local permitting and clear, coordinated process

Input (a few highlights) Focus Groups and Other States

- More upfront, pre-application work = better quality application and streamlined permit review
- Important to document pre-application site visit and meeting findings
- Pre-application meetings should provide clear, concise direction early in design process

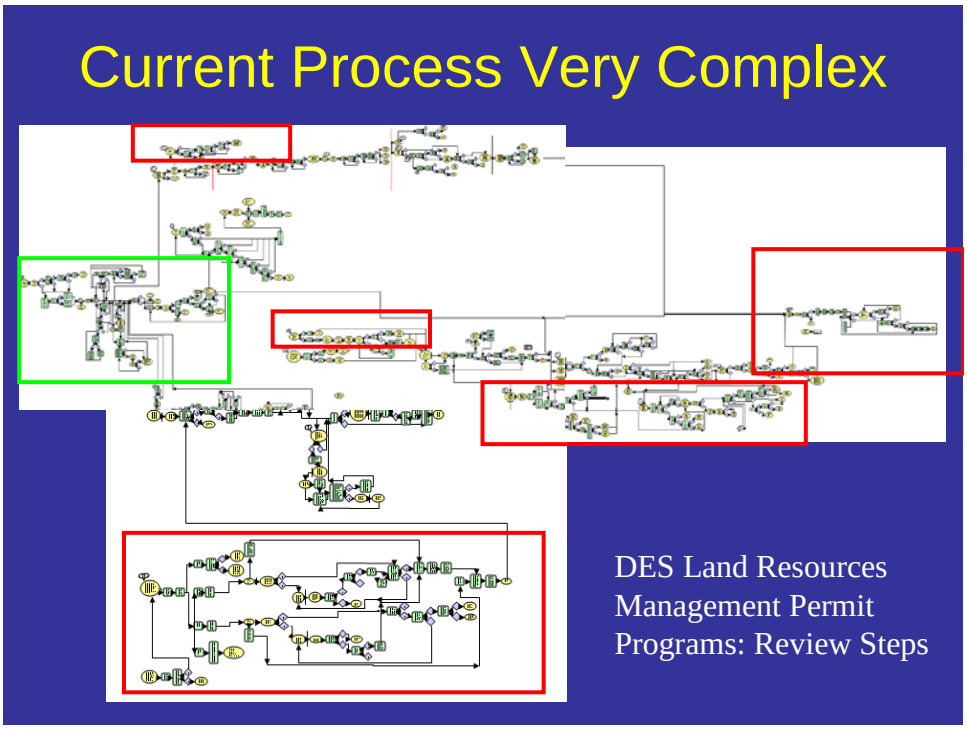
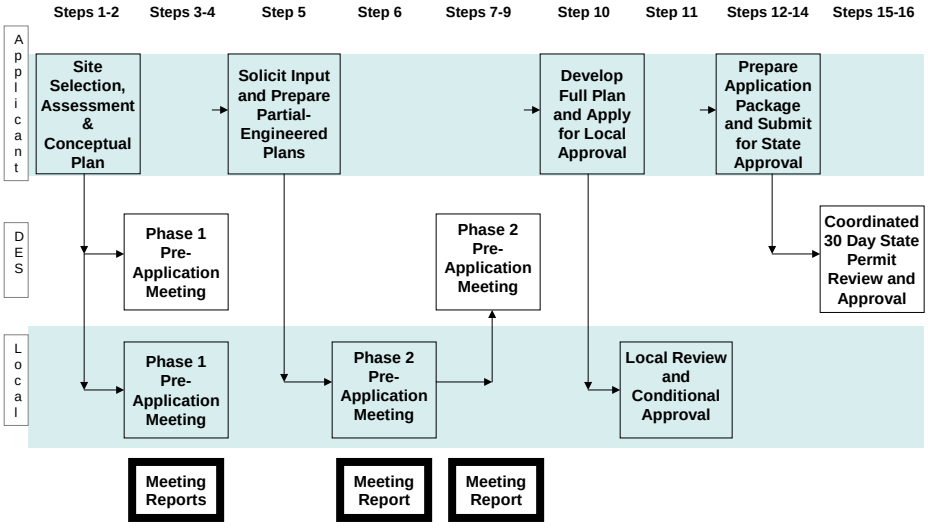


EXHIBIT 1
Innovative Permitting Initiative
Coordinated Pre-Application and Permit Review



Important Process Elements:

- Specific information submitted prior to each Pre-application Meeting
- Detailed Meeting Agenda/Report Template for each Pre-application Meeting
- Public and Abutter Notice prior to Phase 2 Local Pre-application Meeting
- Site visit conducted before Phase 2 Meeting

Important Process Elements:

- Multiple applicable state and federal entities participate in DES Pre-application Meetings
- After Phase 1 Pre-Application, Local-State order fixed
- Final application = quick check
  (all consultations with other entities completed during pre-application process)
- All materials available via Internet at eStudio site

Initial Best Practice Areas

Energy Efficiency:	**Reduced energy demand of structures**
Water Use:	**Lower water consumption by occupants**
Stormwater:	**Reduce generation through design, retain & treat rainwater onsite (mimic natural condition)**
Location:	**In-town/in-city, near town/city center, redevelopment, and avoid high-valued natural resource areas**

Energy Efficiency

- **Commercial**
  - ASHRAE 189.1-2009 **Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings**; Chapter 7, Energy Efficiency
  - 24.5% more energy efficient than ASHRAE 90.1 2004 / IECC 2006
  - Multiple group support (ASHRAE/USGBC/IES)
- **Residential**
  - Silver Level of National Association of Home Builders' **National Green Building Standard** (ICC 700-2008)
  - 30% more energy efficient than IECC 2006
- Current NH Code is ***International Energy Conservation Code*** (IECC) 2009 (as of 4/1/2010)

Water Conservation

- **Commercial**
  - ASHRAE 189.1-2009 **Standard for the Design of High-Performance, Green Buildings Except Low-Rise Residential Buildings**; Chapter 6, Water Use Efficiency
  - Addresses site design, irrigation systems, HVAC systems and equipment
  - 40% less water than EPAct 1992; 20% less water than IPC 2009
- **Residential**
  - **EPA WaterSense Single Family New Home Specification 2009** for indoor and outdoor water use and homeowner education
  - Expected 20% reduction in water consumption
  - Specification developed with multiple interest groups
- **Water Use Metering and Leak Audits**

Stormwater Management

- Replicate Natural Conditions
  - Volume, Peak Flow, Recharge, Evapotranspiration
- Treatment for Pollutant Removal
  - Evaluate treatment options, select most effective and/or treat 90% of volume
- Varied requirements for new development vs. redevelopment
- Builds from new DES Alteration of Terrain Standards

Location Choice/Site Selection

Two Options:

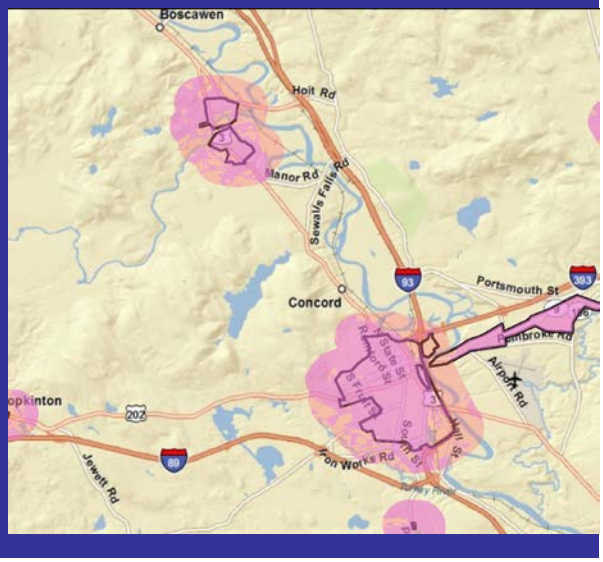
- Option A: Meets one of several criteria as (i) within or near an area of existing, compact development OR (ii) is redevelopment
- Option B: Selected site for development avoids high-valued natural resource areas at broad level

Incorporates various "green standards" as alternatives under Option A

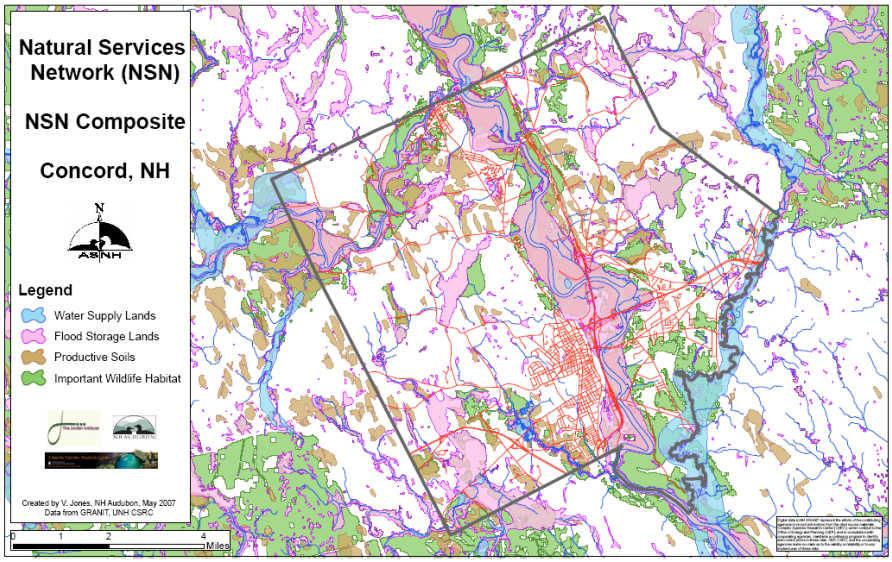
Location Choice/Site Selection

Option A

Example Criteria = Within ½ mile of Community Center Area (in pink or orange) **AND** on public water or sewer



Location Choice/Site Selection
Option B = Avoid Colored Areas



Pilot Phase Requirements

Two Requirements:

1. **Either**
   - **(a) Meet Option A for Location Choice/Site Selection**
   - **or**
   - **(b) Meet Option B for Location Choice & Commit to Achieve One Additional Best Practice Standard**

2. **Discuss and evaluate opportunities and estimate performance for all Best Practice areas (no long-term documentation for pilot participants)**

Innovative Permitting Initiative

Land Development Best Practice Guidelines

New Hampshire
Department of Environmental Services

DRAFT FINAL- January 2013

Background

The U.S. Environmental Protection Agency's (EPA) State Innovation Grant (SIG) program provides support for state environmental agencies to develop and evaluate innovative approaches to working with regulated entities to improve environmental performance. The SIG program also supports the development of approaches to improve state agency operations and provide time and cost savings for regulated entities that demonstrate better environmental performance.

In 2009, the New Hampshire Department of Environmental Services (DES) received funding under the EPA SIG program to undertake the "Innovative Land Development Technical Assistance and Coordinated Permitting Initiative" (a.k.a. DES Innovative Permitting Initiative or IPI). The Innovative Permitting Initiative focuses on land development activities and the permit programs under the Land Resources Management section of the Water Division of DES: Alteration of Terrain, Subsurface Systems and Subdivisions, Shoreland Protection, and Wetlands.

Under the EPA grant, DES proposed to examine our outreach, technical assistance, and permitting activities that affect development to accomplish several goals:

- Identify approaches to increase the adoption of better development practices and improve the environmental performance of new development and re-development projects.
- Provide for streamlined review of projects providing superior environmental performance.
- Increase the transparency of our land development permit programs.
- Improve coordination with municipalities and other entities.

Over the long term, broad adoption of the ideas identified under this initiative would be expected to reduce the environmental impact of continuing growth and development and provide greater efficiencies for DES permitting programs.

A key objective of the Innovative Permitting Initiative is to encourage adoption of development practices that reduce air and water pollution, reduce energy and water consumption, and limit impacts to critical natural resource areas. The intent is to reduce both immediate effects as well as potential long-term impacts of changing land use and the resulting pattern of land development on the natural environment. In support of this objective, DES initially identified best practice guidelines for four topics: (1) Energy Efficiency, (2) Water Conservation, (3) Stormwater Management, and (4) Location Choice and Site Design. Additional best practice topics may be addressed in the future.

The DES best practice guidelines are based on available national "green" standards and practices, together with existing data and regulatory requirements in New Hampshire. The DES

best practice guidelines will serve as the basis for providing technical assistance to applicants and municipalities interested in superior environmental performance.

IPI pilot participants will be asked to voluntarily consider the IPI best practices guidelines in their project design and evaluate their project's expected environmental performance in these four areas. To aid in the evaluation of the new approaches being employed under the IPI, pilot program participants will be asked to submit information regarding their project design and expected performance at various stages of the project design and permitting process.

Location Choice and Site Design

Best Practice Guideline

Locate Within or Near Existing Community Centers

and

Minimize Impacts to Natural Resources

The location of new development, and the resulting pattern of development across the New Hampshire landscape, is an issue of critical importance identified in both the New Hampshire Climate Action Plan (2009) and New Hampshire Water Resources Primer (2008). The location of development greatly affects the magnitude and types of environmental impact. Sites that are distant from other development and that are not served by transit result in greater air pollution from more and longer automobile and truck trips. Sites in previously undeveloped areas often fragment forests, impact wildlife habitat and natural communities, and can reduce the ability of the natural environment to provide essential natural functions that benefit humans, such as the availability of clean drinking water. Sites that have to be served by new roads and driveways result in more stormwater running off these impervious surfaces, which can affect surface water quality, stream habitat and stormwater levels. Promoting efficient and strategic use of land through thoughtful, natural resource-based site selection and design and encouraging redevelopment and concentration of growth in/near existing town and city center areas reduces these impacts.

Existing national "green" standards typically rely on a demonstration that the project (a) is located in or near an area of sufficient density and (b) does not impact certain types of natural resources (e.g., floodplains, critical habitat, wetlands)[1]. The DES Land Development Best Practice Guideline for location choice and site design is consistent with the intent of the existing national "green" standards, but has been adapted to apply to development opportunities throughout New Hampshire.

The DES Land Development Best Practice Guideline for location choice and site design provides three levels of performance: Minimum Practice, Good Practice, and Best Practice. In addition to the DES Guidelines, a prospective land development project should consider its consistency with municipal planning and conservation objectives as described in the municipal Master Plan, Zoning, and Open Space Plan, when available.

Best Practice for Location Choice/Site Design:

New development or redevelopment that meets the minimum practice for location choice and site design and **ONE** of the criteria below:

[1] For example: LEED-ND (http://www.usgbc.org/DisplayPage.aspx?CMSPageID=148), Sustainable Sites Initiative (http://www.sustainablesites.org/), and ANSI/ASHRAE/USGBC/IESNA 189.1-2009 (http://www.ashrae.org/resources--publications/bookstore/standard-189-1).

h. Within a Community Center Area (CCA) or Key Destination Polygon Area as determined by GIS data available from GRANIT;

i. Located within an urbanized shoreland exemption area under the Comprehensive Shoreland Protection Act;

j. Within the existing service area of a public water or sewer system and within ½ mile of a Community Center Area (CCA);

k. Within a ¼ mile of an existing or planned rail or transit station;

l. Meets Density and Linkage Requirements of LEED-ND Prerequisite #1; **or**

m. Meets ASHRAE 189.1-2009 Site Selection Criteria (5.3.1.1.d) or (5.3.1.1.e), namely within ½ mile of an existing area of high-density residential development (≥10 units/acre) **or** an area with pedestrian access to at least 10 basic services within ½ mile

Good Practice for Location Choice/Site Design:

New development or redevelopment that meets the minimum practice for location choice and site design and **ONE** of the criteria below:

a. Within one (1) mile of a Community Center Area (CCA) or Key Destination Polygon Area as determined by GIS data available from GRANIT; **or**

b. Within a 1/2 mile of an existing or planned rail or transit station.

Minimum Practice for Location Choice/Site Design:

The selected location for the development and the specific site development plan avoids and buffers (to the extent practicable) important natural resources as identified by the following:

a. Areas included in the Natural Services Network (NSN) data layer available through GRANIT (see Exhibit 2 for example NSN map)[2];

b. Areas identified by other readily-available state, regional, and local natural resource data, including additional GIS-based data, existing conservation or open space plans or assessments (e.g., local Natural Resource Inventory), or other natural resource mapping.

c. Areas identified through a site-specific assessment of natural resource attributes.

[2] The Natural Services Network data layer identifies natural areas that provide critical services that benefit humans, such as flood storage, agricultural production, and water supply, and areas that represent the highest quality wildlife habitat in the state based on the NH Wildlife Action Plan.

Documentation for Location Choice/Site Design:

A project's location and site design is evaluated in two stages.

Stage 1 Evaluation: The first stage is a "desktop" analysis using existing GIS data or other available maps (electronic and hard copy). The first stage evaluation includes a simple GIS mapping exercise using the Community Center Areas, Key Destinations (specifically looking at either transit/rail stops or polygon areas of existing intensive development), and Natural Services Network data available from GRANIT. During the first stage, the location should also be evaluated using the Natural Heritage Bureau's on-line datacheck tool, to determine if there are known occurrences of any threatened or endangered species or unique natural communities within or near the site. If there is a "hit," an assessment by NHB and/or Fish and Game is needed to rule out potential impacts.

Local planning maps, such as an existing zoning map or future development map, such as a Master Plan future land use map, may be needed to demonstrate proximity to a planned rail or transit station, location within the existing service area of a public water or sewer system, or inclusion within an urbanized shoreland exemption area under the Comprehensive Shoreland Protection Act.

> Documentation of Stage 1 Evaluation: Applicants will provide a project location map including the above data layers and identifying the location of their project. The location map should indicate the distance of their project to the nearest Community Center Area. If meeting the LEED-ND or ASHRAE standards, the applicant should follow the documentation procedures identified by that standard to illustrate compliance with their specification. Copies of this documentation should be provided to DES.

Stage 2 Evaluation: In the second stage, additional natural resource information as well as site-specific information is required to evaluate the site and to inform the conceptual development plan for the site. Site information collected should include, at a minimum, a field-based wetlands delineation, including vernal pools and small streams, and habitat assessment. Additional natural resource data and site characteristics to consider during the second stage evaluation include:

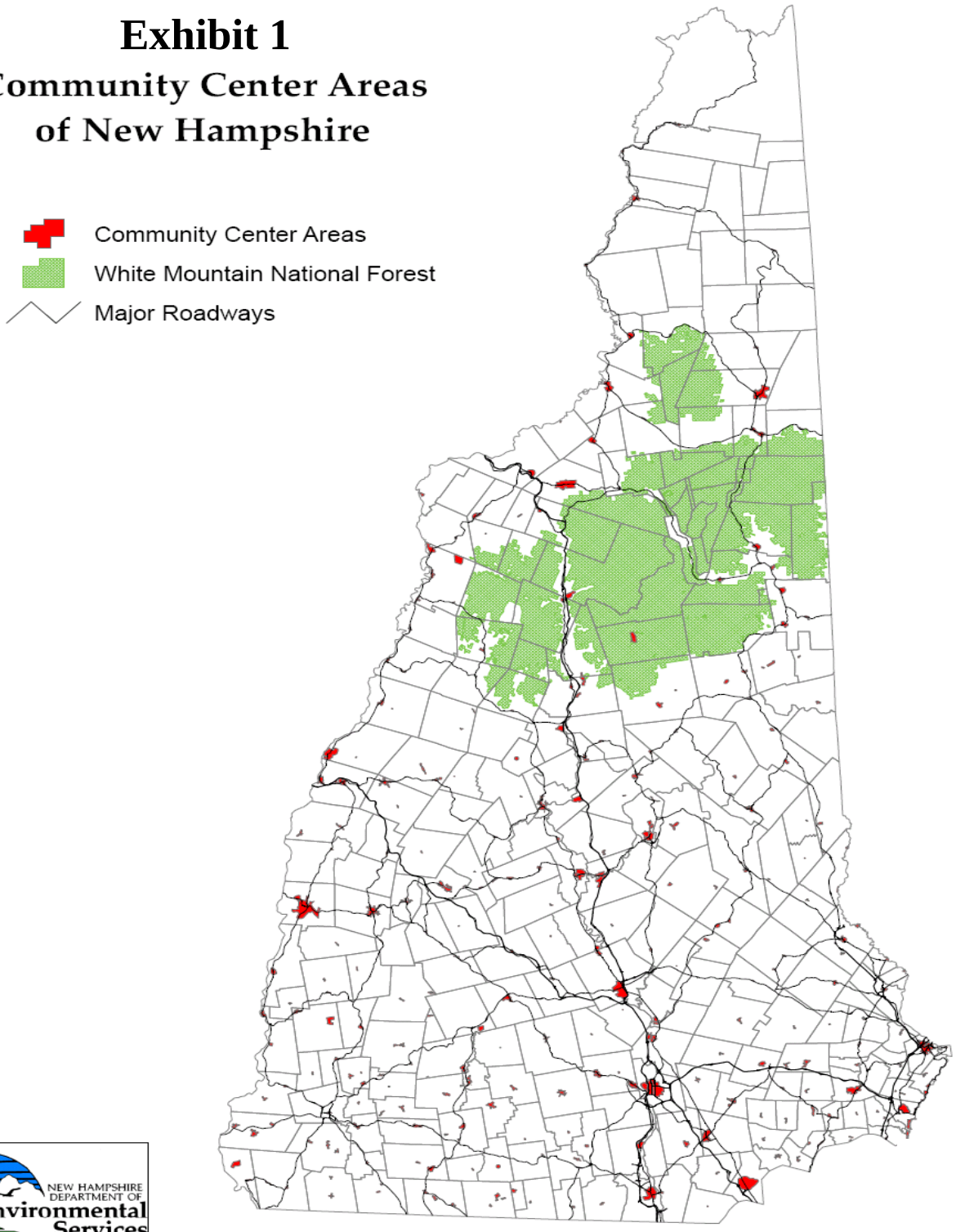
- Areas of high-quality groundwater (areas identified as GA1 or GAA);
- Areas of steep slopes (greater than 25 percent);
- Areas of local priority (e.g., identified by a local Natural Resource Inventory or Open Space Plan or other similar document);
- Presence of a designated river corridor (1/4 mile buffer to a designated river)
- Presence of protected shoreland;

- Areas of significant conservation value identified by a regional conservation plan (such as the Land Conservation Plan for NH's Coastal Watershed or a regional land conservation organization's plan);
- Other data (TBD)

Documentation of Stage 2 Evaluation: Applicants will submit a map or plan that identifies the presence and boundaries of important natural resources within their parcel and in close proximity (e.g., within 300 to 1000 feet) of their project. Applicants should describe, through indications on the map, plan or in a separate description, how their land development project location and design minimizes impacts to those resources.

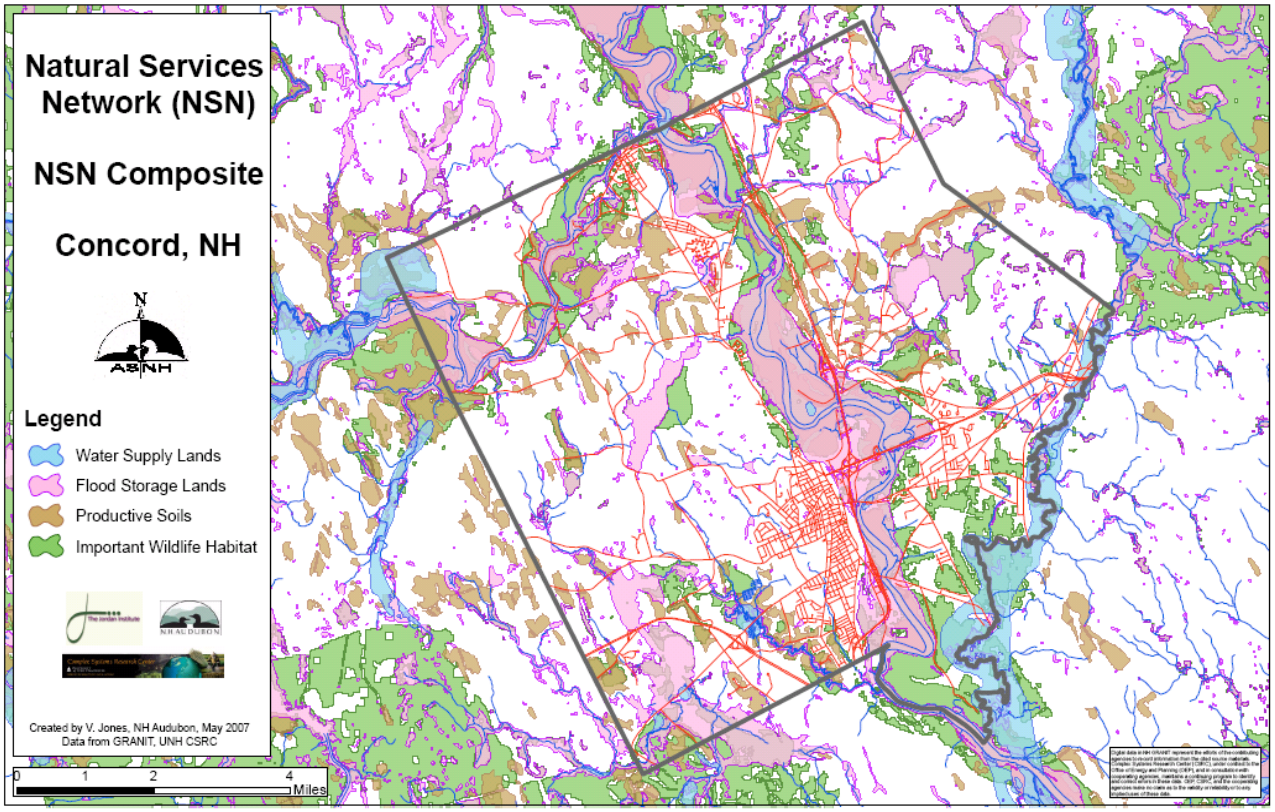
Exhibit 1

Community Center Areas of New Hampshire



NEW HAMPSHIRE DEPARTMENT OF Environmental Services

Exhibit 2



Stormwater Management

Best Practice Guideline

Mimic Natural Hydrology

and

Select Most Effective Treatment Practicable

Stormwater management is identified in the New Hampshire Water Resources Primer (2008) as a key issue for long-term protection of New Hampshire's water resources. Stormwater running off streets, parking lots, roofs, and other impervious surfaces transports contaminants to streams, rivers, and other waterbodies. Developed landscapes typically have lower levels of groundwater recharge as well. Reducing stormwater generation and increasing on-site management and infiltration, to better mimic natural hydrology before development, can reduce these impacts.

The DES Land Development Best Practice Guideline for stormwater management is based primarily on The Sustainable Sites Initiative guidelines and numeric requirements specified by the DES Alteration of Terrain (AoT) rules. Some elements of other "green" standards also are incorporated (e.g., the 20% vegetation requirement is from the ASHRAE Standard 189.1). Although the available "green" standards use differing basis for their stormwater management requirements, we expect that fulfillment of the DES Land Development Best Practice Guideline will satisfy most of the existing national "green" standards for stormwater management.

Exhibit 3 presents the specifics for the DES Land Development Best Practice Guideline for stormwater management and the documentation requested to evaluate the project's performance. This guideline extends slightly beyond the existing Alteration of Terrain requirements, asking applicants to take additional steps to fully replicate the pre-development, natural hydrology, by controlling the total volume of runoff generated, replicating pre-development evapotranspiration through vegetated treatment of stormwater on site, and managing stormwater through multiple smaller-scale, dispersed treatment facilities.

Additionally, applicants are encouraged to minimize site disturbance, minimize the amount of impervious surfaces on the site, and follow the minimum impact development guidelines identified in the Innovative Land Use Handbook, Post-construction (Permanent) Stormwater Management Model Ordinance. These practices include, for example, limiting site grading to a maximum cut-and-fill of 10 feet, retaining a minimum of 50 foot "no disturbance" vegetated buffer to surface waters, and ensuring that stream crossings meet the NH Fish and Game guidelines.

The DES Land Development Best Practice Guideline also calls for projects to estimate their pollutant load reduction using the DES simple spreadsheet method and to select treatment approaches that maximize pollutant load reductions for their project and site conditions to the extent practicable.

Documentation for Stormwater Management: The basic documentation required includes a site plan including the proposed stormwater management structures and summary describing how the plan and proposed management structures compare to the best practice guidelines. In addition, participants are asked to provide some information on the expected treatment performance of their stormwater management approach. Treatment documentation may include study results of similar designs, an analysis using the DES simple method spreadsheet analysis showing how the performance of the selected treatment approach compares to alternative options, or other modeling of the expected treatment performance (see Exhibit 3). Future IPI participants may be asked to either conduct their own wet-weather sampling (per EPA-approved protocol) within one-year of completing construction or authorize DES to conduct the sampling to provide for longer-term measures of environmental benefits.

EXHIBIT 3
Stormwater Management Best Practice Guideline and Documentation

Topic Area	IPI Best Practice Standard	Documentation
Volume	Replicate natural runoff volume (greenfield projects): Post-development total runoff volume = 90-110% of pre-development total runoff volume for "good, woods" (for 2-, 10-, 25- and 50-year, 24-hour storms) Reduce runoff volume (redevelopment): Total run-off volume with redevelopment is 90-110% of undeveloped run-off volume (for "good, woods") **OR** is at least 60% below current developed run-off volume	Provide calculations based on NRCS method (TR 20 Storm Events), using a land use condition of "good, woods" as pre-development baseline
Peak Flow (Channel Protection)	Where natural runoff volume is maintained, post-development peak flow ≤ pre-development peak flow, otherwise post-development peak flow ≤ 50% of pre-development peak flow for 2-yr, 10-yr, and 50-yr, 24-hr storm event	Provide calculations per AoT Standards, based on Natural Resource Conservation Service (NRCS) methods (TR 20 or TR-55)
Recharge (infiltration)	Maintain natural, pre-development infiltration (all projects): Infiltrate greater than or equal to annual Groundwater Recharge Volume per Env-Wq 1504.11 (unless prohibited)	Provide design and calculations, per AoT standards, to infiltrate Groundwater Recharge Volume per Env-Wq 1504.11
Evapotranspiration and Vegetation	Use vegetated stormwater capture/treatment (e.g., bioretention) to maintain evapotranspiration (all projects) Use dispersed, smaller-scale infiltration and/or capture/treatment stormwater facilities throughout developed area (all projects) 20% of site is vegetated with native species (required for greenfield projects only)	Provide calculations and demonstrate evapotranspiration through vegetated stormwater management. Demonstrate dispersed treatment and vegetated cover on development plan.

EXHIBIT 3
Stormwater Management Best Practice Guideline and Documentation

Topic Area	IPI Best Practice Standard	Documentation
Redevelopment Project or Project below the AoT Permit Threshold	Implement treatment technology per design specifications in Env-Wq 1508 for treatment of Water Quality Volume (WQV) or Water Quality Flow (WQF). Select an appropriate technology to treat total suspended solids (TSS), nitrogen, and/or phosphorus, as applicable.	Demonstrate compliance with AoT standards for design of stormwater treatment practices per Env-Wq 1508. Describe how the selected treatment approach is an appropriate treatment option.
Projects Subject to AoT Permit	Implement treatment technology per design specifications in Env-Wq 1508 for treatment of Water Quality Volume (WQV) or Water Quality Flow (WQF) or at least 90% of stormwater runoff volume, which ever is greater. Demonstrate that the proposed stormwater treatment provides for the greatest practicable reduction of total suspended solids (TSS), nitrogen, and/or phosphorus, as applicable.	Demonstrate compliance with AoT standards for design of stormwater treatment practices per Env-Wq 1508. Use previous studies, DES Water Quality Simple Method spreadsheet, or other water quality analysis method to document that the selected treatment provides for the greatest practicable expected treatment.
Inspection and Maintenance (All Projects)	Prepare an Inspection and Maintenance Plan, including designated authorities to conduct activities and legal authority to effect corrections.	Submit a copy of the Inspection and Maintenance Plan

Energy Efficiency

Best Practice Guideline

25-30% More Efficient

than

International Electric Conservation Code (IECC) 2006

or ASHRAE 90.1 2004 Standard

Buildings consume significant amounts of energy, which can increase air pollution and greenhouse gas emissions. Promoting increased energy efficient design of buildings and sites (including solar orientation and landscaping) reduces these impacts. Buildings in the United States are responsible for 40 percent of energy consumption and 39 percent of CO_2 emissions[3]. As discussed in the New Hampshire Climate Action Plan (2009), to have a significant impact on energy use, buildings must improve energy efficiency dramatically.

The DES Land Development Best Practice Guideline for Energy Efficiency is **25-30% more efficient than the International Electric Conservation Code (IECC) 2006 or ASHRAE 90.1 2004** standard for residential, mixed use, and commercial structures. This level of performance is recommended by the Energy Efficient Codes Coalition and Architecture 2030. It is also consistent with recommendations made in the NH Climate Action Plan. As of April 2010, the required energy code in New Hampshire is IECC 2009. Residential structures built to IECC 2009 are estimated to be about 15% more energy efficient than those built to IECC 2006.[4]

An additional aspect of the best practice guideline is to regularly monitor, maintain and adjust the building's systems to ensure that the expected level of energy efficiency is achieved and maintained.

"Standard 189.1 can lead to significant energy savings. The U.S. Department of Energy, through the National Renewable Energy Laboratory, has made a preliminary estimate based on Standard 189.1 as published. Applying the minimum set of prescriptive recommendations in the standard resulted in weighted average site energy savings of 30% when compared to Standard 90.1-2007."

"Code Green: Standard 189.1 Comes at a Crucial Time," Peterson, Kent, published in *High Performing Buildings*, Spring 2010.

For non-residential buildings, developers/designers are referred to Section 7, in ASHRAE Standard 189.1-2009, for specific design recommendations to meet the above performance goal. Standard 189.1-2009 addresses seven major categories: envelope requirements, on-site renewable energy systems, mechanical equipment efficiencies, ventilation, energy consumption data collection, peak load control and lighting. Each of these areas has been identified as a critical component in addressing the efficient use of energy in the design

[3] USGBC Alabama (http://www.usgbcofal.org/leed-quick-facts.php)

[4] The 2009 IECC will produce approximately 15% in residential energy-efficiency gains compared to the 2006 edition, according to the International Code Council and U.S. Department of Energy (http://media.iccsafe.org/geo/docs/IECC_energycodesupportprogram-overview.pdf).

of high-performance, green buildings. The energy requirements in Standard 189.1-2009 are built upon those in ASHRAE Standard 90.1-2007.

Developers/designers can look to the Silver Level of Chapter 7, Energy Efficiency of the National Green Building Standard (ICC-700-2008) to meet the above performance goal for mixed use and residential buildings not covered under ASHRAE 189.1-2009. Many of the mandatory measures found in the National Green Building Standard are consistent with the International Energy Conservation Code (IECC). The National Green Building Standard uses IECC 2006 as a baseline. The National Association of Home Builders Research Center expects a Silver Level certified home to be 30% above IECC 2006; the Bronze Level is expected to be about 15% better than IECC 2006.

Comparison of Alternative Energy Standards

Standard	% Greater Energy Efficiency Compared to IECC 2006 or ASHRAE 90.1-2004
IECC 2009 (commercial)	5% [a]
IECC 2009 (homes)	15% [a]
ASHRAE 90.1-2007	6.9% [b]
ASHRAE 189.1-2009	24.5% [c]
LEED-NC 3.0 (commercial)	16% [d]
Energy Star (homes)	28% [e]
ICC 700 National Green Building Standard – Bronze Level	15% [f]

[a] http://media.iccsafe.org/geo/docs/IECC_energycodesupportprogram-overview.pdf
[b] http://www.energycodes.gov/status/documents/determinations_com_quantitative070.pdf
[c] http://www.eei.org/meetings/meeting%20documents/gettingagriponnewenergygreenbldgcodes.pdf
[d] Based on USGBC estimate that LEED-NC is about 10% better than ASHRAE 90.1-2007 for commercial buildings and ASHRAE estimate that ASHRAE 90.1-2007 is about 7% more efficient than ASHRAE 90.1-2004 (see http://www.eei.org/meetings/meeting%20documents/gettingagriponnewenergygreenbldgcodes.pdf)
[e] http://www.energystar.gov/index.cfm?c=new_homes.hm_index and http://media.iccsafe.org/geo/docs/IECC_energycodesupportprogram-overview.pdf
[f] NAHB (see http://www.nahbgreen.org/ngbs/default.aspx)

Documentation for Energy Efficiency: Estimated Annual Energy Use, Peak Energy Demand and CO_2 emissions vs. a baseline standard (IECC 2006 or ASHRAE 90.1 2004) using International green Construction Code (IgCC) Section 603.1 or another equivalent modeling tool. Residential developers are encouraged to use the National Association of Home Builders (NAHB) Green Scoring Tool results to demonstrate that the residential building meets NAHB Green Building Silver Level performance. In the future, IPI participants may be asked to provide information on actual annual energy usage to compare with the estimated usage.

Water Conservation

Best Practice Guideline

20% Lower Water Use

than

International Plumbing Code (IPC) 2009

Increased demand for water is identified as an important underlying challenge in the New Hampshire Water Resources Primer (2008). Available fresh water amounts to just over one-half of one percent of all water on earth[5]. It is estimated that the global consumption of water is doubling every 20 years, more than twice the rate of human population growth[6]. Locally, using excessive amounts of water can result in increased pumping and treatment rates and can also overburden sewage treatment plants when that water is discharged after use. Indiscriminate use and poorly designed water infrastructure lends to higher costs to the city, town and taxpayer. Water efficiency also helps consumers save both water and money, encourages innovation in manufacturing and private investment in water efficiency, and trims energy costs for both households and utilities by reducing the amount of energy required to pump, treat, deliver, and heat water.

The DES Land Development Best Practice Guideline for Water Conservation is **20% lower water use than under the International Plumbing Code (IPC)** for residential, mixed use, and commercial structures. The ASHRAE Standard 189.1-2009 (Section 6, Water Use Efficiency) is recommended as a good resource to guide water conservation efforts for new and renovated non-residential buildings. In 1992, the Energy Policy Act (EPAct) established minimum water-efficiency levels for fixtures, fittings and appliances. Compared against this baseline, the water conservation requirements in Standard 189.1-2009 are about 40% more efficient.[7] Standard 189.1-2009 is expected to be about 20% more efficient than the required plumbing code in New Hampshire; International Plumbing Code (IPC) 2009.[8] In addition to plumbing fixtures, fittings and appliances, Standard 189.1-2009 addresses site design, irrigation systems, HVAC systems and equipment.

For new homes, designers/developers are encouraged to look at EPA's WaterSense Single Family New Home Specification 2009 for indoor and outdoor water use practices and homeowner education to achieve the above best practice goal. To qualify under WaterSense, a new home must feature WaterSense labeled plumbing fixtures, efficient hot water delivery systems, and well designed yards using less water. The WaterSense Specification, developed by working with builders, utilities, trade associations, manufacturers and landscape and irrigation professionals is expected to reduce water consumption by 20% from that of a standard new home.[9]

[5] Climate Institute (http://www.climate.org/topics/water.html).
[6] Water Quality and Health Council (http://www.waterandhealth.org/news_center/03-21-01.html)
[7] http://www.ashrae.org/file%20Library/doclib/public/20100412_1891overview.ppt
[8] http://www.epa.gov/watersense/docs/matrix508.pdf
[9] www.epa.gov/watersense/docs/home_finalspec508.pdf

Additional best practices to promote efficient water use and water conservation is for water systems to install metering as specified in Section 705 of the *International green Construction Code* Public Version 1.0 and the *Manual of Water Supply Practices, Water Meters-Selection, Installation, Testing, and Maintenance* (document AWWA M6, American WaterWorks Association, 1999) and to implement a water audit and leak detection program in accordance with the *Manual of Water Supply Practices, Water Audits and Leak Detection* (document AWWA M36, American Water Works Association (AWWA), 1999). Unaccounted for water use should be less than 10% based on a water audit conducted within 365 days of occupancy.

Documentation for Water Conservation: Estimated water savings using International green Construction Code (IgCC) Public Version 1.0, Section 702.1.11 or another equivalent modeling tool. For residential projects, participants should submit an architect certification that the new home(s) conform to the WaterSense Specification. In the future, IPI participants may be asked to provide information on actual annual water use (total and per capita) to compare with the estimated usage and to conduct and submit annual water audits.

References

The following "green" standards and supplementary materials were reviewed in development of the Best Practice Guidelines.

ANSI/ASHRAE/IESNA 90.1-2004 American National Standards Institute/American Society of Heating Refrigeration & Air-Conditioning Engineers/Illuminating Engineering Society of North America
http://www.techstreet.com/ashrae/standards/ashrae/90_1_2004?product_id=1199725&ashrae_auth_token=

ANSI/ASHRAE/IESNA 90.1-2007 American National Standards Institute/American Society of Heating Refrigeration & Air-Conditioning Engineers/Illuminating Engineering Society of North America
http://www.techstreet.com/ashrae/cgi-bin/detail?product_id=1577325

ANSI/ASHRAE/USGBC/IESNA 189.1-2009
American National Standards Institute/American Society of Heating Refrigeration & Air-Conditioning Engineers/US Green Building Council/Illuminating Engineering Society of North America
http://www.ashrae.org/resources--publications/bookstore/standard-189-1

ANSI approved ICC-700-2008 National Green Building Standard International Code Council/National Association of Home Builders
http://www.nahbgreen.org/Certification/ngbs.aspx
http://www.nahbgreen.org/NGBS/default.aspx

Architecture 2030
http://www.architecture2030.org

California Energy Commission 2008 Building Energy Efficiency Standards for Residential and Nonresidential Buildings
http://www.energy.ca.gov/title24/2008standards/

Energy Efficient Codes Coalition
http://www.thirtypercentsolution.org/

Energy Policy Act of 1992 (**EPAct 1992**)
http://www.ferc.gov/legal/maj-ord-reg/epa.pdf

Energy Star US Environmental Protection Agency/US Department of Energy
http://www.energystar.gov/

Env-Wq 2101 NH Department of Environmental Services Water Conservation, Use Registration and Reporting
http://des.nh.gov/organization/commissioner/legal/rules/documents/env-wq2101toc.pdf

Innovative Land Use Planning Techniques: A Handbook for Sustainable Development
NH Department of Environmental Services, New Hampshire Association of Regional Planning Commissions, New Hampshire Office of Energy and Planning, and
New Hampshire Local Government Center
http://des.nh.gov/organization/divisions/water/wmb/repp/innovative_land_use.htm

International green Conservation Code (IgCC)
American Institute of Architects (AIA)/ASTM International/Partnered with ANSI, ASHRAE, USGBC, IESNA
http://www.iccsafe.org/CS/IGCC/Pages/default.aspx

International Energy Conservation Code 2006
International Energy Conservation Code 2009
International Plumbing Code 2006
International Plumbing Code 2009
http://www.nh.gov/safety/boardsandcommissions/bldgcode/documents/BCRBwebnotice3-10.pdf

LEED for Neighborhood Development 1st Public Draft – October 31, 2008
http://www.usgbc.org/DisplayPage.aspx?CMSPageID=148

LEED V2.2 for New Construction and Major Renovations
LEED V3 for New Construction and Major Renovations
US Green Building Council
http://www.usgbc.org/DisplayPage.aspx?CMSPageID=220

Low Impact Development Information and Guidance Manuals Available from U.S. Environmental Protection Agency
http://water.epa.gov/polwaste/green/index.cfm

Market Barriers to Green Development Initiative
EPA Region 5
http://www.delta-institute.org/marketbarriers/

Methods for and Estimates of 2003 Projected Water Use in the Seacoast Region, Southeastern New Hampshire
US Department of the Interior/US Geological Survey
http://pubs.usgs.gov/sir/2007/5157/

Mount Washington Resort Residential Sustainability Guidelines
http://www.mtwashington.com/pdfs/five_year_sustainability_plan_executive_summary.pdf

NAHB Model Home Green Building Guidelines
http://www.nahbgreen.org/NGBS/default.aspx

National Consensus Green Building Investment Underwriting Standards; Commercial Buildings
http://www.capitalmarketspartnership.com/UserFiles/Admin%20Abstract%20-%20Green%20Building%20Underwriting%20Standard.pdf

NH Climate Action Plan
http://des.nh.gov/organization/divisions/air/tsb/tps/climate/action_plan/nh_climate_action_plan.htm

NHDES RSA 485:61 NH Safe Drinking Water Act
http://www.gencourt.state.nh.us/rsa/html/L/485/485-61.htm

NH Green Building Guidelines
http://www.buildgreennh.com/pages/certification-guidelines

NH Water Resources Primer
http://des.nh.gov/organization/divisions/water/dwgb/wrpp/primer.htm

New York State Department of Transportation GreenLITES Project Design Certification Program
https://www.dot.ny.gov/programs/greenlites

The Chicago Standard City of Chicago, Illinois
http://futuregreenchatham.com/pdf/chicagostandard.pdf

The Living Building challenge V 1.3
https://ilbi.org/lbc/prior (V 2.0 - https://ilbi.org/lbc/standard)

The Sustainable Sites Initiative American Society of Landscape Architects/Lady Bird Johnson Wildflower Center/United States Botanic Garden
http://www.sustainablesites.org/

WaterSense New Home
US Environmental Protection Agency
http://www.epa.gov/watersense/docs/home_finalspec508.pdf

Attachment 5: Integrated Permitting Pilot Project Case Studies

Altaria, Lebanon, NH

Cotton Mill, Nashua, NH

INNOVATIVE PERMITTING INITIATIVE

PILOT PROJECT CASE STUDY

Altaria

A Mixed Use, Planned Unit Development - Lebanon, NH

Summary of the Project

This project involves a 300-acre parcel of land on a major state road located near the Dartmouth-Hitchcock Medical Center. The developer proposed to develop 66 acres in two phases. Phase one is a high-density, mixed-use urban node that is expected to include a LEED-silver hotel on a "downtown" street area with retail, commercial, and residential spaces, as well as a central park area. Phase two includes high-density housing near the mixed-use downtown and an office park. The remaining 223 acres are to be set aside for conservation.

The New Hampshire Department of Environmental Services (NHDES) worked with the Altaria project under the Innovative Permitting Initiative, or IPI, a grant-funded effort to explore alternative approaches for working with land development projects requiring multiple permits from NHDES.

Proposed Mixed-Use "Downtown"

Innovative Permitting Initiative Pilot Program

Key activities conducted as part of IPI pilot program included:

1. NHDES IPI staff coordinated a pre-application meeting with staff from multiple NHDES programs and other state and Federal agencies with review/regulatory authority over the project (i.e., NH Division of Historic Resources, NH Department of Transportation, NH Fish and Game, USEPA, USACOE), the developer, and the developer's engineer. This pre-application meeting was valuable in identifying additional necessary reviews and potential issues on the site (e.g., potential archeological resources at the site that would require a higher-than-typical level of evaluation; possible contamination from prior activities, blasting notification and compliance requirements, and treatment of stumps).

2. IPI staff organized a coordinated pre-application site visit involving staff from the NHDES wetlands and alteration of terrain programs, a wetland scientist and engineer for the developer, and a wetland scientist representing the municipality. The site visit was helpful in resolving questions regarding wetland boundaries, potential vernal pools, and design options for minimizing wetland impacts. The site visit also confirmed the value of the resources proposed to be conserved (as mitigation for wetland impacts.

3. The NHDES technical review of the wetland and the alteration of terrain (AoT) (stormwater management) permit applications was conducted by a single reviewer, and closely coordinated with the wetlands mitigation coordinator and Federal agencies. NHDES permit staff reviewed preliminary AoT plans (prior to a formal application being submitted) in conjunction with the formal wetlands permit application review to ensure a coordinated response.

4. IPI staff prepared summary reports from the pre-application meeting, site visit, and technical review meeting.

5. IPI staff worked with wetlands staff and applicant to resolve violations identified during the site visit, including the development of an erosion control plan to stabilize the site, and avoid formal enforcement action.

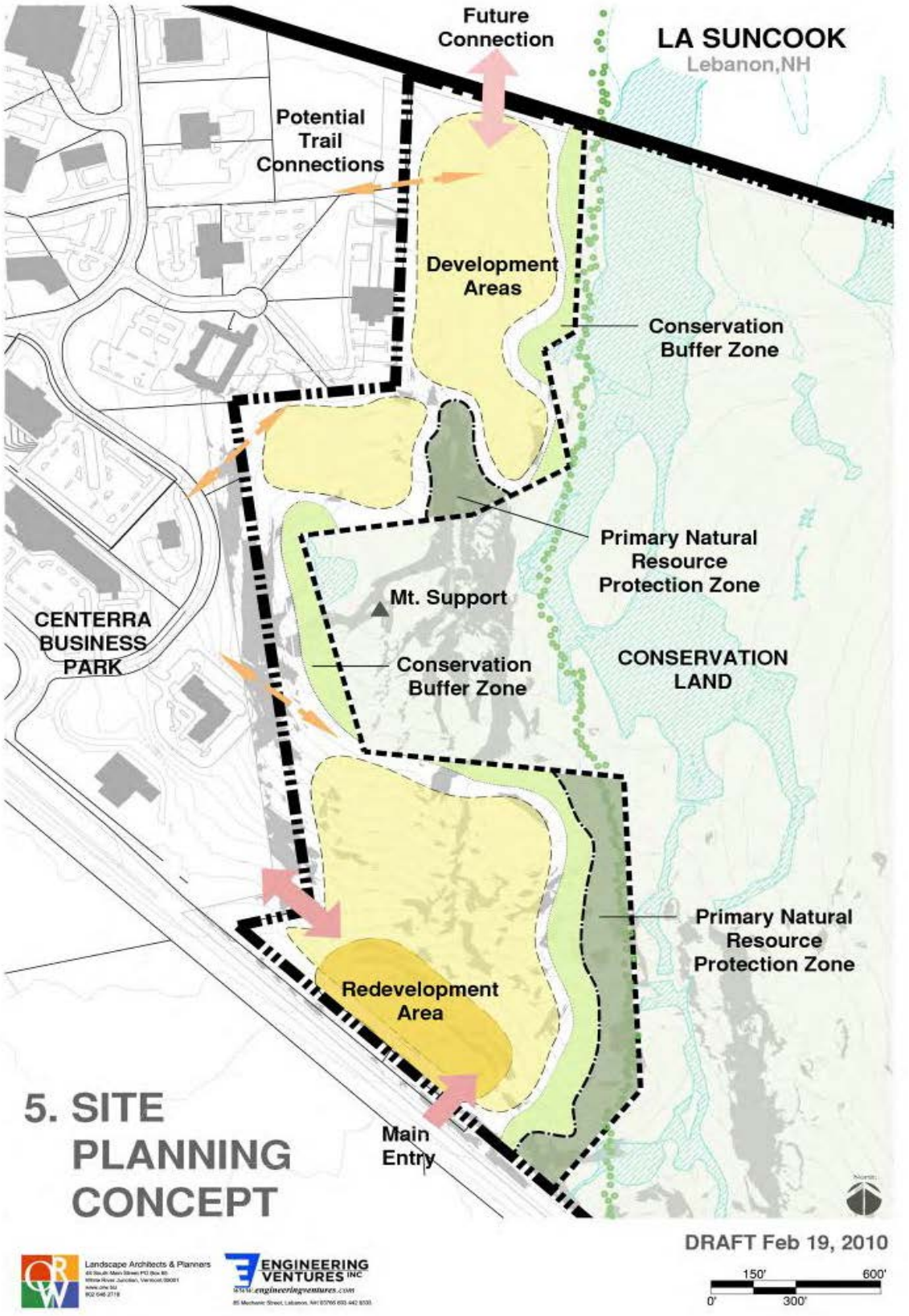
6. IPI and NHDES wetlands program staff coordinated with Federal entities involved in the review (EPA and ACOE) to resolve permitting issues (e.g., Historic Preservation Act review; agreement on an innovative, alternative wetlands mitigation package).

7. IPI staff provided assistance to the applicant in working with other state agencies to support the applicant in gaining full project approval (e.g., understanding NH DOT and Division of Historic Resources requirements, identifying appropriate contacts).

8. IPI staff provided assistance to the applicant in evaluating and responding to local requirements (e.g., understanding the requirements for inter-municipal sewage treatment).

NHDES involvement supported the developer's vision to revise the zoning at the subject property to allow the compact, mixed-use development as an option. The applicant had been working with the municipality for several years and it would have been relatively easy for the developer to have instead proposed to construct a new housing subdivision of 2-3 acre lots. Fortunately, the developer has been patient and persistent in pursuit of their vision.

Identification of Proposed Development & Conservation Areas for Altaria Project



Benefits and Lessons Learned under Pilot Program

Questions of Policy and Procedure for Pre-Application Meetings and Site Visits:

While the pre-application meetings and coordinated site visit were useful in resolving certain issues, the applicant was concerned that this higher-level of attention might result in a higher-level of scrutiny of the proposed project and, as a result, additional requirements. This concern was valid to a certain extent. Issues regarding erosion control and pre-existing impacts to wetlands immediately surrounding the existing buildings were identified during the pre-application site visit. As a result, the applicant was required to prepare and implement a remediation plan, which had to be reviewed and approved by NHDES separate from the permit application, to immediately address these issues. This situation could have resulted in formal enforcement (e.g., LOD or fine) had the applicant not responded promptly and completely. Similarly, additional wetlands were identified that were not previously mapped, resulting in a higher level of direct impacts and requiring additional time and expense for the developer's engineers and wetlands scientists to revise the delineation, alter the designs, and define an acceptable mitigation package. Also, the group of wetlands experts could not reach consensus on all the questions in the field (e.g., whether an area represented a wetland seep or an intermittent stream) – agreeing to leave the final determination up to the wetland professional who would sign the delineation submitted with the wetlands application.

The lack of clear policy and procedure on how to handle these situations was disconcerting for both IPI staff and the applicant – as each issue needed to be discussed at some length to settle on the appropriate course of action. It would be helpful to have clear policies and procedures for how these types of issues are to be handled by regulatory staff (e.g., Should there be a certain level of enforcement immunity except for egregious violations? What issues need to be immediately

resolved versus addressed as part of the proposed development plans? Who has the final say regarding delineation and classification questions in the field?).

Project Issues & Local/State Interactions

Projects of this nature involve many types of reviews and approvals at both the local and state levels; the Altaria project is no exception - and seemed to involve many more complicating factors than a typical project! Unfortunately, the Altaria experience appears to be more common than one might expect – only the specific issues in play for any particular project will vary. There appears to be significant opportunity for streamlining and improved coordination on issues involving both local municipalities and state agencies. Some of the issues that the Altaria developer needed to resolve for their project to move forward included:

Wastewater Treatment The developer had to wait over 2 years for a new inter-municipal wastewater treatment agreement to be negotiated by the towns of Lebanon (where the project site is located) and Hanover (where the treatment plant is located). Although other developments in this area of Lebanon are serviced by Hanover Wastewater Treatment Facility (WWTF), the exact limits of the service area needed to be resolved to ensure that the entire Altaria project would be included, among other conditions. Additionally, Lebanon had not previously mapped the wastewater piping system or installed flow meters and initially asked the Altaria project to fund the entire cost of mapping and installing flow meters throughout the Lebanon system (the applicant did provide about $40,000 toward these efforts as an exaction under their local approval). Even though the state Department of Environmental Services requires an engineering review of all systems connecting to a public WWTF and there is a federal permit requirement for WWTFs, there was no state or federal level regulatory requirement or oversight of the towns regarding the need for, timing of, or specifics of their inter-municipal agreement or minimum mapping/metering, except that the final inter-municipal agreement needed to be

approved by the NH Attorney General. This left the developer on their own to resolve these issues with the two municipalities - and wait patiently.

Traffic There were pre-existing concerns regarding traffic levels along the main road by the development site, particularly focused on significant back-ups at the exit from the highway, several miles away. Local concerns regarding traffic, and the additional pressure from this project and other developments coming through the review pipeline, led to many discussions between the developer, the state Department of Transportation, the regional office of the NH DOT, municipal Public Works, and the regional planning commission. The municipality initially wanted the developer to fund the entire cost of a corridor study along the Route 120, to be funded through the NH DOT, and conducted by the regional planning commission. The developer sought to negotiate a fair contribution to the study, even though the traffic studies for his project showed a net decrease in traffic at the highway exit (because the project resulted in mostly reverse commute trips - to the highway not from it - or travel within the immediate vicinity). Direct conversations between the developer and the state DOT office, including the DOT Commissioner, were required to resolve these issues.

Historic Resources – Section 106 Review The applicant was asked to complete a historic resource assessment of the property due to a prior archeological finding on a remote portion of the site. Interestingly, the area of concern was located well away from the proposed area of development and in an area proposed to be permanently conserved as part of the project. There was some uncertainty regarding the scope and level of investigation that would be required, with the Division of Historic Resources asking for a more thorough study of the entire property. The Army Corps of Engineers indicated that the developer need only evaluate the area of proposed disturbance and development.

Wetland Impacts The project was subject to both local and state level review and approval of the proposed impacts to wetlands. The local review process involved several boards (conservation commission, zoning board of adjustment, and planning board) and hinged on the applicant submitting its application to NHDES for the state wetlands permit. The extended timeframe for moving through the local process controlled the timing of the state application submittal - forcing the applicant to submit the state application before it was ready. As a result, in order to allow the applicant time to satisfactorily resolve the historic resource review and mitigation issues, extra steps were required under the state review process to extend the NHDES application timeframe to make a decision.

The potential for the project to impact vernal pools is another issue that was addressed - this is an issue of particular concern under Federal wetlands review. However, the requirements for when an applicant must conduct a specific vernal pool assessment (or other assessment of potential impacts, such as for a threatened or endangered species) are unclear for applicants. The need for a vernal pool assessment, in particular, can disrupt the submission/review/approval process for a project since the vernal pool assessment to confirm a pool's presence and productivity must be completed during a narrow timeframe in the spring. Some concern was expressed that local municipalities might, without sufficient justification, use the investigation of potential vernal pools or further wetland characterization, as a means to delay review and approval of a project. Despite the long tradition of "local control" over land development issues, the applicant suggested that it would facilitate the review process to have the state serve as the ultimate authority regarding determinations and the need for further investigation in situations where a developer's and a municipality's wetland scientists do not agree.

Stormwater Management is subject to local, state, and federal requirements, and is often addressed by multiple programs and agencies. It can be challenging for

applicants to understand and successfully navigate through this complicated, and sometimes conflicting and duplicative, web of regulation.

- The state stormwater review does not cover the development and management of stormwater from individual lots within a subdivision or office park situation. However, because individual lots are associated with the larger project, they are required to submit an application and receive a permit from NHDES.
- The state stormwater review (under the Alteration of Terrain Program) does not relieve the applicant from complying with federal stormwater NPDES notification requirements and standards.
- There was some inconsistency noted in the NHDOT design standards for the driveway access onto the state highway and the NHDES stormwater design requirements.
- Similar, but slightly different, erosion and sediment control plans and other management plans are required by multiple NHDES permit programs (i.e., alteration of terrain, wetlands), as well as under the federal NPDES program.

Other Issues of Consideration This project also required consideration of several other issues, most of which were subject to both local and state review and/or approval:

- Stumps that are dumped off site are subject to additional state-level requirements; stumps buried on site and not within 75 feet of a drinking water supply are not considered solid waste.
- Blasting activities are subject to review and requirements by the town, NH Department of Resources and Economic Development, and NHDES (including a review of potential groundwater impacts).
- Rock crushing operations are subject to state registration and permit requirements - as well as local standards.
- As the property had been previously occupied by an industrial client, the applicant was encouraged to conduct a Phase 1 Site Assessment using

ASTM methodology and hazardous building materials survey to identify any environmental issues/concerns (e.g., unidentified contamination, asbestos-containing materials, PCB-containing materials, and lead-based paint).

Conclusion

The extra assistance from the internal NHDES project contact and coordinator under the IPI pilot program proved valuable to the applicant. However, the time requirement was substantial - existing staff within NHDES permit programs would not be able to assume this type of role under current workloads. Staffing and program procedure changes also would be needed to easily support the provision of timely assistance, improved coordination, and "fast-tracked" technical review for selected projects.

Improvements in state NHDES processes and staffing alone will not be sufficient incentive to support green development projects. There are significant process barriers for these, and all types of projects, in navigating through the numerous and, at times, lengthy local, state, and federal review and approval processes. Although many of these challenges exist for any large-scale development, there appear to be additional difficulties for innovative, and "green" development projects, such as the compact, mixed-use project proposed by Altaria, due to the lack of familiarity with and acceptance of alternative development options and innovative designs at the municipal level in New Hampshire.

INNOVATIVE PERMITTING INITIATIVE

PILOT PROJECT CASE STUDY

Cotton Mill - Nashua, NH

A Downtown Historic Mill Redevelopment for Affordable Housing

Summary of the Project

This project aims to redevelop an existing historic mill building into a mixed-income residential property with affordable and market rate units. The 5.75 acre parcel, which will be subdivided, is adjacent to the Nashua River in downtown Nashua. Two other buildings, along with the annex on the mill building, are to be demolished. The site has contaminated soils and groundwater, and presumes lead paint and asbestos issues in the mill building. The project represents an unusual yet forward-thinking partnership between a private for-profit developer and the City. The City is focusing on redeveloping this area and has worked with the applicant to secure funding to resolve contamination at the site, has provided other funding and grants in support of the project, and plans to connect the property to the City's new River Walk system.

Because the property is in a 100-year floodplain, the project proposed to modify the Jackson Falls Dam downstream to allow for higher flows during storm events. This will allow for an adjustment to the 100-yr floodplain boundary and remove the Cotton Mill property from floodplain.

The project applied for and received both affordable housing tax credits and historic resource tax credits. The tax credits and financing from Housing and Urban Development (HUD) were necessary to support the financial viability of the project, but introduced additional constraints related to the timing and conditions of those programs. For example, properties located within the mapped 100-yr floodplain are not eligible for HUD financing - which led to the applicant assuming a lead role in the effort to modify the Jackson Falls Dam to remove this and many other properties in downtown Nashua from the floodplain. The pursuit of the dam modification required an extended negotiation and agreement between the private developer, the City of Nashua (who owns the dam), and Essex Power, who operates the hydroelectric facility at the dam under a long-term lease that was due to expire in 2014.

The New Hampshire Department of Environmental Services (NHDES) worked with the developers of the Cotton Mill project under the Innovative Permitting Initiative, or IPI, a grant-funded effort to explore alternative approaches for working with land development projects requiring multiple permits from NHDES and to support and encourage green development practices.

Innovative Permitting Initiative Pilot Program

Key activities conducted as part of IPI pilot program included:

9. NHDES IPI staff coordinated a pre-application meeting with staff from multiple NHDES programs including wetlands, alteration of terrain, hazardous waste/Brownfields, petroleum contamination & remediation, wastewater engineering, asbestos (air), and dam bureaus. Other state and Federal agencies

with review/regulatory authority over the project were involved in follow-up pre-application discussions, including the NH Division of Historic Resources, which conducts Section 106 historic resource reviews, NH Department of Transportation, NH Fish and Game, US Environmental Protection Agency's Wetlands Program, and the US Army Corps of Engineers. The pre-application meetings were valuable in identifying necessary state and federal permits, reviews, approvals, potential regulatory issues and the expected project schedule. For example, the applicant was advised to prepare a contingency work scope and remediation budget in the event that petroleum contaminated soil was encountered during excavation for water main/wastewater infrastructure. The major findings and recommendations of this pre-application meeting and all discussions were documented by the IPI staff. NHDES staff later referred to these notes in their review of the final wetlands application for the dam modification project.

10. NHDES IPI staff coordinated a meeting to discuss and resolve issues about the state wetlands and alteration of terrain permit applications. Staff from NH Fish and Game, the City of Nashua Planning Department, and NHDES technical staff met to resolve concerns about potential impacts to threatened and endangered species (turtles and eagles) associated with the re-development (i.e., proposed parking, drainage, and fencing) and removal of vegetation along the river. With all the involved parties together, an agreement on design changes to the project to resolve concerns was reached in a single meeting.

11. NHDES prepared alternative pollutant loading analyses of the proposed stormwater management controls and an alternative approach incorporating bioretention to capture and treat a portion of the stormwater from the site. The results of these analyses were discussed with the applicant to encourage them to explore using bioretention as part of their stormwater management approach (opportunities for infiltration were limited due to contamination). NHDES staff

used the DES Simple Method, a relatively simple spreadsheet that estimates loading of various criteria under different management approaches, for this analysis. A follow-up meeting was held to discuss options for the site's stormwater management and resulted in the applicant incorporating some bio-retention into their design, as practicable given site constraints.

12. NHDES staff spoke with the City of Nashua and the applicant, suggesting that the City re-evaluate its designation of the Nashua River as a prime wetland within its urban core. This designation imposes additional regulatory constraints within 100 feet of the wetland and conflicted with the City's previously received urban exemption from the state's Shoreland Protection Program for the same area.

13. NHDES IPI staff organized a second pre-application meeting focused specifically on the proposed modifications to the Jackson Falls Dam, which would require Federal Energy Regulatory Commission (FERC) approval and possibly other state and federal reviews and permits. This meeting involved the developers and their engineers; NHDES wetlands, water quality, and dam bureau staff; US ACOE; staff from the City of Nashua; and representatives of Essex Power, which currently leases and operates the electric generation facility at the dam. Efforts also were made to involve the NH Fish and Game department and the US Fish and Wildlife Service, as each also would be involved in the review of the applicants' request for an amendment to the FERC exemption for the modification of the dam structure.

View Across River from Inside the Mill Building
(Note historic walking bridge spanning the river that will be restored as part of City's river Walk project)

14. NHDES IPI staff arranged for the applicant and their engineers to meet with other state agencies

(NH Division of Historic Resources, NH Fish and Game, and NHDES) at the quarterly meeting of the Customer Service Initiative, a multi-agency group aimed at improving coordination and assistance for projects involving multiple state agencies.

15. FERC approval was required within an expedited timeframe for the applicant to maintain their affordable housing tax credits, which would expire if the project was unable to demonstrate likely approval for the dam modification. NHDES IPI staff coordinated the Department's response to the applicant's FERC submittal to assure the timely review of their FERC amendment application.

16. The NHDES Commissioner's Office approved the applicant's request to expedite the final state wetlands permit application review in support of a financing deadline for the project.

Prior to NHDES involvement, the applicant had previously received wetlands and alteration of terrain permits for a different development proposal at the Cotton Mill site. Due to the substantial changes in the development plan, new permit applications were required.

Benefits and Lessons Learned under Pilot Program

Value of In-Department Single Point of Contact and Coordination. The number of issues and complications associated with this project - including both the historic mill redevelopment and the modification of the dam - truly demonstrated the value for the applicant to have a single point of contact and internal "coordinator" within the department and within state government. The applicant placed numerous calls to the IPI staff for assistance in understanding requirements, identifying appropriate contacts, ensuring that their consultants had provided the department with the necessary information, and ensuring that they obtained the necessary response from the

department, often within tight timeframes. The value of the IPI coordination was initially questioned by the applicant's stormwater engineer; however, this same engineer later asked who he should contact within the department regarding another project he was working on that he felt would benefit from this same approach.

Value of Pre-Application Technical Review of Proposed Project Plans and Preliminary Engineering. As this project had received both wetlands and alteration of terrain (stormwater) permits from NHDES previously, IPI staff did not require the applicant to submit draft plans and participate in a pre-application technical review to identify and resolve any outstanding issues. As a result, additional meetings between NHDES, the applicant, and other entities were needed to resolve issues during the final application review process - lengthening the approval timeline and requiring significant revisions to the engineering plans for the project. This experience served to validate the need for and value of a pre-application technical review meeting as proposed by the IPI. The use of the stormwater loading analysis to demonstrate the environmental value of alternative ideas for stormwater management also proved useful. More significant changes and improvements to the stormwater management plan for the project might have been possible if earlier consultation and discussion had occurred.

Project Issues & Local/State Interactions

Redevelopment and "green" development projects of this nature typically involve many types of reviews and approvals at both the local and state levels. This project, however, likely involved more complications than most because it involved both a redevelopment of a historic structure on a contaminated site and a modification to a dam involving a hydroelectric power facility. The difficulty faced by the developer in moving this project along and securing the necessary funding, agreements, and approvals despite the extra support provided by local, state, and federal entities demonstrates the potential opportunity and significant value to streamlining and otherwise supporting projects that serve to provide substantial public benefits in addition to the private economic gain.

Some of the specific issues and complications that the Cotton Mill redevelopment and Jackson Falls Dam modification project faced included:

- Historic Resources – Section 106 Review The applicant worked with the NH Division of Historic Resources on both the Cotton Mill redevelopment and the modifications to the Jackson Falls Dam. Ultimately, all concerns were resolved.

- Wetland Impacts The Cotton Mill redevelopment project initially required a wetlands permit only due to the designation of the Nashua River as a prime wetland. Under the prime wetland designation, any activity within 100 feet of a wetland is considered "jurisdictional" subject to the required fee and NHDES review & approval. With the prime wetland designation, the Cotton Mill project would have been subject to a wetland permit fee of $22,000 for the redevelopment activity despite the area already having been disturbed and developed. There also was no provision in the wetlands statute or rules to waive the excessive fee under the circumstances. This issue was identified for the City of Nashua and since it would affect this and any future redevelopment along their river front in the downtown, they decided to remove the prime wetland designation from the urbanized area already exempt from the state Shoreland Protection program. As there were no other direct wetland impacts associated with the project, a wetlands permit was ultimately not required for the Cotton Mill project.

  A state wetlands permit was required for the dam modification, however.

Jackson Falls Dam

Although the NH state wetlands program operates in partnership with the federal wetlands permitting program, in this case, there was no parallel federal permit jurisdiction over the project had been deferred to FERC. Under the state wetlands permit for the dam modification, the applicant was required to address potential water quality impacts from contaminated sediments and ensure the flow regime after the modification would not affect upstream or downstream flooding during high flow events.

- Stormwater Management is subject to local, state, and federal requirements, and is often addressed by multiple programs and agencies. It can be challenging for applicants to understand and successfully navigate through this complicated, and sometimes conflicting and duplicative, web of regulation.
    - The Cotton Mill project highlights the needs for alternative standards to apply to redevelopment projects. The site currently has NO stormwater controls - draining directly to the Nashua River. Any stormwater management added by the redevelopment represents an improvement on current environmental conditions. Under current rules, NHDES was required to issue a waiver of current treatment and control standards for the project.
    - Nonetheless, the stormwater loading analysis showed potential slight benefit of incorporating bioretention into the proposed plan, which consisted of underground Vortex systems. In-line filters within the Vortex system would have improved pollutant removal but proved too expensive to be practicable.
    - As noted earlier, it is possible that a better stormwater management approach could have been defined had the applicant worked with NHDES more closely in advance of submitting their permit application. The lack of knowledge about alternative stormwater management practices on the part of the developer and limited experience of their

engineer with integrated bioretention systems within a highly-developed setting seemed to factor into the proposal to use a more conventional, underground system.

- During the alteration of terrain (AoT) permit review, NH Fish and Game raised habitat issues related to removal of the existing large trees and other vegetation along the river, the need to restrict turtle access onto the developed property, and the trapping of turtles due to vertical curbing on the site. It appears beneficial that multiple state permit programs include consideration of impacts to wildlife and habitat to ensure that such issues are addressed. Typically these sort of issues are addressed under a wetlands review but here were also identified and resolved during the AoT permit application review. A concern, however, is that if multiple permit applications are submitted sequentially instead of concurrently that duplicative or even different concerns and recommendations may be raised under different application reviews of the same activities.
- This project was subject to stormwater management review at both the local and state levels.

Conclusion

The extra assistance from the internal NHDES project contact and coordinator under the IPI pilot program proved valuable to the applicant. However, the time requirement was substantial - existing staff within NHDES permit programs would not be able to assume this type of role under current workloads. Staffing and program procedure changes also would be needed to easily support the provision of timely assistance, improved coordination, and "fast-tracked" technical review for selected projects.

Improvements in state NHDES processes and staffing alone will not be sufficient incentive to support green development projects or to adequately assist a complicated

project like the Cotton Mill/Jackson Falls dam project. There are significant process barriers for these, and all types of projects, in navigating through the numerous and, at times, lengthy local, state, and federal review and approval processes. Although many of these challenges exist for any large-scale development, there appear to be additional difficulties for projects seeking to do something out-of-the-ordinary, innovative, or "green." Despite a high level of support at the local, state, and federal level, the process and timeframe for review, funding, and approval for the Cotton Mill/Jackson Falls Dam project was complicated and lengthy. The IPI pilot project helped to illuminate the difficulties these types of "smart" and "green" projects face.

Attachment 6: Green Development Example Case Studies

The Nature of Things School Building

Gile Hile Condominiums

Weston Solutions, Incorporated

The Children's Museum of New Hampshire

GREEN DEVELOPMENT CASE STUDIES

The Nature of Things – 10 Groton Road, Nashua, NH

- A LEED Certified School Building -

Brief Description

The Nature of Things, which opened 15 years ago, is a farm-concept elementary school. Several high-performance "green" buildings are located on 3 acres of the 22 acre property, with the remaining 19 acres as pasture and undeveloped land. The green aspects of the school buildings and campus are used on a daily basis to teach about energy, conservation, recycling, water efficiency, earth science, biology, farming, sustainability, ecology, weather, economics, health and nutrition, community, collaboration, and critical thinking.

Goals of Project

- To build a campus that reflects the philosophy of the school – to integrate core curriculum areas with science while using the natural environment for inquiry, observation, and discovery.
- To provide a campus with plenty of natural outdoor space.
- To provide buildings free from chemicals, pesticides, and other hazards that also are warm and inviting, energy efficient, and healthy.

Description of Building Prior to Construction

The property was once home to a dairy farm that operated in the 18th century. Aside from a few farm structures, the site was mostly covered by pine forest.

Description of Building After Construction

Three acres were cleared and developed to build several "green" buildings, including a sustainable early childhood and elementary school campus, a working farm, two barns, and

a greenhouse. The historic barn still stands on the property and is used to teach farm and local area history.

"Green" Features

- Buildings meet strict criteria for site selection and sustainable building practices
- Low-flow plumbing fixtures
- Solar energy in the secondary building
- Heat-Recovery Ventilation system
- Radiant floor heating
- Open-loop geothermal system in the secondary building and a closed-loop geothermal system in the main building
- Utilization of recycled and local materials, including certified wood from sustainably-managed forests, cork floors, Vermont slate, and pine from the Ossipee pine barrens
- No materials containing toxins

Standard Used During Building

When the owners set out to build the campus, they didn't know about the Leadership in Energy and Environmental Design (LEED) standard until it was brought up by one of the engineers. The owners decided to follow LEED for their buildings, even though some people told them to abandon the idea. The secondary red building, which was built first, achieved LEED-platinum certification. The main white building, which was built two years after the secondary red building, followed the LEED for schools standard (although the owners did not apply for certification due to the cost of doing so).

Cork and locally-sourced wood stairs

Reason for Building "Green"

The concept of the school is to teach children about stewardship of the earth and empower them to make positive changes, so the owners wanted to lead by example and build a campus that followed the principles to be taught. The owners knew going into the project that they wanted to build "green," so they did not consider traditional building. They had leased a traditionally-built building for their school prior,

so they knew the problems they had had with a traditional building.

Cost versus Traditional Building

Initial

The owners invested a significant amount of their own time to educate themselves on "green" products and design options and to oversee the design and construction. Some "green" features, such as the solar-energy system, do represent a higher up-front cost, but those costs are offset by future energy savings.

Operational

It costs less than $2,000/year to pay for all the utilities on the campus, which is about 60% of what they were spending at their old, traditionally-built facility.

Unique Aspects of Project

- Despite being advised against it, the owners went to the neighbors and the city before purchasing property or beginning construction to discuss their plans and offer to take into account any advice or concerns. As a result, the owners gained support from the neighbors and community organizations, such as the Dunstable Land Trust. By going to the city prior to and throughout construction the owners were able to get advice along the way, including assistance on the design of their mechanical infrastructure, and had few difficulties with local permit approvals.
- After working with an architect on a design, the owners decided to abandon the initial design, serve as their own general contractor, and work directly with the subcontractors to ensure that their input was heard. In addition, by dealing with the subcontractors directly they were able to save money and therefore incorporate more “green” technology and materials.
- The staff is able to use the building as a teaching tool – for example, math and science can be taught using the solar panels and geothermal heating system.

Steps Taken to Complete Project

- The owners looked at many different companies and people in selecting an architect and builder. They found that the process was easier when they hired people who were unfamiliar with green building design but were eager to learn about it because then the owners were able to have more input throughout the process.

- The owners took a very active role during the design and building process. For example, the owners took on the task of reading every material data sheet for every possible material option in selecting the most appropriate “green” building materials.
- Two years after the red building was completed, construction began on the larger white building. This design and construction process was easier for this second building because 80% of the workers from the first building worked on the second building, so they were familiar with the “green” building process and it was far easier to get “green” materials because they had gained popularity.

Problems/Complications

- The owners were initially told that a LEED-Gold building would be too expensive. Ultimately, the owners abandoned the initial design in an effort to build a "greener" structure.
- The approval process for the geo-thermal system was uncertain - due to it being one of the first ones installed in the state - but the owners received assistance from state regulators to help them through the process.
- In the plans, the building was facing south instead of solar south, which would have prevented the building from gaining the solar energy it needed, so the building location needed to shifted slightly. The shift caused the building to encroach on the well radius, so the owners had to go to the city and then their neighbor, the Dunstable Land Trust, about changing the position of the well closer to the property boundary. Due to the positive relationship the owners built with their neighbors they received permission for the well radius to encroach on their land.

Hardest Part of the Process

- Learning the LEED criteria and process throughout construction
- Recognizing and avoiding green washing
- Being unsure of the environmental impact specifications and constantly being fearful of unknowingly breaking laws and/or regulations

- Managing the construction process and timing - for example, the connection of the utilities between the first and second buildings had to be timed for one week between school sessions!
- Keeping the project going and staying calm when problems arose

Benefits

- Cost savings on utility bills
- Minimal environmental impact – water consumption is low and the campus is carbon neutral
- More pleasant environment – natural daylight, comfortable air temperature, clean air quality
- Healthier students and staff – in the old building a lot of asthma medication had to be given to the children, but no medications have been needed in the new "green" buildings.
- Less absenteeism

Awards

- First non-residential Platinum LEED certified building in New Hampshire
- Business New Hampshire Magazine's winner of the 2010 Lean & Green Building Award

Advice for People Looking to Build "Green"

Building owners should take more ownership in the building process and be more proactive.

Contact

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Telephone # (603) 881-4815 ext. 1000

Resources

The Nature of Things. http://naturesacademy.com/redesign/campus/campus.html
http://naturesacademy.com/redesign/about_us/property.html

New Hampshire Fish and Game Department. Project Web, Fall 2011.
http://www.wildlife.state.nh.us/Education/Project_Web/WEB11_Fall.pdf

GREEN DEVELOPMENT CASE STUDIES

Gile Hill Community – Gile Dr. Hanover, NH

- An EnergyStar 5+ and LEED for Homes Gold Residential Development -

Brief Description

The Gile Hill Community consists of 10 buildings, with two more buildings nearing completion, which will containing a total of 120 units. The buildings, roads and parking areas are clustered on 9.74 acres of a 21.2 acre property near the Dartmouth-Hitchcock Medical Center campus and provide a mixture of affordable and market rate rental and for-sale units. The development serves to address a critical need for reasonably priced housing in the area.

Goals of Project

- To provide a mixture of permanently affordable and market-rate rental and for-sale condominiums.
- To provide highly-energy efficient units to reduce operational costs (rental units include heat), further supporting the affordability of the units.
- To cluster the development on a portion of the site to reduce impacts and construction costs.

Apartment-Style and Townhouse-Style Units

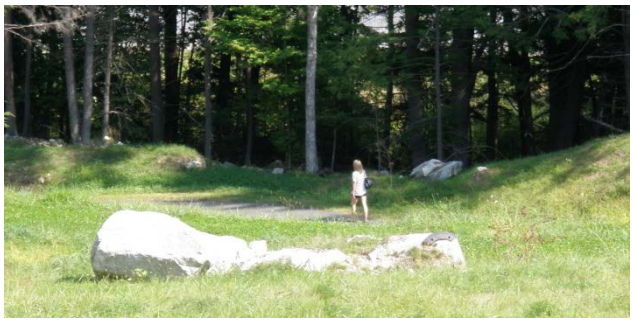
Description Prior to Construction

- The Gile family donated 55 acres to the Town of Hanover in 1954.
- A portion of the property was previously used for the Town of Hanover Landfill, and currently houses a recycling operation.

- In 2003, Hanover residents approved donating 21.2 acres of the land for a mixed-income community.

Description After Construction

- To date ten of the twelve buildings have been built, providing 97 of the total 120 units available for rental or purchase. The first four buildings were constructed in 2008, additional buildings were constructed in 2009, 2010, and 2012/2013.
- Two-thirds of the 61 rental units are permanently affordable and the remaining one-third are market rate. One-third of the 36 condo units are permanently affordable and two-thirds are market rate.
- Rents range from $600 to $1,450/mo and sale prices have ranged from $180,000 to $400,000.
- One of the first LEED for Homes registered communities in New Hampshire and the largest Gold-rated development in the Northeast.
- The development (buildings, roads, and parking areas) utilizes only 9.74 acres, the remaining portion of the site contains walking trails that connect to a larger trail network offsite.



- Pedestrian/bicycle pathways provide easy access from the buildings to the bus stop on the main road (Rt 120) and the Dartmouth-Hitchcock Medical Center Campus.

"Green" Features

- Ultra-high efficiency heating equipment
- EnergyStar ventilation fans
- Extra insulation from the foundation to the roof
- Low-E argon windows
- Water conserving plumbing fixtures
- Casement windows to enhance passive cooling
- EnergyStar light fixtures
- EnergyStar appliances
- Low or zero VOC paints and coatings
- Green Label certified carpets, local Vermont slate, and sustainable bamboo flooring
- Wood siding made from trees harvested on-site

- Stone for roads and sub-foundations manufactured from on-site rock ledges
- Stormwater treated using created wetlands with native plants
- Sensitive Site Design - the location of the buildings and roads were selected to preserve natural features, such as wetlands, an underground stream, and ledge faces

Standard Used During Building

The Leadership for Energy and Environmental Design (LEED) for Homes and EnergyStar standards were both followed during design and construction.

Reason for Building "Green"

The EnergyStar standard is a baseline requirement for all affordable housing, so Gile Hill was required to follow this standard. The LEED Gold certification was pursued because the cost to achieve the standard was expected to be only slightly more than the cost for EnergyStar design. Being a LEED Gold certified community also helped to "brand" the community as high-quality and environmentally-responsible, supporting sales and mitigating concerns about it incorporating affordable units.

Cost versus Traditional Building

Initial

The additional cost of seeking LEED designation, beyond the EnergyStar standard required for affordable housing tax credits, was expected to be relatively small.

Operational

A typical unit has a heating bill below $100/month during the colder months. The Home Energy Rating Score (HERS), which predicts energy use for homes, is in the low 50s, qualifying for the Federal Energy Efficiency Tax Credit (which is applicable only for units projected to have heating/cooling energy demands at least 50% below that of a reference dwelling in the same climate zone).

Steps Taken to Complete Project

- The Town of Hanover had an extensive, but appropriate, review process. The local review process took longer because the Gile Hill project was one of the first projects to go through a newly adopted review process involving a more extensive pre-application review and greater involvement of the Zoning Board of Adjustment and the Conservation Commission. Reduction of wetlands impacts was a primary focus of the local review.
- The site also needed state permits (Wetlands and Alteration of Terrain). It is believed that the attention given to the project at the local level may have made the state permitting process easier for this project.

Problems/Complications Faced by Developers

- While the land was donated, the site work was expensive, just over five million dollars, due to the slope of the site and the amount of blasting required.
- The architect hadn't explicitly labeled on the plans that the slab edge insulation needed to be two inches thick, an EnergyStar requirement, so the contractor only used one and a half inches of insulation in the first two buildings. To fix the mistake, the buildings were excavated down to the footings and insulation was added to the outside of the foundation. This detail was fixed on the plans for the remaining buildings.

Benefits

- Reduced utility costs for owners & rental company (heat is included in rent)
- Units qualify for the Federal Energy Efficiency Tax Credit
- EnergyStar designation and LEED Gold certification beneficial in marketing the for-sale units

Awards

- LEED Gold certification
- EnergyStar 5-Star+ rating
- 2011 AIA VT Excellence in Architecture Award

Contact

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Telephone # 802-865-6991

Resources

http://www.gilehill.com/green/certifications.php

http://www.gilehill.com/green/building-overview.php

http://www.hartlandgroup.biz/projects/current.html

http://www.gbarchitecture.com/projects/residential/gile-hill/

http://pathwaysconsultingnh.com/giletract.htm

http://www.uvhc.org/pdfs/242-5%20UVHC%20Newsletter%20Spring%2007.pdf

http://www.nhnonprofits.org/insider/twinpines03192009.cfm

GREEN DEVELOPMENT CASE STUDIES

Weston Solutions, Inc. – 45 Constitution Avenue, Concord, NH

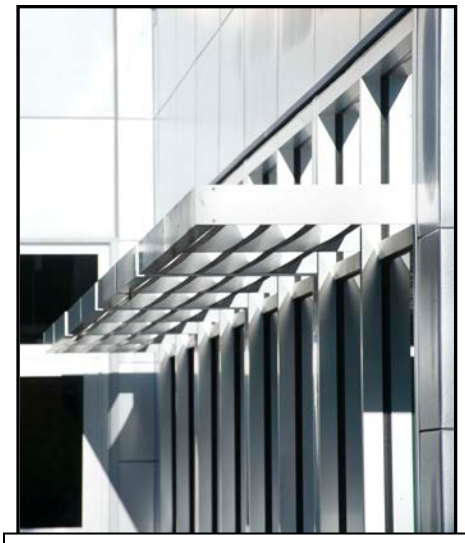
- A LEED Gold Building -

Brief Description

Weston Solutions, Inc. (WESTON) is a leader in environmental solutions, sustainable development, design/build construction, green buildings, and clean energy. In 2008, Weston acquired a blighted, abandoned "Brownfield" site in Concord for the location of their regional office. Weston Solutions constructed the first LEED-Gold office building in Concord.

Goals of Project

- Achieve long-term operational efficiencies by combining sustainable approaches, systems, and technologies.
- Promote sustainable land use by putting a blighted property back into productive use.
- Create a collaborative, highly productive work environment.
- Engage with local stakeholders and conduct community outreach.



South-facing windows with light shades

Description of Building Prior to Construction

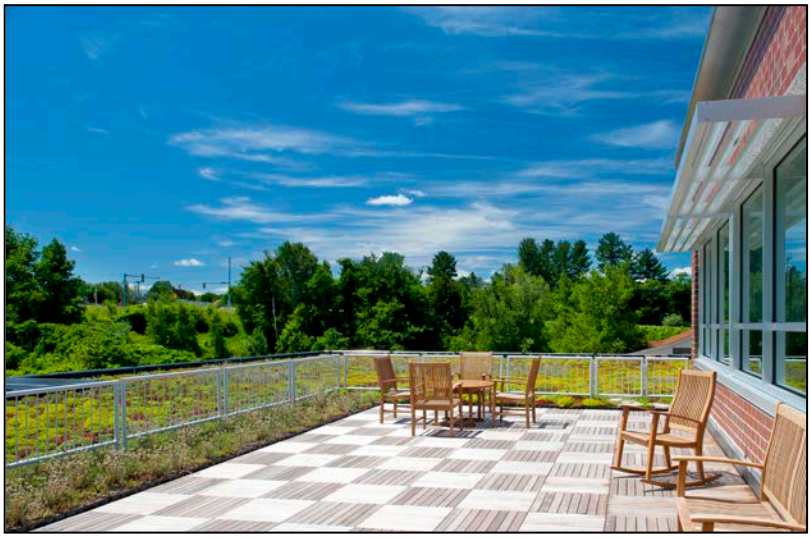
The project made use of a "Brownfield" site, which had an abandoned building on the premises and subsurface oil and gas contamination. The building was torn down, but most of the materials from the building were recycled or re-used on the

new site.

Description of Building After Construction

The new building incorporated a variety of "green" design technologies. As a result, heating and cooling costs are estimated to be 35-45% less than a code-compliant building of similar size and design. Water consumption is expected to be 40% of a similar building.

"Green" Features



Vegetated Roof with Deck

- 95% of the demolition and construction materials were recycled or reused
- Drought-tolerant, native plants featured to eliminate the need for irrigation
- GreenGrid vegetated roof system reduces the amount of impervious surface on the property, therefore reducing stormwater runoff. The vegetated roof also lowers the energy demand needed to cool the building during warmer months, and prevents heat from radiating back into the atmosphere (reducing the "heat island" effect of urbanized areas). The temperature on the vegetated roof is 50 degrees cooler than on a traditional dark roof. The vegetated roof absorbs one inch of rain in one hour.

- Automated thermal controls
- Building orientation and windows capture solar heat in the winter; light shades reflect natural light into the building and block out solar energy in the summer
- Closed-loop geothermal heating and cooling system (no fossil fuel backup)

- Automated lighting controls that dim the lights close to the windows when the sun is shining
- Light tubes reflect natural light into the building to reduce the need for fluorescent lights
- Sensor-operated and low-flow plumbing fixtures
- Energy-efficient, low-E glass windows and doors
- Low VOC paints and adhesives
- 40% of construction materials obtained within 500 miles of the site
- Sustainable products and finishes (i.e. sustainable teak deck)
- Zero net surface discharge of stormwater due to underground retention system that captures drainage, filters it, and sends it back into the ground
- Preferred parking for alternative fuel vehicles

Unique Features/Aspects

- Carbon dioxide (CO_2) monitors detect CO_2 levels, and when the levels become too high oxygen from outside is drawn into the room. An Energy Recovery Ventilation (ERV) unit mixes the fresh air from the outside with air from inside the building to heat or cool it before it's pumped into the rooms.

Utility room for Geothermal System with ERV Unit

- Showers on site encourage employees to bike or walk to work and/or enjoy the recreational areas during breaks.
- Since Weston has a GreenGrid roof, which can weigh as much as 25 pounds per square foot when wet, the design of the building needed to take into account this additional dead load.

Standard Used During Building

The project didn't follow a particular standard during construction, the company decided to design the building with the features that they wanted. After construction they applied for Leadership in Energy and Environmental Design (LEED) certification.

Reason for Building "Green"

As a sustainability company Weston Solutions decided that they wanted to build a regional office that reflected their mission statement and the message that they send to their clients.

Cost versus Traditional Building

Initial Construction

The project was able to incorporate all the green building designs that it wanted while still staying within the building budget.

Operational

Since February of 2010, when the building was opened, the company has saved over $113,000 in energy costs (about $100/day). Weston saved $35,000 in the first year of operation.

Problems/Complications Faced by Developers

Weston Solutions experienced no problems with the building approval/permitting process. Since the size of the lot was so small (just over 2 acres) the primary permits needed to be obtained through the city. The company went to the city one year ahead of construction to discuss their proposed building and site design. Weston Solutions sought to work in partnership with the city and planning board. By taking this approach Weston was able to get advice from the city staff to ensure compliance and approval, and they did not run into any stumbling blocks that would have held up the project.

After first working on some preliminary designs with an architectural firm, Weston ultimately decided to work with a local design/build firm committed to achieving Weston's objectives and designing to the LEED Gold standard.

Benefits

- Weston Solutions has saved money while reducing energy consumption
- Beautiful rooftop deck for the employees to enjoy and/or for meetings
- Reduced employee absence and turnover

Awards

- LEED Gold certification
- PlanNH award
- Environmental Business Journal Award
- USGBC "2011 LEED Public Building of the Year"

Contact

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(603) 656-5487

Resources:

http://www.westonsolutions.com/about/news_pubs/press_releases/greenredevelopment.htm
http://www.westonsolutions.com/about/news_pubs/press_releases/concordoffice.htm
http://www.westonsolutions.com/pdf_docs/PP-136.pdf
http://nerej.com/41406
http://www.concordmonitor.com/print/153267

GREEN DEVELOPMENT CASE STUDIES

Children's Museum of New Hampshire - 6 Washington St. Dover, NH

- A LEED Silver Certified Redevelopment -

Brief Description

The Children's Museum of New Hampshire, the state's most visited cultural attraction, serves as an educational resource for families, schools, and communities. Previously named The Children's Museum of Portsmouth, this non-profit outgrew its Portsmouth site and signed a lease in 2005 with the City of Dover for the Butterfield Building located in the heart of downtown Dover on the bank of the Cocheco River. The museum renovated the building using "green" design. The museum strives to teach children that they can improve the world around them and they don't have to accept conventional ideas: The new "green" location and design of the museum is a reflection of that message.

Goals of Project

- Transform a historic 80-year-old armory into an inviting building for children and families that would meet the museum's need for additional space.
- Lead by example – by utilizing the most sustainable practices and maximizing energy efficiency, the museum is a living exhibit that teaches visitors about green design.

Description of Building Prior to Construction

- Butterfield Gym - originally built in 1929 as an armory, it was converted into a gym and used by the City of Dover Recreation Department since 1962.
- Three stories – a main floor that housed the gymnasium, an upper level with offices and balconies, and lower level storage areas.

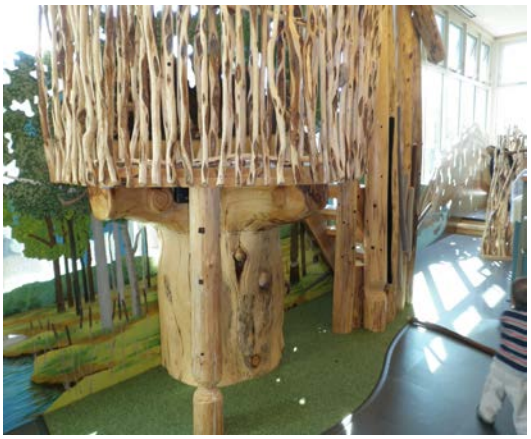
Description of Building After Construction

- A central ramp connects the renovated main floor to the renovated upper floor. Exhibits are housed on both the main floor and the upper level balconies.
- Natural lighting is maximized by a new clerestory (which also accomodates a “Build It, Fly It” exhibit), a glass addition adjacent to the Cocheco River (which houses the "Cochecosystem" exhibit), and restoration of original windows bricked over during the prior modification to a gymnasium. High-performance glass minimizes heat loss.
- Native plants were planted in the outdoor spaces adjacent to the building to improve wildlife habitat and erosion control.

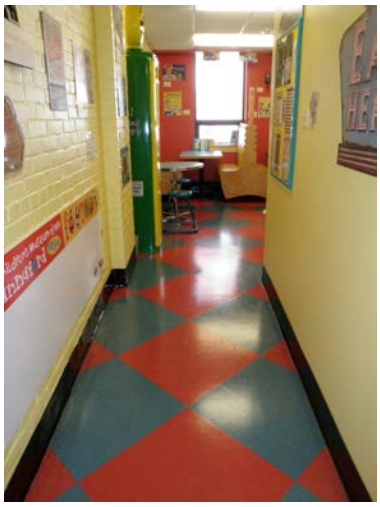
- Signs, graphics, and hands-on elements educate visitors about the “green” features and how people can be more environmentally-friendly in their daily lives.
- Many of the historic features from the Armory were retained and are visible to visitors, including large doors, exposed brick, and original viewing balconies.

“Green” Features

- Re-use of a historic building in the City center within walking distance of shops and restaurants
- Rainwater, harvested via a roof cistern, is used for irrigation of restored native plants
- High-performance windows - clerestory windows can be opened to exhaust hot air
- Enhanced building insulation
- High-efficiency HVAC equipment with an energy recovery system
- Low-flow and water-efficient plumbing fixtures and dual-flush toilets
- Non-toxic, low VOC paints and finishes
- Bamboo cabinets in classroom
- Most of the wood used in the museum exhibits is from locally-harvested sustainable forests or wood that couldn’t be used for anything because of flaws



- Used materials with high recycled content, such as the recycled rubber and cork floors
- Used repurposed materials (e.g., gift shop, coatroom, and classroom floors were from an Manchester furniture store; the maple gym flooring was refinished; additional flooring was obtained from a decommissioned Manchester mill; most of the decorative items were purchased from Ebay)
- Instituted a recycling program for visitors and staff - All plastic collected is upcycled via Earthtec into fabric for shirts or other wearable items



Standard Used During Building

The Leadership for Energy and Environmental Design (LEED) standards were used as the guide for making choices during design and construction. The museum project manager benefited from the architects' prior LEED building experience and their guidance in choosing appropriate materials.

Reason for Building "Green"

The directors of the museum thought that building green was the right thing to do. Building "green" promotes good citizenship practices and respects the younger generations

Cost versus Traditional Building

Although cost was not a factor in deciding to pursue a "green" design, the museum benefited from cost savings during construction from re-using materials and continues to enjoy lower operating costs (i.e., lower heating and electric costs per sq ft than a conventional-design building).

Unique Aspects of Project

- The Children's Museum is the only museum in New Hampshire to achieve LEED Silver certification, and one of only 14 LEED certified children's museums in the country.
- When looking for donors for the museum, some of the donors were skeptical about the idea of "going green" and the up-front costs of doing so. The fact that in 2006 some people still didn't understand the value of being "green," and striving for LEED certification, was surprising.

- The museum serves as an economic driver for the downtown. Several new stores and restaurants have opened in the area since the museum relocated. It is estimated that museum visitors spend over $400,000 annually at local businesses (Fosters, 1/17/13).

Steps Taken to Complete Project

The process of selecting an appropriate site for an expanded museum was fraught with difficulty. Directors wanted the museum to be in a "walkable" area and connected to its surrounding community. The City of Dover offered the museum the building, which the museum could lease for a small amount of money, but the renovations that needed to be done to the building were estimated to cost around $2.8 million.

Problems/Complications Faced by Developers

- At the beginning of the project the crew stumbled upon some engineering flaws with the building that were going to cost an additional $600,000 beyond the museum's budget. Fortunately, the City of Dover agreed to pay the $600,000 needed to reinforce the building.
- The project struggled some with communication, coordination, and timing of the state and local permitting for the project. It was difficult to explain the state and local permitting processes and requirements to donors and board members, which led these folks to believe that state and local permitting was "holding up the project." Project staff suggest that a more open, better understood state and local project review and permitting process, as well as improved coordination of state and local standards and timing of review, would help facilitate these types of projects.

Advice to People Looking to Build “Green”

- Make the “green” aspect a larger focus in the publicity for the project
- Do subtle things that tie into your "green" design philosophy – not everything has to be extravagant

Benefits

- More user-friendly, and healthier, than the old building for both visitors and staff

Contact

Name Doug Tilton, Director of Visitor Services

E-mail dtilton@childrens-museum.org

Telephone # (603) 742-2002

Resources

The Children's Museum of New Hampshire; http://www.childrens-museum.org/cmnh2010/about/content.aspx?id=400

Fortier, Marc (2008). "Children's Museum of New Hampshire reopens in new location," EagleTribune.com; http://www.eagletribune.com/lifestyle/x1876443713/Childrens-Museum-of-New-Hampshire-reopens-in-new-location/print

http://www.greenalliance.biz/blog/archives/201107/going-green-childs-play-childrens-museum-new-hampshire

http://arqarchitects.com/#/11065

Attachment 7: Land Resources Management Process Improvement Case Studies

NHDES LEAN Team

Case Study # 2009-01

LEAN Team: 603-271-3503 www.des.nh.gov

Summary

Organization

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

Division

Water

Business Problem

Administrative staff type about 4,000 file labels per year using a typewriter, tying up valuable staff time.

Methodology

Software review by programmers knowledgable in FoxPro and Access

Solution

Labels print using database information already entered during application log-in.

Benefits/Results

Saving over 25 hours per year.

Key Tools Used

- 5S
- Brainstorming
- Pilot

Idea

Brenda Constant x 1969

Team Leader

Bob Minicucci x 2941

Wetland File Labeling

Though identical information was entered into the tracking database, Wetlands and Shoreland administrative staff spent hours each year typing file folder labels on a typewriter.

The process was hardly fluid, with files waiting for labels before being put away. Naming conventions were abandoned to speed up the filing and the file names were sometimes different from the project names.

The Process & The Bumps

The task seemed simple enough; get the database to print the label. Not so simple.

Due to the lack of source code for the aging FoxPro database, it was decided to create a new utility using MS Access to retrieve the needed data and print the labels. Prior to this point, the printing of labels had been a manual process, accomplished by many different people, so there was little consistency in either the content or the layout of the labels.

The new standard was created over the course of a couple of short meetings between the stakeholders and developer. Another consideration was that the labels currently used in the manual process were of a non-standard type. To solve this problem a different standard sized label that worked well with MS Access was used.

The new labels were also on a paper size that makes it easier for the users, since they would no longer have to change printer settings. The developer then created the code to retrieve the data.

The deployment phase uncovered a compatibility issue between the MS Access versions being used by Wetlands and the developer. As it turns out, Wetlands is using an older version that required the developer to modify the labeler's code to account for those differences.

> "It's just beauteous, isn't it?"
>
> -Vanessa
> General Staff
> ...reacting to the first sheet of labels from the new process.

The Results

Despite the 20 hours taken to delve into and understand the system to create the final product, the Team considers the project a success.

Why?

- 25 hours saved
- Intangible frustration with a typewriter eliminated
- Consistency at 100% between file name and project name
- The computer system does what it was designed to do (despite having to compensate for its age and substandard utility).

Team

- Vanessa Burnes x 4057
- Muriel Lajoie x 8139
- Jeffrey Yopp x 2970

Case Study #2009-01 Form Date: 12/09
Author: M. Lajoie Page 1 of 1 LF#1 Rev. 1

NHDES LEAN Team

Case Study # 2009-01

LEAN Team: 603-271-3503 www.des.nh.gov

Summary

Organization

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

Division

Water

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Team

- Vanessa Burnes x 4057
- Muriel Lajoie x 8139
- Jeffrey Yopp x 2970

Case Study #2009-01 Form Date: 12/09

Author: M. Lajoie Page 1 of 1 LF#1 Rev. 1

NHDES LEAN Team

Case Study # 2009-06

LEAN Team: 603-271-3503 www.des.nh.gov

Summary

Organization

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

Division

Water

Business Problem

The receipt of Land Resource Management Program applications for wetlands, AoT, shoreland and subsurface programs follow separate log-in, review, tracking and completeness procedures.

Solution

Standard review of permit applications by cross trained administrative staff and return of poorly crafted applications

Key Tools Used

- CSVM/FSVM
- 5S
- Brainstorming

Idea

Innovative Permitting

Team Leader

Muriel Lajoie x8139

Facilitator

Carolyn Russell x3010

Application Receipt Process

Four permit programs within Land Resources Management; Wetlands, Shoreland, Subsurface, and Alteration of Terrain, had separate administrative staff processes for receipt and review of application packages and data entry into three different databases. Data entry into the accounting system followed markedly different processes and letters to applicants, municipalities and other parties communicated different information and were sometimes redundant. Some programs had lengthy timeframes for the completion of this initial review and data entry and lacked sufficient staff coverage.

The Process & The Bumps

The Administrative staff spent many days describing their then-current processes for the Lean facilitators. When like steps were consolidated, the staff understood that they were doing many of the same tasks, but in different ways.

When the facilitator took the proposed process changes to management, it became clear that the biggest stumbling block would be the inconsistency in statutory and regulatory requirements. Department response time frames were anywhere from one to 14 days. Some programs sent poorly completed applications back to the applicant. Some were regulatorily required to deem them incomplete, and then deny them after a certain time period if no applicant response was forthcoming.

The implementation team spent months pouring over statutes and rules to determine what was consistent among the statutes and rules. The result – very little. Though the items that were required with each application were all different, the process by which they were reviewed, as either present or absent, could be standardized. Where communications between the applicant and property owner could be standardized, they were. Letter templates were created. Checklists were developed listing required materials and applications lacking them were returned to the applicant with a letter clearly identifying the missing items. Communications to the regulated community began in earnest with a Land Resources Management webpage describing proposed changes cross referencing each affected program. Flyers outlining the proposed changes were included with each program's letters and permits. A descriptive email went out to 2500 individual contacts including those that represented multiple constituencies, such as wetland scientists, septic system designers and installers and professional engineers.

> "Now we will have all the information necessary to make an informed decision." – Eileen Chabot
> former Derry Con Com member

The Results

- Applications of all types and their payments are processed the day they are received.
- Up to 40% reduction in processing time for each type of application due to the standardization of data reviewed.
- Elimination of double and triple keying payment information by using database info.
- 45 "tweaks" made to operating procedures to improve consistency in data entry.

The Team

- The ARC Staff

NHDES LEAN Team

Case Study # 2010-04

LEAN Team: 603-271-3503 www.des.nh.gov

Land Resources Management Check Processing

Four permit programs within Land Resources Management; Wetlands, Shoreland, Subsurface, and Alteration of Terrain, had checks received and processed by Administrative Staff through the State's accounting software using different processes. This trickled up to the Accounting Section, where there were different processing steps for each bureau's deposits. Double and triple keying was commonplace, as checks needed to be processed within 24 hours, while permit application processing lagged behind by 4 or 5 days. Fees would be separated from applications, number of applications entered didn't match the number of checks received during any given day and management struggled to receive "real time" data.

The Process & The Bumps

With the help of a facilitator from the NH Manufacturing Extension Partnership, the team mapped out the then-current steps for processing payments for each bureau (in conjunction with Event 2009-06) and looked for ways to reduce the keystrokes and potential error rate for one bureau in particular, Wetlands.

A Wetlands staffer spent the better part of each morning keying check information directly into the Accounting software, then into a separate spreadsheet for management reference. Fines were keyed into a third spreadsheet for enforcement personnel reference. Check information was written onto the corresponding permit application, which was subsequently entered into the bureau's working database several days later.

During the brainstorming sessions, it came to light that one of the bureaus had worked with IT to develop an extraction program to pull check information from their database and summarize it for uploading into Lawson, the State's accounting software. Shortly thereafter, it was determined that the Department of Information Technology (DoIT) could modify the program to pull data from all three databases and make the data available for management to view at the end of the day.

After several weeks of training, the Application Receipt Center took over the payment, fee and fine data entry. This process is paperless. A single report is now generated for the Accounting section to upload into Lawson. As this step takes only a few minutes, the ARC staff plans to incorporate it into their quality control, eliminating Accounting's involvement in the day-to-day. The day's receipts are visible to management via a desktop link and the opportunity for miskeying is reduced since the information only has to be entered once. There is an account pick-list, so there is no "best-guess" at the proper account leading to minimal errors in routing of funds.

> **"Thankfully we aren't double keying anymore and I spend less time in Accounting."** – Brenda Constant
> Wetlands Bureau Admin Staff

The Results

- Applications of all types and their payments are processed the day they are received.
- Ancillary fees, for training, personnel certifications, fines and copying are processed through the same system.
- Elimination of double and triple keying payment information by using database information to update accounting.
- A cooperative effort between DoIT and DES to streamline procedures.

The Team

- The ARC Staff
- Rick Druding - DoIT
- Traci Knieriemen - Accounting

Charter #2010-04 Date: 12/09

Author: M. Lajoie Page 1 of 1 LF#1 Rev. 1

Summary

Organization

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

Division

Water

Business Problem

The receipt of Land Resource Management Program application fees for wetlands, AoT, shoreland and subsurface programs require duplicate and triplicate keying of data into the State's accounting software.

Solution

Modifying a pre-existing data extraction program to pull fee information from three LRM databases into the State's accounting software.

Key Tools Used

- CSVM/FSVM
- Brainstorming

Idea

Debra Brown x2210

Programmer

Rick Druding x1947

Facilitator

NH Manufacturing Extension Partnership

NHDES LEAN Team

Case Study # 2010-16

LEAN Team: 603-271-3503 www.des.nh.gov

Summary

Organization

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

Division
Water

Business Problem
Compliance decision-making process among Wetlands, Alteration of Terrain and Subsurface Bureaus inconsistent and disjointed

Methodology
Current and Future State Value Stream Mapping; Extensive staff training on new procedure.

Solution
New process puts management sign-off on enforcement decisions up-front, document drafting performed by two staff, leaving field inspection staff to focus on inspections.

Benefits/Results
New process results in consistent enforcement decision-making and management "buy-in" of decisions.

Idea & Process Owner
Rene Pelletier X 2951

Facilitation
Carolyn Russell X 3010

Compliance Process Improvement

In 2009, DES began to integrate the compliance staff from the Wetlands Bureau, Alteration of Terrain, and Subsurface Sections (collectively referred to as Land Resources Management, or "LRM.") Compliance staff was cross-trained, and as a result of the consolidation, the number of compliance regions was increased from six to nine, decreasing caseloads and allowing, for the first time, pro-active, rather than reactive, compliance.

The Process

At the end of 2009, it became apparent that, while there was an increase in the number of inspections conducted, enforcement response varied among programs and enforcement documents were inconsistent.

With the participation of staff and supervisors from each program, goals were developed and the (then) current process of issuing enforcement documents was shown in a Value Stream Map. A Value Stream Map describing a desired future state was then produced.

The current state map revealed that compliance staff making decisions on what enforcement actions to take independently. This led to inconsistent enforcement response, resulting in reversal of decisions by management, and creating the impression of an inequitable and uneven "playing field."

The new process resulted in the creation of a case review team ("CRT") consisting of Bureau administrators or their designees, and led by the Assistant Water Division Director. The CRT meets weekly with Compliance Inspectors to discuss pending enforcement cases. The compliance specialist completes a "case summary" sheet summarizing the key facts and issues of a case, and makes a recommendation as to what enforcement action to take. If the recommendation is approved, the CRT "signs off" on the case summary sheet. Decisions are tracked using a spreadsheet for consistency.

Once an enforcement decision is approved, the file and case summary sheet is then forwarded to one of two document writers for completion.

Implementation took place in May 2010 following a training session of the the new process. After a few weeks of CRT meetings, it became apparent that it was necessary to take minutes of each meeting to develop a record and aid in future decision-making.

> "It's helped to promote team building within our Agency."
>
> -Craig Rennie
> Land Resources Specialist

The Results

Approximately 100 cases were brought before the Case Review Team between May and December 2010. As a result, program managers have the opportunity to be kept informed and achieve "buy-in" during the enforcement decision-making process. Compliance staff benefit by discussing the strengths and weaknesses of their cases before an enforcement decision is made.

Team Leaders

- Rene Pelletier x 2951
- Linda Magoon x 4061

Case Study #2010-16 Form Date: 12/09

Form Author: M. Lajoie Page 1 of 1 LF#1 Rev. 1

LAND RESOURCES MANAGEMENT: APPLICATION RECEIPT PROCESS

Summary

Combined, standardized, and simplified application intake procedures for four separate permit programs.

Using Lean principles, DES's Land Resources Management permit programs ensured same-day review for completeness and acceptance of permit applications, eliminated delays by standardizing procedures and cross-training staff, and improved accuracy of data entry.

Accomplishments

- Automated many repetitive activities.
- Cross-trained all support staff on initial review.
- Reduced data entry errors by eliminating double-keying.
- 45 "tweaks" to streamline the process.

Team

- 9 Support Staff
- 6 Supervisory Staff
- 2 Lean Facilitators
- Customer groups on a consulting basis

Contact

Carolyn Russell
carolyn.russell@des.nh.gov
271-3010

The Service

Wetlands, Shoreland, Alteration of Terrain and Subsurface Permit Programs (collectively, "Land Resources Management Programs" – LRMP), which regulate land development throughout the state.

The Problem

The four programs used separate staff and followed their own procedures to accept permit applications. The programs had many differences in data entry, requirements for a "complete" application package, and letters sent to applicants and municipalities. The initial "administrative completeness review" could take up to 14 days for some types of applications.

The Goal

The goals of this project were to:

- Reduce the time required to do the completeness review of applications;
- Improve the consistency of submissions by applicants and the response by programs; and
- Provide cross-program staff coverage to prevent processing delays.

The Lean Process

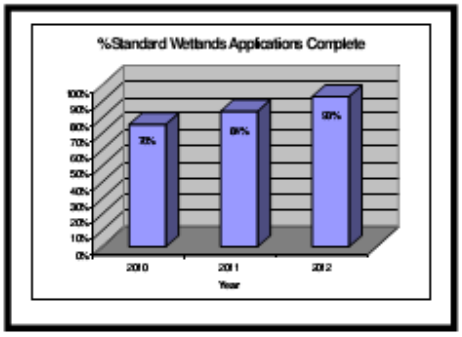
LRMP staff described the current process steps to intake new permit applications. In mapping the process steps for each of the programs, the staff understood that they were doing many of the same tasks, but in different ways. The team then designed a single process using the best practices from the existing approaches and using all available staff on a rotating basis. One of the biggest challenges to creating a single, consistent process was the inconsistency in statutory and regulatory requirements between the four programs. It took some time, and some legal input, to reach final agreement on the minimum elements that could be required as part of each application. Applications missing any of the critical elements would be returned to the applicant to resubmit a complete package.

Although the list of items required for each type of application remained slightly different, the initial review process was standardized. Detailed standard operating procedures and new "checklists" listing the required elements were developed to support staff. Letters were standardized across the programs and new automated templates were created. Application forms and instructions were revised to streamline the initial review.

DES did several things to communicate the changes in the requirements and procedures with consultants and potential permit applicants. A LRMP webpage was created to describe the new process. Flyers outlining the changes were included with each program's letters and permits for several months leading up to the change. E-mail notices went out to 2,500 contacts including professional organizations.

The Results

- Applications and payments are now processed the same day received.
- Up to 40% reduction in processing time for initial completeness review.
- Eliminated duplicative data entry and redundant letters to applicants.
- 23% increase in initially complete standard wetland applications.



Attachment 8: 2013 Legislation to Establish New Integrated Land Development Permit Program - Final Revised by House and Senate

SB 124-FN – VERSION ADOPTED BY BOTH BODIES

03/14/13 0875s

8May2013… 1501h

5June2013… 1863h

06/23/13 2178EBA

2013 SESSION

13-0509

08/10

SENATE BILL ***124-FN***

AN ACT establishing an integrated land development permit.

SPONSORS: Sen. Odell, Dist 8; Sen. Hosmer, Dist 7; Sen. Watters, Dist 4; Sen. Carson, Dist 14; Sen. Reagan, Dist 17; Sen. Rausch, Dist 19; Sen. Stiles, Dist 24; Sen. Fuller Clark, Dist 21; Sen. Woodburn, Dist 1; Sen. Boutin, Dist 16; Sen. Bradley, Dist 3; Sen. Pierce, Dist 5; Rep. Grenier, Sull 7; Rep. Sad, Ches 1; Rep. Gottling, Sull 2; Rep. Renzullo, Hills 37

COMMITTEE: Energy and Natural Resources

AMENDED ANALYSIS

This bill establishes a permit process for applicants seeking one or more land development permits from the department of environmental services.

- -

Explanation: Matter added to current law appears in ***bold italics.***

Matter removed from current law appears [~~in brackets and struckthrough.~~]

Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.

3/14/13 0875s

8May2013… 1501h

5June2013… 1863h

06/23/13 2178EBA

13-0509

08/10

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Thirteen

AN ACT establishing an integrated land development permit.

Be it Enacted by the Senate and House of Representatives in General Court convened:

1 New Chapter; Integrated Land Development Permit. Amend RSA by inserting after chapter 488 the following new chapter:

CHAPTER 489

INTEGRATED LAND DEVELOPMENT PERMIT

489:1 Purpose. This chapter is intended to:

I. Establish an integrated land development permit option that may be sought, at the discretion of the applicant, as an alternative to seeking one or more individual land development permits or approvals issued by the department of environmental services.

II. Provide a coordinated approach and holistic perspective in regulating land development activities to protect the quality and functions of New Hampshire's natural environment.

III. Establish an alternative project review and permitting process to improve communication and coordination between multiple organizations and entities involved in the permitting of proposed projects.

IV. Establish a structured pre-application process to provide enhanced guidance earlier in the project design process to facilitate compliance and improved environmental performance.

V. Encourage and facilitate implementation of environmentally superior projects.

VI. Recognize that the degree of relatedness of the affected programs presents a unique opportunity to achieve efficiencies and savings that are not possible to achieve by similar means within the other programs administered by the department.

489:2 Definitions. In this chapter:

I. "Abutter" means any person who owns land immediately contiguous to the subject property or who owns flowage rights on such land. The term does not include the owner of any land that is separated by a public road or public waterway from the subject property or, in the absence of a public road or waterway, is more than ¼-mile from the limits of the proposed work. If any land that is immediately contiguous to the subject property is owned in whole or in part by the person who is proposing the work or is necessary to meet any frontage requirement, the term includes the person owning the next contiguous property.

II. "Affected programs" means the following programs implemented by the department:

(a) The terrain alteration program established under RSA 485-A:17 and rules adopted pursuant thereto;

(b) The subdivision and individual sewage disposal systems program established under RSA 485-A:29 through RSA 485-A:44 and rules adopted pursuant thereto;

(c) The wetlands program established under RSA 482-A and rules adopted pursuant thereto; and

(d) The shoreland water quality protection program established under RSA 483-B and rules adopted pursuant thereto.

III. "Applicant" means the person who initiates the application process for an integrated land development permit. If the applicant is not the owner of the property on which the project is proposed to occur, the applicant shall be authorized in writing by the property owner to undertake all actions and representations required under this chapter.

IV. "Department" means the department of environmental services.

V. “Integrated land development permit” means a single permit issued by the department in lieu of issuing separate permits or approvals under one or more of the affected programs.

VI. “Permittee” means a person who obtains an integrated land development permit under this chapter.

VII. “Subject property” means the property on which a project is proposed or, after issuance of a permit, is undertaken.

489:3 Authorization.

I. There is hereby established an integrated land development permit, for which application may be made as an alternative to applying for separate, individual permits or approvals under the affected programs.

II. Municipalities may review materials, engage in discussions with the department, conduct independent site visits with the consent of the property owner and the applicant, if other than the property owner, and provide written comment to the department during any or all phases of the integrated land development permit process. Municipalities may attend site visits, attend meetings or participate in discussions between the applicant and the department in accordance with the following:

(a) Municipalities may participate in meetings or other discussions between the department and the applicant during the conceptual and pre-application phases of the integrated land development permit process under RSA 489:5 and RSA 489:6 with the consent of the applicant.

(b) Municipalities may participate in site visits conducted by state or federal regulatory agencies during the conceptual and pre-application phases of the integrated land development permit process under RSA 489:5 and RSA 489:6 with the consent of the property owner and the applicant, if other than the property owner.

(c) If the department concludes that it would promote the efficient and timely consideration of a final application under RSA 489:7, the department may invite the municipality in which the subject property is located to participate in meetings or other discussions between the department and the applicant or attend site visits conducted by state or federal regulatory agencies.

(d) To the extent practicable, site visits by municipalities for the purposes of commenting on a permit application or permit issued under this chapter shall be coordinated with entry upon the property by state or federal regulatory agencies under RSA 489:3, VI.

III. If administrative requirements or procedures contained in this chapter, or adopted by rule to execute this chapter, conflict with administrative requirements or procedures of any other statute or rule implemented by the department, the provisions under this chapter shall apply.

IV. The time limits prescribed in this chapter, or adopted by rule to execute this chapter, shall supersede any time limits provided in any other applicable provision of law.

V. Electronic communications and electronic document management may be employed to facilitate correspondence, application, notification, and coordination under this chapter.

VI. Submission of materials for the pre-application technical review under RSA 489:6, II or for final application under RSA 489:7 shall constitute express authorization by the property owner and the applicant, if other than the property owner, for the department and other participating regulatory agencies, through their respective agents or employees, to enter upon the subject property for purposes of evaluating site conditions and the application made under this chapter at reasonable times and with reasonable notice except under exigent circumstances.

489:4 Applicability.

I. Any person who wishes to conduct an activity requiring a permit or other approval from the department under 2 or more of the affected programs may choose to apply for an integrated land development permit from the department in lieu of all individual program permits or approvals otherwise required under the affected programs, subject to the following conditions and limitations:

(a) All permits or approvals otherwise required under the applicable affected programs shall be included in the application for an integrated land development permit and in any permit issued based on the application.

(b) No person shall be eligible under this chapter if the person is the subject of a state administrative, civil, or criminal enforcement action for violating this chapter or any of the affected programs at the time of initiating the application process.

(c) No person shall be eligible under this chapter if the person was the subject of a state administrative, civil, or criminal enforcement action for violating this chapter or any of the affected programs within the 5 years prior to initiating the application process, unless the action was withdrawn or overturned on appeal.

(d) No property shall be eligible under this chapter if the property is or has been the subject of an administrative enforcement action for violations of this chapter or any of the affected programs, unless the violations have been remediated or will be

remediated as part of the proposed project and any outstanding fees, fines, and penalties assessed against the same person who owns the property at the time of the application have been paid in full.

(e) No property shall be eligible under this chapter without the prior consent of the attorney general if the property is, at the time of initiating the application process, or has been, within the 5 years prior to initiating the application process, the subject of a civil or criminal enforcement action for violations of this chapter or any of the affected programs. This subparagraph shall not apply to any action that was withdrawn or overturned on appeal.

(f) This chapter shall not apply if any of the work that is part of the project, other than preliminary site evaluation activities such as surveys or test pits not requiring a permit from the department, has been initiated or completed prior to the application process being initiated.

(g) This chapter shall not apply to permits for shoreline structures unless they are part of a larger project.

(h) This chapter shall not apply to emergency authorizations.

II. For projects that would otherwise require only a single permit from the department under the affected programs, the applicant may request a waiver of the requirement for 2 or more permits provided the project incorporates low-impact or minimum-impact design practices and the applicant demonstrates that the proposed project will achieve a superior overall environmental outcome in accordance with the requirements and procedures specified in RSA 489:9.

489:5 Conceptual Preliminary Discussions. Any person interested in pursuing an integrated land development permit may consult with the department regarding the applicable procedures and requirements. Applicants may request and participate in conceptual pre-application discussions with the department prior to initiating the formal pre-application technical review process under RSA 489:6. Such conceptual pre-application discussions shall not replace the formal pre-application technical review process.

489:6 Pre-Application Technical Review.

I. An applicant shall initiate the integrated land development permit process by conducting certain activities, as specified by the department in rules adopted under this chapter, in preparation for pre-application technical review by the department. These activities shall include the following:

(a) Inquiry or consultation with the department of resources and economic development's natural heritage bureau and the fish and game department;

(b) Notification of and provision of materials on the proposed project to the governing body, the planning department, the planning board, and conservation commission of the municipality or municipalities in which the proposed project is located;

(c) Notification of and provision of materials on the proposed project to the local river management advisory committee, when the project is in the corridor of a designated river or river segment under RSA 483;

(d) Notification of and consultation with federal regulatory entities, when applicable;

(e) Notification of, and, when requested, provision of materials on the proposed project to the New Hampshire division of historic resources;

(f) Assessment of site characteristics and location, as defined by the department in rules adopted under this chapter; and

(g) Other assessments, inquiries, notifications, and consultations as defined by the department in rules adopted under this chapter.

II. After conducting the activities required under paragraph I, the applicant shall submit to the department such materials as the department requires under rules adopted pursuant to RSA 541-A. The department may require the applicant to pay up to 30 percent of the expected final application fee under RSA 489:7, I to cover departmental costs associated with the pre-application technical review. Any payment made shall be applied towards the final application fee. Such payment shall not be refundable or transferable to another project should a final permit application not be submitted.

III. The applicant shall participate in a pre-application technical review with the department.

IV. As part of the pre-application technical review, the department shall review preliminary design plans, supporting information, and advisory input from state or federal entities notified or consulted pursuant to paragraph I and comments received from other persons notified pursuant to paragraph I to identify critical issues regarding site development and design, any requested waivers, and any mitigation that may be needed, and review the final permit application requirements with the applicant.

V. The department may invite any state or federal entities notified under paragraph I to participate in pre-application technical review discussions. Other persons or entities may be included at the request of the applicant.

VI. The pre-application technical review process shall not establish any presumption as to whether the department will approve the final application.

489:7 Submission and Review of Final Application.

I. Following the pre-application technical review, the applicant shall submit a complete application, as defined by the department in rules, together with the application fee, which shall be equal to the total of the permit fees specified in statute and in rules for each of the individual permits or approvals being replaced by the integrated land development permit, to the department. The proposed activities shall not be undertaken unless and until the applicant receives a permit from the department.

II. Within 14 days of receipt of the application, the department shall notify the applicant whether the application is complete or not. Incomplete applications shall not be accepted and shall be returned, along with the fee, to the applicant to be made complete and resubmitted to the department.

III. Concurrent with the submission of the final application to the department, the applicant shall:

(a) Provide a complete copy of the final application and all supporting materials, by certified mail or other delivery method that provides proof of receipt, to the municipality, or if applicable, municipalities in which the project is located and, when applicable, the local river management advisory committee or committees.

(b) Notify all abutters by certified mail or other delivery method that provides proof of receipt regarding the application. If any question arises as to whether all abutters were notified, the burden shall be on the applicant to show that notification was made.

IV. The department shall apply the technical criteria established in the affected programs.

V. The department may waive, in accordance with RSA 489:9, any technical criteria established by statute or rule under the affected programs, if such waiver is necessary to achieve a superior overall environmental outcome, or achieve an equivalent overall environmental outcome at reduced cost.

VI. Within 45 days of receiving a complete application, the department shall:

(a) Approve the application and issue a permit, which shall include such conditions as the department deems necessary to comply with this chapter or rules adopted under this chapter;

(b) Deny the application and issue written findings in support of the denial;

(c) Identify the need for and schedule a public hearing on the proposed project, and within 30 days of the public hearing approve or deny the application in accordance with subparagraph (a) or (b); or

(d) Extend the time for rendering a decision on the application for good cause and with the written agreement of the applicant.

VII. If the department fails to act within the applicable time frame established in this section, the applicant may ask the department to issue the permit by submitting a written request. If the applicant has previously agreed to accept communications from the department by electronic means, a request submitted electronically by the applicant shall constitute a written request.

(a) Within 14 days of the date of receipt of a written request from the applicant to issue the permit, the department shall:

(1) Approve the application, in whole or in part, and issue a permit; or

(2) Deny the application and issue written findings in support of the denial.

(b) If the department does not issue either a permit or a written denial within the 14-day period, the applicant shall be deemed to have a permit by default and may proceed with the project as presented in the application. The authorization provided by this subparagraph shall not relieve the applicant of complying with all requirements applicable to the project, including but not limited to requirements established in or under this chapter and any chapter relating to the applicable affected programs.

(c) Upon receipt of a written request from an applicant, the department shall issue written confirmation that the applicant has a permit by default pursuant to subparagraph (b), which authorizes the applicant to proceed with the project as presented in the application and requires the work to comply with all requirements applicable to the project, including but not limited to requirements established in or under this chapter and any chapter relating to the applicable affected programs.

VIII. Undertaking any activity authorized by a permit issued pursuant to VI(a), VII(a), or VII(c) shall constitute express authorization by the property owner and the permittee, if other than the property owner, for the department and other participating regulatory agencies, through their respective agents or employees, to enter upon the subject property for purposes of determining compliance with the permit and other applicable requirements at reasonable times and with reasonable notice except under exigent circumstances.

489:8 Rulemaking. The commissioner of the department shall adopt rules under RSA 541-A relative to:

I. Requirements and procedures for the pre-application process and technical review, including requirements for notification of and coordination with municipalities, other state and federal agencies, local river management advisory committees, and other entities.

II. Application requirements and procedures for processing a final application for an integrated land development permit, including requirements for notification of and coordination with municipalities, other state and federal agencies, local river management advisory committees, and other entities.

III. Applicability of technical criteria of the affected program.

IV. Time extensions and duration of a permit, and procedures and requirements for amending a permit issued pursuant to this chapter.

V. Procedures and requirements for projects requiring a public hearing.

VI. Terms and conditions for permits issued under this chapter to ensure compliance with this chapter and affected programs.

489:9 Waivers.

I. No waiver from any affected program's requirement in rule or statute shall be granted unless the applicant requesting the waiver demonstrates that:

(a) There will be no substantial loss of wetland functions and values;

(b) Water quality will be protected to the maximum extent practicable and in compliance with the anti-degradation requirements of the federal Clean Water Act and departmental rules; and

(c) A superior overall environmental outcome will be achieved or an equivalent overall environmental outcome at reduced cost.

II. The demonstration required by paragraph I shall be made based on project design, mitigation, submission of modeling results, engineering calculations, relevant scientific studies, or such other documentation the applicant believes supports the requested waiver.

III. No waiver shall be granted if doing so results in a violation of any state statute or regulation outside those governing the affected programs, unless the statute or regulation expressly provides that the provisions may be waived.

IV. No waiver shall be granted if doing so results in a violation of any federal requirement, unless the federal requirement expressly provides that its provisions may be waived and the federal agency charged with enforcing the requirement agrees with the waiver.

V. Municipalities may adopt an innovative land use control ordinance pursuant to RSA 674:21, authorizing the planning board to allow a project that does not fully conform to the local zoning ordinance to proceed as approved by the department under this chapter, provided the planning board makes a finding that such a project meets the criteria of paragraph I.

489:10 Appeals.

I. Any person aggrieved by a decision made under RSA 489:7, V, VI(a) or (b), or VII, and any person subject to an order of the department under RSA 489:11 who wishes to appeal shall, within 30 days of the decision, file a notice of appeal with the appeals clerk for a hearing before a joint water-wetland council described in paragraph II. At the time the notice of the appeal is filed, the person shall send a copy of the appeal to the commissioner. If the appeal is of a decision to issue a permit, the person shall also send a copy of the appeal to the permittee. The notice of appeal shall clearly state that it is being filed pursuant to this paragraph.

II. Upon receipt of a notice of appeal filed pursuant to paragraph I, the appeals clerk shall notify the chairperson of the water council established under RSA 21-O:7 and the chairperson of the wetlands council established under RSA 21-O:5-a. The chairperson shall each designate 4 members of their respective councils to sit with a hearing officer appointed under RSA 21-M:3, VIII as a joint council for purposes of the appeal. The interests represented by members of the joint council shall be as diverse as possible based on the council members available to be designated after any recusals are considered.

III. The appeal shall set forth fully every ground upon which it is claimed that the decision complained of is unlawful or unreasonable. Only those grounds set forth in the appeal shall be considered by the joint council.

IV. The joint council shall conduct an adjudicative proceedings as provided in RSA 21-M:3, IX and X, RSA 21-O:14, RSA 541-A, and rules to be adopted by both of the councils for appeals to be heard by the joint council. Until both of the councils have adopted the same rules, the rules of the wetlands council shall apply to any appeal. The burden of proof shall be on the party seeking to set aside the department's decision to show that the decision is unlawful or unreasonable. All findings of the department upon all questions of fact properly before it shall be prima facie lawful and reasonable.

V. If the appeal is of a decision to issue a permit, the permittee may appear and become a party to the appeal as a matter of right. Requests by any other person to intervene in any appeal shall be made and decided upon as provided in RSA 541-A:32.

VI. On appeal, the joint council may affirm the decision of the department or may remand to the department with a determination that the decision complained of is unlawful or unreasonable. In either case, the council shall specify the factual and legal basis for its determination and shall identify evidence in the record created before the council that supports its decision.

VII. Any party aggrieved by a decision of the joint council may appeal to the supreme court as specified in RSA 541.

VIII. In the case of a remand to the department by the joint council, the department shall consider the council's determination and may either reissue the subject decision or order or appeal as provided in paragraph VII.

489:11 Compliance.

I. The following shall constitute noncompliance with this chapter:

(a) Failure to comply with this chapter or any rule adopted or permit issued under this chapter.

(b) Failure to comply with an order of the commissioner issued relative to this chapter or any rule adopted or permit issued under this chapter.

(c) Misrepresentation by any person of a material fact made in connection with any application filed under this chapter or any permit issued under this chapter.

II. The permittee shall be responsible for ensuring that all work done under the permit complies with the permit and all other applicable requirements. Any person who performs work under an integrated land development permit shall comply with the permit and all other applicable requirements.

III. The department may issue a written order to any person in noncompliance with this chapter as specified in paragraph I to cease any continuing noncompliance and to remediate or restore any land or water areas affected by the noncompliance.

IV. Any noncompliance with this chapter as specified in paragraph I may be enjoined by the superior court upon application of the attorney general.

V. Any person who knowingly fails to comply with this chapter as specified in paragraph I shall be subject to all remedies available under law in the applicable

affected programs. For purposes of this paragraph, a permit issued under this chapter shall constitute a permit issued under each of the applicable affected programs.

2 Planning Board Procedures. Amend RSA 676:4, I(b) to read as follows:

(b) The planning board shall specify by regulation what constitutes a completed application sufficient to invoke jurisdiction to obtain approval. A completed application means that sufficient information is included or submitted to allow the board to proceed with consideration and to make an informed decision. A completed application sufficient to invoke jurisdiction of the board shall be submitted to and accepted by the board only at a public meeting of the board, with notice as provided in subparagraph (d). An application shall not be considered incomplete solely because it is dependent upon the ***submission of an application to or the*** issuance of permits or approvals from other ***state or federal*** governmental bodies; however, the planning board may condition approval upon the receipt of such permits or approvals in accordance with subparagraph (i). The applicant shall file the application with the board or its agent at least 15 days prior to the meeting at which the application will be accepted. The application shall include the names and addresses of the applicant, all holders of conservation, preservation, or agricultural preservation restrictions as defined in RSA 477:45, and all abutters as indicated in the town records for incorporated towns or county records for unincorporated towns or unorganized places not more than 5 days before the day of filing. Abutters shall also be identified on any plat submitted to the board. The application shall also include the name and business address of every engineer, architect, land surveyor, or soil scientist whose professional seal appears on any plat submitted to the board.

3 New Paragraph; Powers of the Zoning Board of Adjustment. Amend RSA 674:33 by inserting after paragraph V the following new paragraph:

VI. The zoning board of adjustment shall not require submission of an application for or receipt of a permit or permits from other state or federal governmental bodies prior to accepting a submission for its review or rendering its decision.

4 New Paragraph; Powers of the Commission. Amend RSA 36-A:4 by inserting after paragraph IV the following new paragraph:

V. The conservation commission, in reviewing an application to provide input to any other municipal board, shall not require submission of an application for or receipt of a permit or permits from other state or federal governmental bodies prior to accepting a submission for its review or providing such input.

5 New Subparagraph; Innovative Land Use Controls. Amend RSA 674:21, I by inserting after subparagraph (n) the following new subparagraph:

(o) Integrated land development permit option.

6 New Paragraph; Innovative Land Use Controls. Amend RSA 674:21 by inserting after paragraph VI the following new paragraph:

VII. In this section, "integrated land development permit option" means an optional land use control to allow a project to proceed, in whole or in part, as permitted by the department of environmental services under RSA 489.

7 Effective Date.

I. Sections 1, 5, and 6 of this act shall take effect January 1, 2015.

II. Sections 2-4 of this act shall take effect 60 days after its passage.

III. The remainder of this act shall take effect upon its passage.

Attachment 9: Permit Process Improvement Webinar Slides

Streamlined Permitting for Land Development Projects

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NEW HAMPSHIRE DEPARTMENT OF Environmental Services

DES Innovative Permitting Initiative

- Make it Easier for Environmentally-Superior Projects to Move Through State and Local Permitting Processes
- Improve Coordination within DES and with Municipalities and Other Agencies
- Increase Use of Better Development Practices

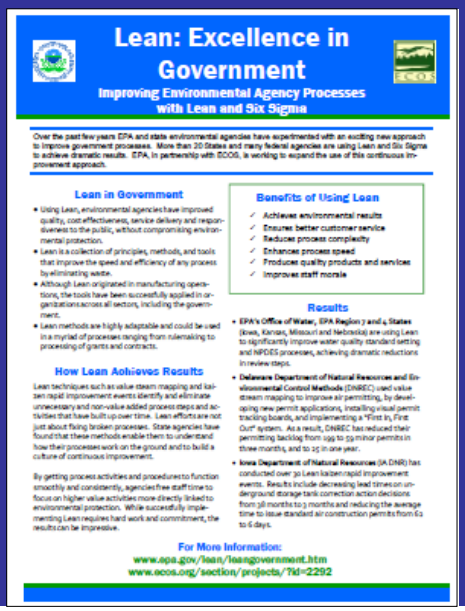
Outcomes of Process Streamlining to Date:

(1) Integrate & Standardize Processes of 4 Programs:

- Wetlands
- Shoreland
- Subsurface
- Alteration of Terrain

(2) Proposed New Integrated Land Development Permit
- optional, alternative to multiple single permits, with structured, coordinated pre-application process

Lean in Government



Lean: Excellence in Government

Improving Environmental Agency Processes with Lean and Six Sigma

Over the past few years EPA and state environmental agencies have experimented with an exciting new approach to improve government processes. More than 20 States and many federal agencies are using Lean and Six Sigma to achieve dramatic results. EPA, in partnership with ECOS, is working to expand the use of this continuous improvement approach.

Lean in Government

- Using Lean, environmental agencies have improved quality, cost-effectiveness, service delivery and responsiveness to the public, without compromising environmental protection.
- Lean is a collection of principles, methods, and tools that improve the speed and efficiency of any process by eliminating waste.
- Although Lean originated in manufacturing operations, the tools have been successfully applied in organizations across all sectors, including the government.
- Lean methods are highly adaptable and could be used in a myriad of processes ranging from rulemaking to processing of grants and contracts.

How Lean Achieves Results

Lean techniques such as value stream mapping and kaizen rapid improvement events identify and eliminate unnecessary and non-value added process steps and activities that have built up over time. Lean efforts are not just about fixing broken processes. State agencies have found that these methods enable them to understand how their processes work on the ground and to build a culture of continuous improvement.

By getting process activities and procedures to function smoothly and consistently, agencies free staff time to focus on higher value activities more directly linked to environmental protection. While successfully implementing Lean requires hard work and commitment, the results can be impressive.

Benefits of Using Lean

- ✓ Achieves environmental results
- ✓ Ensures better customer service
- ✓ Reduces process complexity
- ✓ Enhances process speed
- ✓ Produces quality products and services
- ✓ Improves staff morale

Results

- **EPA's Office of Water, EPA Region 7 and 5 States** (Iowa, Kansas, Missouri and Nebraska) are using Lean to significantly improve water quality standard setting and NPDES processes, achieving dramatic reductions in review steps.
- **Delaware Department of Natural Resources and Environmental Control Methods** (DNREC) used value stream mapping to improve air permitting, by developing new permit applications, installing visual permit tracking boards, and implementing a "First In, First Out" system. As a result, DNREC has reduced their permitting backlog from 199 to 59 minor permits in three months, and to 25 in one year.
- **Iowa Department of Natural Resources** (IA DNR) has conducted over 30 Lean kaizen rapid improvement events. Results include decreasing lead times on underground storage tank correction action decisions from 38 months to 3 months and reducing the average time to issue standard air construction permits from 62 to 6 days.

For More Information:
www.epa.gov/lean/leangovernment.htm
www.ecos.org/section/projects/?id=2292

Key Lean Tools

- **Value Stream Mapping (VSM)** – Value stream mapping refers to the activity of developing a high-level visual representation of the process flow involved in delivering a product or service (a "value stream") to customers. VSM events focus on identifying sources of non-value added activity (waste) and prioritizing future improvement activities.
- **Kaizen Events** – Kaizen means "*to change for the good of all.*" Kaizen activity is often focused in rapid process improvement events (kaizen events) that bring together a cross-functional team for 3–5 days to study a specific process and immediately implement process changes.
- **Six Sigma** – Lean is often combined with Six Sigma, a process improvement methodology that uses statistical tools to improve quality, reduce defects, and eliminate variation.

What Lean is Not

- Lean is not about compromising environmental protection, loosening environmental regulations, or foregoing an agency's commitment to environmental protection. Lean seeks to correct inefficiencies in administrative processes and workflow, enhancing an agency's ability to protect the environment.
- Lean is not about cutting jobs. Lean retains the current staff, but may rearrange or assign new duties to those staff. It is not a tool for job performance; rather it seeks to improve the entire agency's performance. Lean often improves staff morale, as employees have a hand in designing work processes that enable success.
- Lean is not just another "flavor of the month." Lean methods have been proven effective many times over and in a multitude of settings making it different from past management trends, such as TQM. Unlike past trends that focused on quality only, Lean addresses quality, cost and delivery. Lean's focus on rapid implementation brings real improvement and compelling results fast, sparking momentum for further improvement.

Types of Administrative Waste

Waste	Example
Inventory	Backlog of Work, Excess Materials/Information
Defects	Data Errors, Missing Info
Overproduction	Unneeded Reports, Doing Work Not Requested
Complexity	Unnecessary Process Steps
Waiting	Approval Cycles
Excess Motion	Trips to Remote Printer
Moving Items	Report Routing

Lean in Government Tools

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Lee Garrigan, Environmental Council of States
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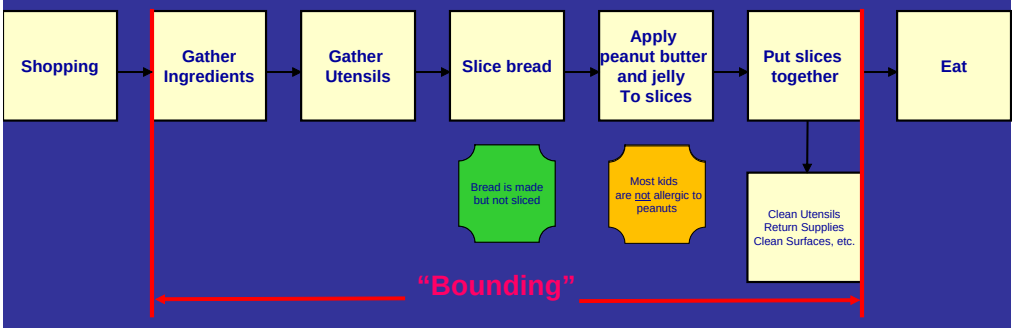
Get the RIGHT Lean Team!

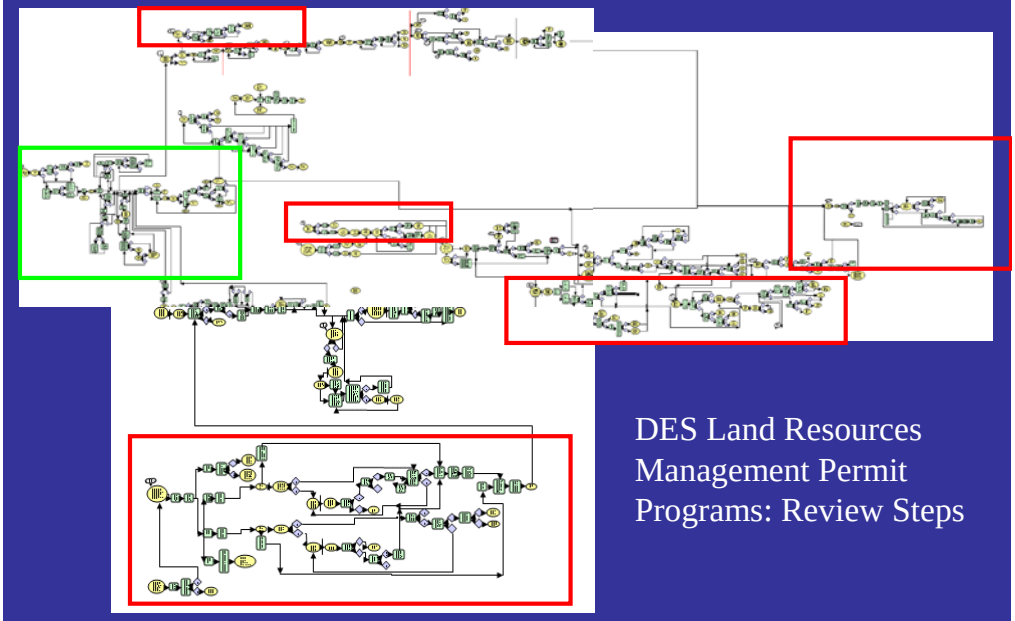
- Open Minded
- Does the Process
- Includes Customer
- Strong Facilitator

"Current State" Process Map



How to Build a Peanut Butter & Jelly Sandwich

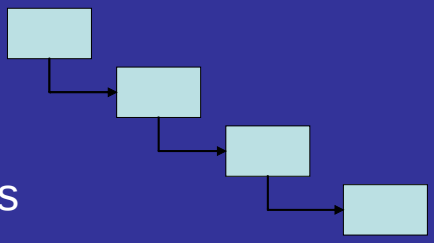
Current Permit Processes Are Complex



DES Land Resources Management Permit Programs: Review Steps

Now that you can "See" Process - Analyze the Process for:

- The "C.Y.A. Factor"
- Complex flow paths
- Major delays / back-logs
- Batching
- Multiple hand-offs & re-work/repeat steps
- Extra motion



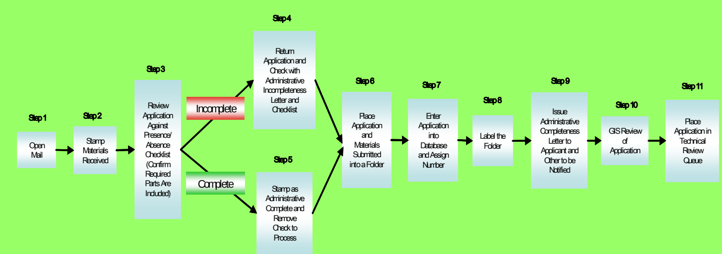
Application Receipt Center

- Combine, standardize, and simplify application intake procedures for four separate land development permit programs

Current State – 4 Separate Processes by 4 Programs

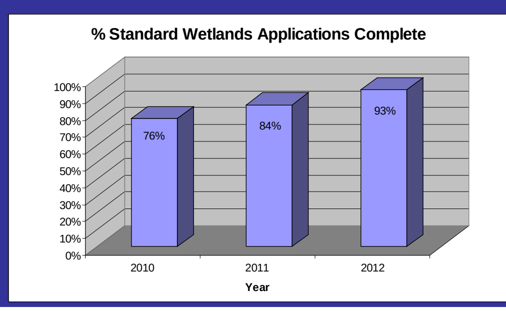
Process	Steps 1	2	3	4	5	6	7	8	9	10	11	12	13	14+
A. Shoreland	Open folder	Date stamp		File #, log in folder			Full administrative review	Mini technical review – plan and type	Acknowledg-ment letter – confirms time and timeline					Into file cabinet queue; shore max technical review; permit; GIS
B. Wetlands	Open, process check, put in folder	Date stamp, partial complete-ness review & notes		Generate file #, label folder, log in database	Sometimes phone call to request additional materials	GIS review	Extensive administrative review (packet & plans) per barcode sheet	Mini technical review – looks at plan, confirms type of application	Incomplete or complete letter				Possible additional letter for local con com hold if not received earlier; designated rivers notification	Delivered to appropriate staff tech queue – file or to Pease
C. Alteration of Terrain	Open		Review for completeness & quality				Administrative review for completeness		Keep incomplete applications - phone call request for added information	Date stamp when complete	Log into database & send notification letter	GIS log in & assess -ment	Design rivers notification	Delivery same day
D. Subsurface Bureau – Seps & Subs	Open mail, sort applications	Date stamp	Initial screen for town stamp if required				Administrative review for presence, not quality		Send incomplete applications back, including check, with letter		Log in & divide up to tech			Delivery, next day AM

Future State – A Single Process for All Programs



LRM Application Receipt Center - RESULTS

- Applications and Payments now Processed the SAME DAY Received
- Cross-Program Staff Coverage Prevents Delays
- 40% Reduction in Initial Review Processing Time
- Eliminated Duplicative Data Entry and Automated Steps
- 23% Increase in Wetlands Applications Submitted that are Initially Complete



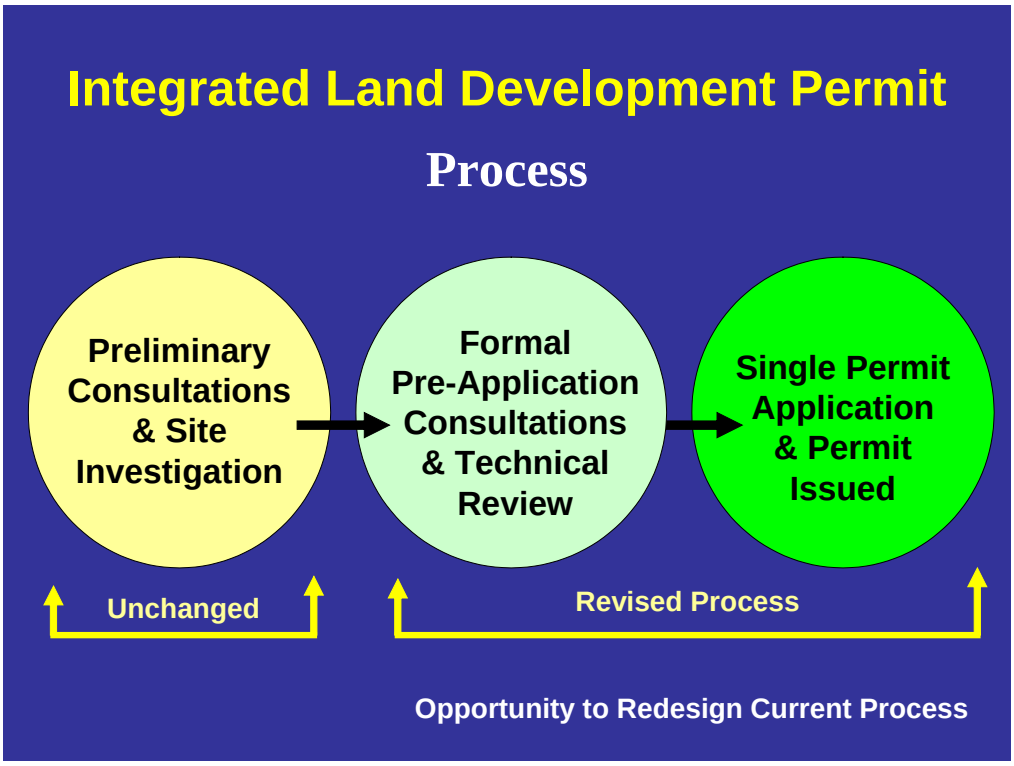
Uses of Lean Approach & Tools

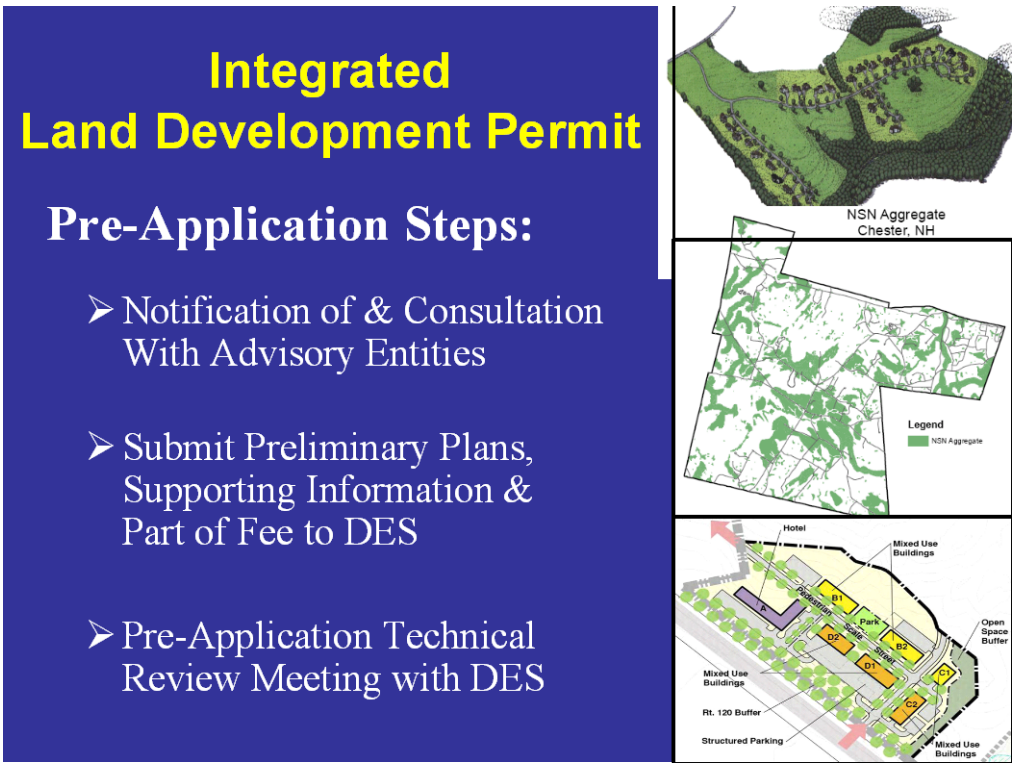
- Evaluate established process – make it more efficient
  - **START SMALL!**
- Define a standard process from many used
  - Standardization of process
    = more efficient & more accurate
- Design new process – focus on goals!

ALWAYS Communicate! Early, Often, "Bite-sized"

Integrated Land Development Permit (proposed)

- One Permit = Replaces up to 4 Individual Permits
- Streamlined, **Consistent** State Permitting Process
- Improved Coordination with other entities
- Enhanced Pre-Application Guidance
- Holistic Perspective in Regulating Land Development
- Less Impacting Land Development





Discuss Best Practices Beyond Regulatory Requirements

Energy Efficiency:	Reduced energy demand of structures
Water Use:	Lower water consumption by occupants
Stormwater:	Reduce generation through design, retain & treat rainwater onsite (mimic natural condition)
Location:	In- or near town/city, redevelopment, avoid high-valued natural resource areas

Integrated Land Development Permit

Final Permit Application:

- Single Permit Application & Single Permit Issued
- Simplifying Application Process & Requirements
- DES Review and Decision within 45 Days (most projects)
- Option to Waive Current Technical Standards for Superior Environmental Outcome

Conclusions

- Lean Techniques are Valuable Tools for Improving Permit Work Processes
  - View it as a continuous effort (incremental change)
- Lean your business process BEFORE developing your IT solution
- Start SMALL & include RIGHT team members
- Communicate, communicate & communicate some more!

Attachment 10: Communications/Public Involvement Plan

Target Audience	Goal for Audience	Approach for Outreach	Outcome Measurement
DES Staff and Management	Support and actively participate in SIG - Determine preliminary perceptions - Identify key issues/internal barriers to success - Identify approaches to address issues/barriers	• Preliminary attitude survey • Full staff meeting to introduce project (Land Resource Management Program and associated staff) • One page briefing paper on SIG • One-on-one/small group meetings with key personnel • Regular full staff meetings and email communication • Opportunity for all LRMP and other related staff to review/comment on draft materials as developed	• Survey responses (pre- and post) • MOAs in place committing staff time to SIG project • Staff hours on SIG (measured with timesheet sitecode) • Comments received on draft materials
Innovative Permitting Advisory Group	Actively participate in development of Innovative Permitting Initiative components Representative of broad array of stakeholder interests	• Letter of invitation from Commissioner • Quarterly (minimum) meetings • Email communications	• Meetings held and # attendees • Comments received • Level of consensus achieved

Target Audience	Goal for Audience	Approach for Outreach	Outcome Measurement
Stakeholders (building/construction/engineering and environmental organizations, established Advisory Committees – see separate list)	Knowledge of and support for effort, and possible participation as pilot entities They provide input to policies and procedures developed DES understands their issues/new procedures reflect their input	• Informational presentations and materials distributed at key workshops, conferences, and newsletters • Letter of introduction to project and individual meetings with key stakeholder groups • Focus groups on key elements • Survey on current practices, issues, and proposed new approaches • Regular communication with stakeholders on project progress and request for comments (email/newsletters) • Public meetings at key decision points (e.g., draft standards, draft procedures) • Webpage	• # presentations/meetings • # newsletter articles • # on e-mail contact list • Comments received (negative/constructive/in support) & changes made • # focus group participants • # participants at public meetings • # organizations on communication list for regular updates • Opinion survey results

Target Audience	Goal for Audience	Approach for Outreach	Outcome Measurement
Municipalities	Knowledge of and support for effort, and possible participation as pilot entities They provide input to policies and procedures developed DES understands their issues/new procedures reflect their input	• Informational presentations and materials distributed at key workshops and conferences • Focus groups on key elements • Regular communication with municipalities on project progress and request for comments (through established newsletters, publications, email list) • Survey on current practices, issues, and proposed new approaches • Public meetings at key decision points (e.g., draft standards, draft procedures) • One-on-one meetings with interested communities • Webpage	• # presentations • # newsletter articles • Comments received (negative/constructive/in support) & changes made • # focus group participants • # participants at public meetings • # municipalities signed on a potential pilot project hosts (MOAs)
Pilot Participants - Permit Applicants	Knowledge of and support for effort, and possible participation as pilot entities They provide input to policies and procedures developed	• Informational presentations and materials distributed at key workshops and conferences • Regular communication with potential applicants through established newsletters, publications, email list • Public meetings at key decision points (e.g., draft standards, draft procedures) • Webpage • Direct communication with identified firms • Survey of pilot participants on new process and policies	• Comments received • Attendees at public meetings • # applicants as pilot participants • # applicants signed on as pilot participants (MOAs in place) • Responses to survey evaluating pilot program

Innovative Permitting Project – Stakeholder Organizations List
(initial contact letters to be sent to Executive Directors or equivalent)

Associated General Contractors of NH
Homebuilders and Remodelers Association of NH
NH Association of Natural Resource Scientists
NH Association of Regional Planning Commissions/RPC Executive Directors
American Council of Engineering Companies of NH
NH Municipal Association (Local Government Center – Municipal Section)
Conservation Law Foundation - NH
The Nature Conservancy - NH
Society for Protection of NH Forests
U.S. Environmental Protection Agency, Region I (Wetlands and Administrator)
NH Association of Regional Planning Commissions
NH Association of Conservation Commissions
The Jordan Institute
NH Office of Energy and Planning
NH Department of Resources and Economic Development
NH Division of Historic Resources
NH Fish and Game
Army Corps of Engineers, New England District
New Hampshire Audubon
New Hampshire Governor's Office

Other organizations as identified.

Attachment 11: Land Resource Management Programs - Improvements 2009-2012 (Through: June 4, 2012)

What began as a single project in 2010 to better coordinate the intake of permit applications across similar type programs has evolved into a longer-term effort to fully integrate staff and functions and to standardize and streamline operations across four Land Resources Management (LRM) land development permit programs. Although many of the individual changes made to date are not "innovative" in themselves, the broader scale transformation of these programs achieved by having dedicated staff from outside the program leading a sustained effort to evaluate processes and identify and resolve inefficiencies is an innovative approach to improving government operations.

This document provides a list of all of the individual projects and changes in procedures and operations that have been implemented or are underway as part of the broader effort to integrate and streamline operations within the four related land development permit programs: Wetlands Bureau, Shoreland Program, Alteration of Terrain Program, and Subsurface Systems Bureau. Beginning in the Fall of 2011, Land Resources Management (LRM) senior staff began bi-weekly, facilitated meetings to identify common goals and objectives, define and prioritize specific tasks, and review progress on efforts to better coordinate and integrate activities across the four programs. This formal communication across senior management of these programs has been important in advancing these efforts.

Projects Completed:

- Coordinated LRM Application Receipt Center. Established a dedicated Application Receipt Center at which permit applications for 4 programs are received, input into a tracking database, and forwarded to technical review. The new approach brings together administrative support staff from the four programs as a team, providing for better cross-program coordination and staff coverage, ensures that the initial processing of applications is completed on the same day they are received (reduced from up to 4 to 7 days for some applications), improves the accuracy and consistency of the initial completeness review, automated several daily activities, and eliminated unnecessary and redundant data entry. The time required to conduct the initial administrative review was reduced from up to 40 minutes per application to an average of 23 minutes per application.

- Automated Check Processing. In conjunction with establishing the Application Receipt Center, standardized and automated the processing of checks for additional LRM programs, eliminating duplicative data entry, reducing the potential for data-entry errors, and providing more up-to-date financial data for managers.

- Increased Functionality and Consistency of Wetlands Database. In conjunction with establishing the Application Receipt Center, numerous adjustments and improvements to the Wetlands, Shoreland, and Alteration of Terrain databases and procedures were made including: revisions to standard letters issued to notify applicants and other interested parties, acceptance of foreign address data, standardization of data entry specifications

(e.g., postal address standards, description fields), elimination of unnecessary data entry, automation of label generation, and "clean up" of pick-lists to remove incorrect or unnecessary options.

- Review and Refinement of Application Receipt Center Procedures. One year after initiating the LRM application receipt center, a team assembled to evaluate and identify further process improvements, which included: reducing the amount of materials required to be date stamped during the initial review; streamlining the process of identifying potentially related files; revising the approach for entering abutter information; further standardizing daily activities; implementing a self-QA/QC process to improve data entry accuracy; and streamlining the notification process for certain projects located within a Designated River Corridor.

- Standardization and Simplification of Permit Applications. All LRM permit applications were revised to comply with a standardized format, to use the same terminology (to the extent possible in compliance with existing rules and statutory definitions), and to incorporate additional regulatory and statutory requirements (e.g., to provide for consistent notification of Local River Management Advisory Committee, when applicable). Several permit applications were substantially revised working with applicable stakeholders.

    - The Minimum Impact Forestry Wetlands Notification process and application form were revised with input from a group of stakeholders including the NH Timberland Owners Association, NH Department of Resources and Economic Development, and NH Fish and Game Department.

    - The Minimum Impact Agricultural Wetlands Notification form was revised with input from members of the NH Conservation Districts

    - The Wetlands Expedited Permit and Standard Dredge and Fill applications forms were combined into a single form and substantially revised to provide meaningful direction to the novice applicant.

- Proposal for New, Integrated Land Development Permit. Working with stakeholders, staff, and legislators, LRM and Commissioner's Office staff developed proposed legislation to establish a new, alternative Integrated Land Development Permit, which could be submitted by an applicant in lieu of submitting individual permits for each of the four land development permit programs. The integrated permit requires a more formal pre-application process including consultation with other state and local entities and a formal pre-application technical review with DES prior to submitting a final permit application to the department.

- Wetlands Grants for Process Evaluation and Improvement. The Wetlands Bureau, assisted by Commissioner's Office staff, prepared two successful grant applications for the U.S. Environmental Protection Agency's 2011 Wetlands Program Improvement Grant Program. The Department of Environmental Services (DES) received over

$590,000.00. Much of the work under these grants will focus on process evaluation and improvement within the Wetlands program and in coordination with other LRM programs.

- Posting of Approved Permits for Public Access. LRM programs established procedures to make approved permits available to applicants within one business day of the decision by making an electronic copy available via the DES One-Stop web-based data retrieval system.

- Improved Record Retention Procedures. The Wetlands Bureau and Shoreland Program established a records retention policy and schedule, in conjunction with the NH State Archivist, to reduce the bulk of retained hard-copy files, establish timeframes for recordkeeping, and ensure that retained files can be easily located.

- Integration of "Inspector of the Day" Duties Across Offices. Instead of continuing with separate Inspectors of the Day at two offices, the Coastal Office staff were integrated into the Concord Office Inspector of the Day rotation, reducing staff time dedicated to this function and bringing staff from different regions together several times each month, which assists in communication and awareness of each region's issues.

- Formal Communication Strategy. LRM programs established communications protocols identifying the strategies to be used to communicate both minor and more significant program and process changes to internal staff and outside constituents.

- Joint IT Improvement Plan. LRM programs prepared a joint IT plan articulating common goals for improving data management and reporting and moving toward a more unified system to support inter-program communication and coordination.

- Physical Re-organization of Staff, Equipment, and Files. Staff, equipment, and files within the Concord office were physically reorganized to support integrated and coordinated operations, particularly for administrative support functions, promote cross-program communications, and re-organize files for easier access.

Projects Underway:

- Complaint Processing. Review of procedures for complaint intake, prioritization, and investigation within the Watershed Management Bureau, the Wetlands Bureau, and other LRM programs with the goals of identifying opportunities to standardize and streamline procedures, better coordinate efforts across programs, and more efficiently utilize staff to investigate and resolve complaints.

- Performance Measures. Establishment of a refined set of measures to support real-time evaluation of activity levels and program performance. Measures for permitting activity and review timeframes, environmental impact/benefit analysis, and financial conditions are currently being identified. Changes to permit tracking, data-entry protocols, and

computer programs to generate standard reports will be developed to support regular reporting and updates for the defined measures.

- Data-Entry Protocols. Working to define data entry protocols, including clarifying and standardizing the categorization of permit applications and data entered associated with each individual file to capture the timing and outcome of key process steps. This will support more detailed and accurate reporting on performance regarding review timeframes and applicant response.

- Cross Training of Technical Staff. Technical staff were relocated and interspersed across the floor to promote increased cross-program communication and support initial cross-training of staff. Initial cross-training/mentoring partners were identified for (a) wetlands-shoreline structure permit application review & shoreland program permit application review and (b) shoreland program permit application review and subsurface system application review.

- Integration of Administrative Support Functions. Administrative support staff and functions were merged across all programs and their work reorganized into key functional areas: application receipt; customer service; permit generation; mail processing; and office management. Dedicated areas within the office were established for each functional area and staff are being cross-trained and rotated to ensure adequate coverage of all critical functions at all times across all four programs.

- Organization of Electronic Files, Policies, and Procedures. LRM is evaluating the organization of the computer drives and electronic file folders that house all LRM information and documents. Additionally, staff are reviewing, revising, and cataloging Wetlands Bureau policies and procedures for administrative, technical, and procedural issues.

- Electronic "Decision Tress" for Evaluating Applicability of Permit Requirements. LRM staff are developing simple, easy-to-use electronic flow charts or decision trees to assist potential applicants in determining the need for and the type of permit applications for LRM programs.

Projects planned (2012-2013):

- Evaluation of Technical Review Process for Wetlands Permit Applications. Evaluation of the wetlands permit technical review process to identify opportunities to standardize procedures and better utilize available scientific data to support decisions.

- Evaluation of Wetlands Regulated Activities, Permit Types, and Requirements. Evaluation of the activities regulated by the Wetlands Bureau, the applicability of technical standards to different types of activities, and the information required by permit applications.