

The Maine Drinking Water Program is a public health agency, and is part of DHHS in the CDC Division of Environmental Health. Our mission is to work with public water suppliers to provide safe drinking water to the people of Maine. We provide water quality assurance, engineering and geologic review, technical assistance, infrastructure loans, and education to water suppliers.

Maine has about 2,000 Public Water Systems. 377 of these serve communities as their primary water supply. They range from systems serving 25 individuals at a mobile home park or nursing home to the 200,000 customers served by Portland Water District. A roughly equal number of public water systems serve schools, businesses and industries, and about 1,300 serve a transient population: restaurants, motels, and campgrounds. Overall, over 800,000 Maine citizens use public water at home, work, or in their travels.

For most water systems, state agencies, and municipalities, protecting water supplies is a by-product of other decisions and actions. A wide variety of public and private activities can degrade or enhance water quality protection, but few of those choices take water supply protection into consideration, even when it's a nominal requirement, as it is with PL 761, which the Legislature enacted in 2001. Programs tend to focus on their central mission, and it is important that they also consider the secondary effects of their decisions. Water Supply Protection is not on the checklist, so it isn't considered.

We are fortunate to have a large, rural state with high-quality natural water and relatively few areas where water supplies are at high risk. Well-managed agriculture and forestry are good neighbors to water supplies. Residential and commercial development present higher risks. The rapid growth in many rural towns has increased the pressure on water supplies over the last ten years. Shoreland and upland development, as well as suburbanization of recharge areas make it difficult to maintain high quality water supplies.

Only 21% of our larger community water systems have effective source protection programs. Even those with strong programs have constant challenges from individuals and groups who want to increase the local tax base through development. In an ideal situation, a water supplier would own the area that contributes water to its source, as Bangor does. Most water systems have neighbors whose primary motivations are not water supply protection.

National studies indicate that forestry and agriculture, practiced with good management, are effective at conserving water quality and quantity. If forestry and agricultural conservation and management efforts considered water supply protection a priority, public water supply risks would be reduced, and development pressure alleviated.

Maine has a strong array of environmental protection laws, and a great deal of knowledge of how to minimize the influence of existing development on water quality. Source protection would benefit significantly if those tools and knowledge were focused on

protection of water supplies. Code Enforcement Officer's time and resources are stretched thin, and DEP education and enforcement is limited by staffing constraints.

We have a success story to tell that is also the story of long-term failure to plan. Rumford Water District has two wells known as "Scotty's Wells" located between Scotty's Brook and the Swift River in a sand and gravel aquifer. The wells have been in operation since the early 1950's. Sometime later, a subdivision was developed north of the wells, in the same aquifer. As the homes aged, at least two developed leaks in their oil heating systems. DEP responded aggressively to both leaks in 1992-1997 and 2003-2004. The 2004 spill response included lifting the house off its foundation to recover contaminated soil, as well as installation of new piping for oil tanks in many of the homes in the area. Total cost of the responses exceeded \$600,000.

DEP's response was both timely and effective, and served to protect the water supplies. However, had the subdivision been located perhaps another 1,000 feet north, a much more modest clean up and remediation would have served to protect general ground water quality, and the water supply would not have been at risk. Although a number of public water systems are able to manage their water quality in aquifers with development, it is an ongoing challenge. If we can re-direct development away from water supplies, we will save money and conserve open space, agriculture, and forestry land uses.

Another example of hard and expensive work to protect public water supply is the Lisbon area. The Lisbon Water Department has to cope with an aquifer that is also much of downtown. Lisbon's wells have been contaminated with gasoline (from a site which underwent aggressive DEP remediation), chlorinated solvents, and salt, among other things. The largest contamination event was associated with waste disposal at the nearby Maine Electronics site. Once again, DEP's response was strong and appropriate, requiring Maine Electronics to both control the contaminated area and treat the water reaching the water supply. Lisbon still has an aquifer with a number of adverse land uses, and associated long-term management costs. Although the Department has searched diligently for other sources, this aquifer, even with its difficulties, remains their best option. Had more care been used in developing the area, both the public and industry would not have needed to participate in a long term and expensive clean-up effort.

Brunswick-Topsham Water District has worked diligently with the towns of Brunswick and Topsham to craft and improve a wellhead protection ordinance. Under the ordinance, there has been significant discussion about use of pesticides and fertilizers by both the Town and Bowdoin College. The District, the Town, the Pesticides Control Board and the DWP have spent several years in crafting management tools and restrictions for these uses. The ordinance is not able to regulate individual homeowner applications, and there is significant residential development in the wellhead protection area. Nitrate concentrations, while still well below drinking water standards, have slowly increased, almost certainly from lawn and garden fertilization. In addition to these non-point sources, a portion of the Brunswick Naval Air Station lies within the wellhead protection area. Fortunately, it is the far end of the runway from the Superfund site area.

The proposed closure and re-development of the base will provide new challenges for the water supply.

Maine's population has been moving from its historical city centers to the suburbs and surrounding rural towns. This trend has two serious effects on public water supplies. First, the city centers are served with public water and sewer. As population is reduced, the water suppliers are left with stranded assets and fewer ratepayers to support infrastructure, security, and source protection efforts. Secondly, most of the larger public water supplies located sources in the rural areas near their service area 80-100 years ago. As development occurs in these rural areas, a significant part of the natural protection that was in place is reduced.

Gray Water District is an example of an area where, even with an active wellhead protection district, ongoing development is increasing the risk to the water supply. Much of the contributing area is developed, and analysis of satellite imagery (change detection analysis) indicates that there has been quite a bit of "infill" development in the source protection area. In some ways, this is a good thing, as this area is served by the Gray Water District PWS. However, at least a portion of the new development is commercial/industrial, and the Gray Water District has had chronic low-level volatile organic concentrations in the past, probably a result of earlier industrial activity. Systems like Gray are left with the options of managing a large area of development, and careful, frequent, and expensive monitoring.

The Ellsworth Water Department illustrates the amount of work and coordination required to begin to conserve the quality of a public water supply. The City of Ellsworth utilizes Branch Lake as its source. The lake has historically had seasonal camps on the northern end of the lake. A large portion of the central and southern end of the lake is relatively undeveloped, with a large parcel owned by Department of Conservation DOC, including a small day use area. The intake is in the southern part of the lake. The watershed, until recent years, was mostly forested. There have been ongoing controversies over an appropriate location and control for surface use access. Additionally, many of the small seasonal camps have been re-developed as larger, more elaborate structures, often without due care for the lake.

Ellsworth has worked hard over the past several years to improve their watershed control. Even with these efforts, the change detection analysis shows a significant amount of new clearing and development in the watershed. The seasonal up-conversions around the lake are at too small a scale to show up on this analysis (30 m pixels).

Recommendations, with some explanation

1 All State Agencies Favor Water Supply Protection in all their decisions.

A number of state agencies have authority over activities that can either enhance or detract from protection of public water supplies. In many cases, public water supply protection is not part of the framework for site selection and permitting decisions. The Maine DWP should provide leadership and coordination for decisions that may influence source protection. Agencies that can assist source protection include:

- ❖ Department of Conservation: shoreland and boat launch development, park water supply development, forest management assistance and enforcement prioritization in source water protection areas.
- ❖ Inland Fisheries and Wildlife: surface use management of water supply lakes, boat launch development and management, wildlife area management, hatchery management.
- ❖ Department of Environmental Protection: shoreland zoning review, Natural Resources Protection Act permitting, enforcement prioritization in source protection areas. Spill response and clean-up and siting of new UST's are good models of how source protection areas can be prioritized in environmental activities.
- ❖ Department of Agriculture: prioritization of enforcement, technical and financial assistance activities when correcting environmental problems to give greater priority to source protection areas.
- ❖ State Planning Office: assistance to local entities with source protection land use planning, comprehensive plan and ordinance review.
- ❖ Land for Maine's Future Board: assistance with protection of open space; protection of water supplies currently not a criterion for conservation.

First thoughts on a legislative/executive order:

WHEREAS, the citizens of the State of Maine have invested significant resources in the development of public water supplies for towns and cities within the State, and
WHEREAS, a safe, abundant, and well-protected supply of drinking water is essential for the public health and economic viability of the State, and
WHEREAS, water supply protection provides major economic and social benefits to the people of Maine, conserving open space and increasing the security of our resources, and
WHEREAS, the decisions of many state agencies can either foster or threaten public water supply protection, and
WHEREAS, water supply protection is not officially considered in many state decisions,
THEREFORE, we find and declare that all state agencies shall explicitly consider the impact of their actions on public water supplies, and document the impacts and prescribe or conduct any appropriate mitigation of impacts on the water supply resulting from the activity.

2 Foster Sustainable Agriculture and Forestry in Water Supply Protection areas

National research shows that well-managed forestry and agricultural uses help maintain water quality and availability. Many source protection areas are currently being converted from forestry and agricultural uses to residential and commercial development. These more intensive land uses, also known as “sprawl” pose greater risks to water quality, and often reduce the availability of both ground and surface waters by altering the hydrology of the area.

2.1 Existing programs(e.g., Nutrient Management, Right to Farm, Sustainable Forestry) to maintain environmentally responsible agricultural and forestry uses should be provided with resources and given a focus to work in source protection areas to encourage land conservation.

2.2 Provide resources and direction to Agricultural and Forestry programs including nutrient management, sustainable forestry, and right to farm to work with landowners in source protection areas to minimize the impact of their activities.

Although agricultural and forestry land uses represent the lowest level of threat to water quality, poor management can lead to a variety of problems, ranging from erosion and sedimentation to hydrocarbon and pesticide contamination of ground and surface waters. A combination of landowner education, conservation incentives, and, where needed, enforcement can significantly reduce these risks.

Possible list of activities:

- amend right to farm, manure management and related legislation to focus (new?) resources on farms in public water supply protection areas (PWSPA)
- focus agricultural landowner assistance in PWSPA’s (new resources?)
- encourage land conservation in forestry and agricultural uses in PWSPA through Land for Maine’s future and other programs. Integrate PWS efforts with land trusts and private conservation.
- focus forestry landowner assistance in PWSPA’s (new resources?)

3 Mitigate the effects of existing and new development on drinking water quality
Statewide activities:

3.1: Encourage active management (BMP's) of existing potentially threatening uses in source protection areas through municipal, PWS and state inspection of activities.

3.2 Develop a plan to target enforcement of existing environmental laws in source protection areas.

3.3 Add proximity to public water supplies as a review criterion for Environmental review programs, particularly NRPA and Site Location.

A number of public water supplies are located in relatively developed areas. It is not realistic to expect that businesses and residences will leave a source protection area. It is possible, through the use of education, incentives, and enforcement to mitigate the impact these activities have on water quality.

Maine has a strong array of environmental laws. We also have limited resources to enforce these laws. Programs like Pollution Prevention, Resource Conservation and Recovery Act and Underground Storage Tank inspection, Site Location, and Natural Resources Protection Act (NRPA) enforcement all can assist in reducing risks to public water supplies as well as helping maintain general environmental quality. Source protection areas should be identified on NRPA and Site Location applications, and minimizing the impact of development on water supplies should be an explicit review item under these laws. Focusing the energy in programs like these, as well as agricultural and forestry education and enforcement can reduce risks to public health.

Local Government activities:

3.4 Set minimum standards for local source protection ordinances.

3.5 Amend PL 761 to require that a PWS's written response to notification of proposed changes in land use activities in source protection areas be required prior to approval of a local permit.

Make the adoption of ordinances meeting or exceeding state standards a municipal requirement, using an approach similar to shoreland zoning. Only 21% of all community public water supplies have effective land use controls on their source protection area. These systems serve a large portion of the PWS population (about 60%), but smaller systems have been unable to work successfully with local officials to develop and implement local protection plans. The DWP and its partners have been working with systems and towns for more than 15 years to encourage the adoption of local ordinances with outreach, small grants, technical assistance and model ordinances. Standards should be simple and risk-based.

For ground water sources, a small inner zone would have no new contaminant sources allowed and high levels of management at existing sources. A larger outer zone would require a review of risks associated with proposed development, and would encourage open-space conserving uses, like agriculture and forestry.

Recommendation three possible implementation steps:

Statewide: amend NRPA and Site Location to include explicit consideration of public water supplies. Targeted enforcement plan, BMP education and enforcement strategy. (more detail to come, input needed)

Local:

Source protection ordinance definitions and standards:

PWS wells have at least two zones: a primary protection zone of either a calculated fixed radius or flow-modeled area, and a secondary zone similarly calculated where risks are lower but still significant. A third zone, the total contributing area (watershed) may also be regulated, if local conditions indicate that it is an important source of water for the well. Maine DWP has provided all towns with default zones for all PWS wells.

PWS intakes have three zones: an intake zone of 1,000 feet around the intake, the shoreland zone around the water body (250 feet, to parallel shoreland zoning) and the watershed of the water body. Maine DWP has provided all towns with default zones for all PWS wells.

Acute contaminants: nitrate, bacteria, produced by septic systems, animal husbandry, manure spreading, boat toilets.

Chronic contaminants: metals, organics, pesticides and related substances regulated by the Safe Drinking Water Act that are associated with residential, commercial, industrial, agricultural and silvicultural land uses.

-no new activities that produce acute or chronic contaminants (nitrate, bacteria) are permitted within the primary protection zone. Existing activities shall use applicable Best Management Practices and may be subject to monitoring and inspection. (note: ideally, the water supplier should own or control this zone).

-any development in the secondary zone is subject to a 'no adverse impact on water quality or quantity' test. Industrial/commercial uses may be restricted or conditioned on use of BMP's for handling of toxic materials. DWP has developed a BMP manual for these zones.

-Zoning shall encourage the retention of lands in low intensity forestry and agricultural uses.

**Public Water Supply Protection Meeting – Maine Drinking Water Program
September 14, 2006**

Chart Transcriptions

Individual's Definitions of Water Supply Protection

- allowing public use for other resources
- protecting water quality through wise land use
- preventing contamination
- not doing too much of what humans do too close to water sources
- best and highest use of water is recognized

- provide drinking water at lowest cost – balance competing public interests
- everyone drinks water without needing to think about its quality
- Maine needs a DW EPA to protect water sources
- include ground and surface water – think about “Do I want to drink this?”
- prevent adverse public health effects
- mediate the influence of transportation
- conflicting objectives
- maintain water quality and quantity (this one was repeated 4 times)
- smart development
- think long-range too
- minimize water treatments

Implications, Recommendation #1

- for DOC, the boat launch development issue is the biggest – how to balance this with PWS protection
- list information sources each agency has that are available to other agencies – if you list it will get focused on
- awareness of where 2500 day areas are and how they effect operations
- how to translate PWS needs into day-to-day work
- how does DOT balance needs with PWS
- impact of transportation development

Implications, Recommendation #2

- LMF visible in the 4th bullet
- land (watersheds) conserved for recreation purposes – balance with PWS protection
- low impact recreation
- conflict between ‘sprawl’ and water protection in downtown areas
- LMF – recognizing existing scoring system is problematic. Instead, define the problem up front (flagging the trade-off issues).
- support farmers with education – need for funding
- small land owners need technical assistance

Implications, Recommendation #3

- how municipalities might be forced to do this – do we have to use a hammer?
- any prioritization isn’t evident
- further specifying ‘activities’ – which development do you mean? Building the house at all or just fertilizing the lawn?
- does ‘no adverse impact’ really mean no development?
- alternative funding methods, e.g. septic system utility
- exception to zoning ordinance
- look at what other states are doing

Next Steps

- what other New England states are doing, including how they pay for it and the effects on private property values.
- taking everyone's 'temperature'
- dissect specifics of the model ordinance
- postpone next meeting (because Alex can't be there)?
- what's the problem – at risk for what, when?
- can we hear from towns that have done it?

Integrating Water Supply Protection into the State of Maine's Vision

The Municipal Role in Public Water Supply Protection

Resolve, Chapter 140

Second Meeting

September 28, 2006

Senator Inn Conference Room

Augusta, Maine

Impressions of Sept. 14, 2006 meeting:

- Helpful overview of program's efforts for protection of water supplies, layout of accomplishments
- Overview, presentation was helpful
- Overview, ditto
- Water tastes better than it did two weeks ago
- A lot of threats and contaminants we need to get a hold of
- Interesting to hear perspective and thoughts on this as an insider
- It is much easier for the public to accept to pay millions for clean up rather than to protect the resource in the absence of an identified event
- There is a long way to go with public education and the job at hand
- I am interested to hear what is from the other New England states
- Overview was helpful I wish there had been more discussion of surface water supplies instead of ground water, importance of precautionary principal of water supplies
- There are a lot of interests and complexities in this topic that have not been focused on the subject and broader than we previously realized

Presentations

Municipal-level source protection - Andy Tolman

Comments/questions from the floor:

- Are circular protection zones conservative? Is this in the sense of minimal protection? No, they usually err on the side of protecting more area, although in fractured rock, they can miss significant areas.
- What is the significance in inflections on the graph? (Water radius graph): the radius calculation is based on a range of populations, and uses a straight line approximation between ranges
- Which was there first I-95 or the well house in Augusta? The well pre-dates the road. (interesting protection note – DOT wanted to put in a flow through system

of pipes in the road deck to prevent freezing. They would pull water from the brook pipe it through the deck and return it to the brook. To my knowledge they did not do this. I spoke with them on underground injection rules, possible pinhole leaks and contaminants going back into the streambed. There was substantial protection weights here – icing might cause accidents – accidents could be tankers, fuel might contaminate ground water – deicing has runoff – well did show elevated chlorides seasonally and steadily increasing over decades of use. Not only who came first but what mitigation efforts are “best” all round protection)

- Describe criteria for high, medium and low. (Bedrock flow approximation determination): High probability of contribution is predicted as more than 85% likelihood, Moderate probability is a 60% likelihood.
- How many wells were delineated (bedrock) this way? 40 (serving 27 community water systems).
- 40 out of 400 wells? A total of 217 active community wells have delineations. The remainder of the community (323) and NTNC wells (about 400) have calculated radius circles.

(For the following, the abbreviation PP refers to the title of the PowerPoint slide and comments made in reference to the slide are bulleted)

PP: Basic features of zoning:

PP: Types of Contaminants:

PP: What is crucial to protect at the municipal level:

- 0.35 % is acreage? Average total land area within a town in community and NTNC well source protection areas is 0.35%
- Transient means restaurants? Transient systems are those who serve 25 or more people 60 or more days a year, and the population served changes from day to day. They include restaurants, campgrounds, motels, and similar establishments. The proposal for regulation does not include transient supplies in those required to be protected.

PP: Top 20 towns:

Casco

- Does Casco have an ordinance? No
- When you say that it has the well protection does this mean it should or has? Towns noted with wellhead protection have active ordinances.
- Can the towns find their well protection plans? Some can, many have filed them.

Morrill

- What is the white on the map? Higher and moderate probability areas are in white.

PP: What's working:

PP: What needs to change:

PP: Other New England States:

- What is the level of protection and exceptions of protection, development of these states? Southern NE requires protection, particularly in the inner zone. They are working to manage development in the outer zone as best they can.
- For CT there is a level A and B mapping for all community supplies.
- The regulations of activity increases as the zones are closer to the well
Massachusetts Water Resources Authority is protecting sources so that they can continue to serve unfiltered water to 2.5 million people. (Handout passed out by attendee)
- Protection for a new community source? DWP regulations require written land use control. Until the completion of the assessments, we didn't have a good handle on this requirement. We now require active management plans and land use control for all new community sources.
- How many community wells in Maine have been approved that would fall into that? In the last year, there have been 12 new sources with protection plans
- Going down that list of top 20, towns have had water catastrophes so they have been bitten once. They pass an ordinance because of past problems.

PP: Summary:

PP: Source protection status graph:

PP: Next steps:

Costs of No Wellhead Protection – David Braley

PPs: The cost of No Wellhead protection in Maine

- Norway -
- Lisbon -
- Pittsfield -
- Elementary School in West Forks -
- Limerick -

Comments from the floor regarding Braley's presentation:

- Many of these examples point out impediments. Who ends up paying? The towns can make land use decision with out regard to costs. The state comes in and fixes the problem and they may not be reimbursed.
- Portland Water District operated a well system that supplied North Windham A gas station was proposed right on the edge of the wells' source protection area. The Town and the public were aware that it was not an appropriate site, but the applicant's geologist indicated that the area was isolated from the wells by a bedrock ridge. The gas station went in and MTBE was detected in wells

monitoring the area near the water supply. The cost of it to water district was 1.5 million dollars. It was close enough to Sebago Lake so that piping could be run from the existing source to replace the wells. It was fixed relatively quickly. DEP spent about one million dollars responding to this incident.

- What is the number one reason that towns are so reluctant for ordinances for water protection? It is primarily the individuals that perceive that they would lose use of their land. Changes in zonings were defeated in several towns. They weren't willing to have a protection zone on their property...local politics.
- Comment on same question, Windham wells still are a resource, although currently off-line. Since the time they were abandoned, there are more box stores going in. An applicant hired a consultant, got new data, and determined the data showed that where Home Depot was to go was out of the area the model indicated required protection. The Town re-zoned the area for development, but did not change the zoning in other areas where the model indicated that the protection area should be expanded. What are we going to do now? What will the best management practices be now for these businesses in the wellhead protection area now?
- Land owners fear of being trampled on.
- Have there been attempts to compensate landowners via taxation relief?
Response: Not that I know of. The closest to that is that we encourage them is to see if the water system can negotiate a conservation easement in return for protection. On a municipal level for the outer zone, there is typically a change in the way you can use your land, but it doesn't take significant value from it. There is a variety of opinions about what a person should be able to do with their land.
- Affirmative control by buying of land from willing sellers is an important piece of source protection. Regulation is a back-up for areas where this is not feasible.
- Regarding the handing out of the 5 or more sets of maps you have done modeling for. Mandate should be that towns post the maps.
- Can we get a map of some of the protection zones proposed and then pick a few towns around the state and bring them back to them and ask them how this would affect them. What would that do to local listings of realtors etc? We can do that sort of thing. As an example of the benefits to landowners from source protection, Kittery and York have bought most of their watersheds. For the remaining private lands on or near the lakes, the suppliers have working relationships with the owners and have purchased easements on the shore front areas. Upland areas are regulated by a watershed protection ordinance. These lands are more valuable because they are adjacent to open space, and will be even more valuable later on. It is a mixed bag. For a landowner in a source protection

area, there are advantages as well as limitations. We will provide more materials on examples for the next meeting.

Impressions about positive and negative reactions of the presentations

Positive impressions:

- Of all the information, any provided from New England states and what an accident can cause. The data is interesting and the effects it can have.
- The basic framework on groundwater protection zones and to present it graphically allows you to make a strong case to legislators and whether or not they do it is another question. It seems like a pretty solid case and that you have tools there to advise them to start it.
- How do we implement it and develop the resolve.
- I was impressed on the data. I was struck with the value of science and the case on the engineering data but there was still a problem, that is amazing and for me it says that using precautions there should be things that should not be around a protection water supply. I hope we can have a strong case for water protection to get something through.
- For years I have been telling people that only 50 out of 6000 Maine lakes are used for drinking water supply. Well protection areas are less than one percent in every town. But as a society, we're unwilling to accept that only 1 percent of the land needs to be zoned for protection is amazing.
- Looking ahead for future water supply needs, is that calculated in? A: That is not part of the number, but there has been some discussion of future water supply needs. As a result of the North Windham incident, the DEP is now required to look carefully at applications for underground storage of gasoline in potentially high-yielding aquifers which may represent future sources for public supply. There are a handful of towns that have looked at future water sources and provided zoning for protection of these areas through their comprehensive planning process.
- When IF&W reviewed significant wild life habit and its loss, 85% of development did not come into state scrutiny for protection. The Municipal decision-making process governs most development.
- Protecting our future supplies: education with communities, they are leery of state involvement. The planning board I was on there was never anyone there to

explain things, like centers for communities and landowners. Just a willingness to acknowledge these precursors to protect the sources. We need to treat them differently. Not just to come down on them with ordinances, it can make that defensive.

- The fact that you created a framework for protection, speaks to how critical these resources are and the larger areas that need protection. It allows you to tailor the protection and the larger area doesn't exclude activities. So unless you think about different tools, our approach, is it useful to their approach.
- I am encouraged by the shore land zoning model proposed. It is a state requirement and the only the state enforces it, so it does not work very well and if it were left local then there will be varying degrees of protection and enforcement. There should be a standard for communities to follow. Shore land zoning is a code officer in town that knows what is going on. This is a good model.

Negative impressions:

- We would all like to see the water protected, but we have concerns about private property rights. If this were to occur and compromise like MA for compensation would ...we might want to see what is not allowed in the zones.
- Realtors are required to disclose to buyers problems and need to know. Water supply protection would need to be disclosed to the buyer as well as future protections. Past legislation, when put up against competing uses, the balances is not what it should be. Drinking water is most important and the rest of the uses should be less important.
- Of the most importance, monetizing some of the impacts on positive and negative. Make sure the risk is spread where the risk might be. For example, the development of the area, the monetized risk in the previous examples. Risk and reward and risk exposure must be presented. All of these concepts were explored before and these things have to be presented.
- Wildlife conservation and sustainable forestry would put a positive spin that the water is contributing a valuable water supply to the public. This would be an interesting consequence to see what would be the value lost if the water source became contaminated.
- When we are talking about municipalities, I hadn't heard it before this group but when their bad decisions are bailed out by a third party a host of examples come to mind, a land use decision, a municipality and person of land use, municipality does not have feedback. Municipalities do not have the resources to pick up after big mistakes. Can we use this observation to go when we need to go?

- Home Depot example: we have the science to say we can go there but future problems what if their development had to put a performance bond that these funds well be in place to take care of future problems.
- I don't want to speak for developers, but as far as realtors, I don't know about this.
- We are sort of wrestling with broad classes: compensation of rights from loss and the other exercise of the state police power through regulations for public use and benefit. The two-tier approach. I would want this group to stay away from the regulatory model. It is deeply ground to protect public health especially drinking water. It is a public resource and benefit. I hope we don't focus our energy on what it would take legislature to put up money.
- Examples of costs, if I were on a select board, maybe in all those towns would have to go through hardship. I would want to avoid these problems. Why haven't you brought their stories out to the towns?
- Example: If it came from the state, the town would not do what the state suggests. It almost feels to me that someone else should present these.
- Performance bond issue: my first reaction is this is an insurance policy. All it does for me is to transfer costs from state to developer rather that reduce the risk that reduce the cost. The risk to the consumer needs to be reduced. A benefit is that a developer may want to take into consideration certain aspects of their project.
- BIW example: What do we have there for tools and resources. Public water supplies are public safety issues. These are the conclusion we came to.
- Bond idea: I would wonder the fairness of that? Would you ask the homeowner to retain a bond? You are laying down a whole new layer of requirements.
- The current model, you don't require the bond. If you have an event, you go after the person responsible to get reimbursement for the costs.
- The model for petroleum storage and retailing is similar to developer bonding.
- It did boil down to private property land use. We wanted to replace the old comprehensive plan. The local real estate rallied to defeat the plan. Another group has come along to work on it. The private property owners defeated the plan.
- The water under your property is being consumed by the public. People are already drinking the water, so passing an ordinance to protect the water is

acknowledging the current state of affairs. Once a town is drawing water, a town should draw up protection for what is currently going on.

- Timber harvesting: Protection of water through education, outreach, focusing on best practices...best way to is to educate instead of implementing ordinances. Get some support from DEP for this.
- Surface water discussion: I was hoping of have examples of some of the cost and consequences of not protecting it in the past, but these have been on wells. The problem is that the surface water supplies, but the mentality or change that needs to take place hits everyone in the watershed. Stopping pollution in the area is important. Everyone in the area is somewhat responsible. I am looking for examples of what the costs are for treating problems etc.
- Did we hear anything back from the other states on affect on property values? They did not have any more than I do, they do not have a sense of any loss due to zoning. Some places where the water supply needs exclusive use, we are advocating buying it in those locations. Where there is shared use, our goal is minimizing the risk. We are talking about education as well as regulation. The shoreland zone near a Public Water Supply intake, we think it should be in resource protection. It should be in a conservation easement, and compensation should be given. It is a very complex answer. What are the current concerns for the area.
- Compensation: Shore land zoning compensation: No financial implication. That the purpose that the water is protected. They gain value because of shore land zoning. It increases land value. It is a concept more than a spreadsheet. The perception of a town can affect land values. Benefit is that the land value increases. Sebago Lake's property is still very valuable regardless of the current position.
- The compensation lies that their status quo was protected and they gained protection from what their neighbor might do. The same analysis could be used for ground water supply.
- Sales position is using a protection quote on the sales agreement...an advantage for them. We bought one... protection by conservation easements or next to conservation area. It is appealing now.

Andy:

Are we at a point that we can talk about what municipalities should be required to do to protect water supplies like refining shore land zoning and some level of protection required for ground water supplies? We are proposing that municipalities provide basic protection for community and non-community non-transient water supplies. We have been encouraging suppliers to work towards protection, although they have very limited tools to do it. They have no power to pass ordinances. In the sanitary protection zone,

we are talking about serious protection, no new septic systems. Although new septic systems are not allowed in this area under the Plumbing Code, they sometimes still get through. No toxic materials to be used in these areas. The secondary areas there would be a higher standard of review for anything new going in before for best management practices. There would be a provision there is one that allows inspection for activities in these zones. This has been reduced to the essentials of what we are to propose. Basic standards are what we would like to see.

- Do we use the shore land zoning model? We have talked about this, it might fly. We have a skeleton problem coming down from the state, but they could do their good work.

Andy:

State policy to protect water supply is on the list of things. This is encompassed in Paul's suggestion of a National Environmental Policy Act equivalent for public water supply protection. We had talked about shore land zoning. The question is, can you all agree with the concept of a state mandate for local zoning and agree to support it or not?

- The shore land zone model and 2 tier approach is good. Most of us support that but need to see the next level of detail. Andy: This is where I am trying to get us to. We need to agree on the concept before a model ordinance is developed. We're looking for concept approval first.
- I can support an ordinance, but how is this going to be achieved? Work for compliance through technical assistance. I think this will go further.
- If I presented that list of 3 things to my mom, her response would be would be these things are not being done? She would be stunned that this is not happening.
- People are stunned when I make presentations when I tell them what is happening out on the ice. They can't believe that it is not being control and monitored. The general public would be stunned about this.
- All we heard fifteen years ago was that Maine doesn't need mandatory water protection. What is flushed out is that the municipalities are the major players and they participate the least. They need to actively participate. They are the missing piece. This is why we are sitting here.
- If the reluctance for municipal participation is the reason that they are not interested. Then how do we address this? Most communities do not think they have great risk.
- In a lot of communities the decisions being made by people who are the power brokers and landowners of the communities. There has to be some sort of bonding, somehow they have to be made to feel that they would be made responsible for anything thing that would happened in the future. In the case

where the city owns and operates the water supplies, the councils act as trustees of the water supply. It is a serious responsibility and should there be a person financially responsible. It would be good if there were something going through the municipal communities to address this issue.

- What is the process going forward as we move towards sessions? Natural resources committee to listen in to see what they may be dealing with? Andy-this is designed for a four-meeting process. After this meeting, I was hoping to figure out how these 3 recommendations would happen. On the 3rd recommendation, we are making good progress. We have an incentive level recommendation to keep resource protection areas clean. Then how to we deal with existing problems and how people may want to do with their land. It comes down to education and enforcement. Present standards and show them how to achieve them.
- It might be good to have a meeting with some of the folks from MMA since they are not here.
- What I would hope to happen in the next meeting is to work on recommendation 3 and to talk about recommendation 2 primarily.
- Draft of the details will be presented before the next meeting. The model has everything. We have to decide what we need.
- Wellhead protection is the ordinance. Will this be a model for surface supplies? What we need for that would be shoring mandate. We haven't gone far with DEP. In terms of protecting watershed, we were focusing on surface use and shore land zoning. The biggest gap is that we have 80 percent without protection. Surface is at 35-40% with protection. Bangor owns their entire watershed. This is not a model we see elsewhere. What is the risk we are willing to accept?
- Model ordinance: Are you going to try to extract from that a skeleton version? Yes, because I am trying to ... on a conceptual level it is about developing detail level of triage.

Next steps:

- Do some preparation and writing a draft
- For the next meeting on October 12, 2006
 - Focus on 3rd recommendation and shift to recommendation #2 discussion with more detail. Maybe we should come back with primary ideas to start.
 - Perhaps email to Andy these ideas prior to the next meeting. (Materials are out on the web-site for review from the meetings). If you have something to be posted, send it to Andy.
- Best management process manual on the web site for viewing.

**Resolve, Chapter 140
Integrating Water Supply Protection
Senator Inn, Augusta
October 12, 2006**

Details of “shoreland zoning model” presentation – Andy Tolman

(PP=PowerPoint Slide)

-comment or question

A: answer to question

Comments on the following:

PP: Agreement

PP: New England Update

PP: Northern NE

PP: Proposal for shoreland zone model

PP: Primary protection zone

-How would this work if I had a house that needs a new septic system? A: We use the best technology (keep it as far away as feasible and, if needed, use advanced treatment) to replace it to minimize the risk.

-Is the existing authority that if there is a problem the water system can inspect? A: Yes, the water system can enter a property if they suspect an immediate health-threatening problem.

PP: Secondary Protection Zone

-Who conducts the review of all new activities? A: The planning boards would conduct the review. There is an existing provision that allows boards to require the developer to fund an independent technical review. Do the planning boards exercise this option? A: Many boards in southern and coastal Maine use this option now.

PP: Durham map

-Are the blue dots the 300 hundred-foot circles? A: Yes.

-300-foot protection radius is about 6 ½ acres. A: In most cases, the well owner is the property owner for much of the protection area.

PP: New Gloucester map

PP: Machias, Marshfield, E. Machias map

PP: E. Machias map

-If the inclination is to call salt a toxic substance we would be reducing applications of road salts in front of schools. A: This one is a balancing act; we have two activities that influence public safety: safe transportation and safe drinking water. The intent is to manage both the activities to minimize the overall risk.

PP: Greater Augusta map: Sidney

PP: Zoom in of Augusta map (Bond Brook area)

-In the area near the south well, the land is used for hay. In years past, they have been asked not to spread manure.

-There are a lot of above ground oil tanks that require management. There's not much developable land in the protection areas.

PP: Gardiner

-Are both the wells on the Gardiner estate? A: They are very close to the Gardiner estate, although located next to Route 201. A lot of the land in there is Gardiner estate.

PP: Other Considerations

-RE: Shoreland zoning: Are you proposing the 1000-foot circle to measure where it comes out on the water? A: The measurement is from the intake-location on the water. The area where that radius touches land would be a candidate for Resource Protection Zoning.

PP: What can we make work?

-Shorebird nesting thing, I think that it would be key to have developers, contractors etc. to inform them this is coming. Request a separate meeting. They need to know this is coming. My association is likely to oppose this. We all agree that we need to maintain the quality of water. We would prefer to see a town do this own their own rather than a state mandate. Compensation would soften this.

-Existing zoning, land uses and how these meld together. A lot of the reluctance on the part of towns is fear of land use controls. Small water suppliers, schools and mobile home parks have very limited technical capacity. They often own enough land to protect their supplies, if they manage their property well. So the town doesn't want to tell them what to do. There is a place for larger communities.

-If there is going to be this restriction it needs to go both ways.

-If the end result is that the Legislature has to resolve the conflict between property owners and public rights. What if when the town approves the new development and the developer signs an acknowledgment to restrict activities to reduce their risk? No developer wants to contaminate a water supply well. At least the development decision is made with everyone being aware of the situation.

-Is this taken to the developer and homeowner? Who could oppose just an acknowledgement at the time of approval? At least it is out front. At least when the water is sold future owners would be aware as well. This would be better than nothing at all.

-This would still require that all towns show source protection areas on their maps.

-This would give an opportunity for outreach and education. As ownership of the subdivision changes, the new owners would be responsible as the original owners were when it was approved.

-If I buy a house that is in a wellhead protection area, would I be liable if I polluted in any way? A: Technically polluting the water is a crime, but proving it is difficult.

-It can be looked at as protection of property for new owners and the rights of purchasers of property. Perhaps this idea could be endorsed.

-Didn't TPL come out last year with a study that showed that property values increased in and near conservation zones?

-What does your organization perceive to be overly restricted? A: First, there are concerns with taking any rights to land from a person. They have bought the land to do what they want. It sets a precedent. Buyers and sellers are moving constituents. People only get involved in the buying and selling. Beyond that, people (other organizations) are not watching this. The other issue, if the tax rolls are reduced, other people are taking up the slack for that lack of development. The tax would have to be paid on the land that is taken off the rolls. Lands for Maine Future Program could help. We should compensate the owner for loss of use of property.

- They already can't put ground water contamination sources in a protection area (like a septic system) now. What is it besides not putting a septic that is going to change with this proposal?
- Restricting activities should be reviewed by the buyer with full knowledge of what they can or cannot do. Existing owners should know that there is a restriction.
- What is the taking if you are still able to use the land with restriction? A: One is that the wellhead protection area in a downtown area. There are still parcels that still could be developed years ago, but now cannot. If an individual goes to a town that has no zoning and buys land now, and things change in the future, this greatly affects their plans.
- There is a risk for a buyer, because changes are going to come down the pike. There is a risk assumed when you have to buy a piece of land. There is an inherent risk in land purchases.
- Talking about purchasing protection areas, for the larger ones, that have expanded zones, did you say that some of them have development conservations easements? Is this a potential solution to land owner property rights. It would be a required purchase of development rights. A: some systems have successfully used conservation easements to protect critical areas for their supplies.
- The case is that person came in to put in a replacement septic system, a four bedroom one. They didn't have room on the lot for a four-bedroom system, because the lot was too small. They installed a 2-bedroom system. The house was put up for sale, and the seller was advertising it as a four-bedroom home. We notified the realtor and had them change the advertising. It is illegal to falsely advertise real estate. The buyer and the seller have to know that their land might impact the public water supply. I see it as a positive for the buyer. The seller made promises that only 2 bedrooms would be occupied. Legally we had no choice to approve the two-bedroom system. The seller had provided the information that it was a four bedroom house. I do think that protecting buyers and sellers rights would be a good thing.
- Well location restrictions for public roads. A: the standard is that the well cannot be in the right of way, which is 33 feet from the centerline of the road. It should be as far away as possible. We have a different standard for protection in that area for the right of way. Reducing salt use, there are technologies to reduce salt and pesticide use.
- Keeping a water supply more that 300 feet away from the road, whenever possible, is a benefit to the owner.
- New water supply source approval requires that a protection plan be implemented. The water supplier's consultant makes a recommendation as to what needs to be done for the protection area, and the supplier does their best to implement the plan. Protection is not a priority at the local level. I have many copies of comprehensive plans that go to great lengths to ensure pornography should not be sold in the area around a school, but don't have anything about public water supply protection for the school.
- The abutter notification law, how many has that increased in terms of notifications to water suppliers? A: The Portland Water District's watershed is about 200 square miles. We have received one notice in four years.

PP: Agreement

- What are you asking for agreement on? A: Pieces of recommendation three we can support.

- If there are pieces you cannot support let us know.
- Notification could potentially be brought back to the board. Reasonable compromise. Everything else I have problems with. Where is the money going to come from for this?
A: The proposal provides a requirement that the towns adopt the ordinance and they would have to change their zoning maps. If towns did not adopt the ordinance, the DEP or the Drinking Water Program would implement the plan. We might be able to redirect existing funds to provide mapping. The Drinking Water Program would have to provide the mapping (again) and the towns would have to redraw their maps.
- Majority of this is fine. Implementation, enforcement and inspection, the capacity of many towns is not there. Looking at future water supplies, that town could be looking at their comprehensive planning.
- Original recommendation # 3: NRPA already requires the protection of ground water. There may already be the ability to review activities for impacts on public water supplies. Environmental laws are not enforced a great deal. There are some existing mechanisms that are easy to refine to protect water supplies rather than make new ones. Setbacks between sources and potential threats need to be reciprocal. (Setbacks are reciprocal for new sources; existing sources and existing threats require management)
- We think it all looks good. Consequences, is there a way to make consequences felt with out having to pass a state wide minimum.
- The ordinance should point that things are not restricted or encouraged. And to provide solutions and other options. And provide other information to land owners. If this is rolled out at the same time, that is one package that can go out at one time this could move things along easier.
- A lot of research needs to be done in these areas underground. We don't know what is there. The research is costly to determine what exists already. It does protect our current activity because we don't know what is currently there.
- No objection. It is overdue, is it perfect, probably not. By passing a minimal mandatory ordinance, the burden of proof falls on the developer. This should be part of it and should be built into the ordinance.
- Something needs to be done to see that municipalities are abiding by the ordinance.
- Of course it should be protected, but the details represent a difficulty. I would like to see the mapping of current surface water supply is and overlay it with current protection zones and the shoreland zoning in those areas. Expand or put under NRPA and how do we depict it and put it on GIS mapping. This only picks up the state regulated activities and not the NRPA.
- PL761 amendment is worthwhile. Minimum standards for ordinances are done with coordination with the towns and provision of that for state funding assistance to help the towns with this ordinance. The towns are not going to buy into it right away.
- I am in favor of everything here.
- We would object for to using Land for Maine's Future money if the land is not available for public recreational use.

PP: Recommendation #2

PP: Land Conservation

Identify tools, Sources of funds, Incentives

- How were these two land uses chosen? A: We looked at what local and national experiences have said concerning land uses that are compatible with maintaining water quality. Forestry and agricultural land use are the most compatible. We are trying to work with agencies and other organizations to bring positive pressure to sustain these lands in low-impact uses.
- I am aware of the tools and funds but I am not aware of the gaps.
- Where does the money for Land for Maine's Future come from? A: General Obligation Bonds provide the funding.
- What if there were two bond issues in the future, one directed specifically for drinking water protection. LMF's purpose is to provide public access on land throughout the state.
- Isn't there already a set-aside for agricultural lands? (Yes)
- Most farmers cannot have people running all of their property. Generally speaking a farm can be a dangerous place.
- Preserving those areas without intensive development and also allow public access. A: There are areas in southern Maine where water suppliers, land trusts, and towns are managing access to public water supply lands successfully.
- The Stormwater Law allows compensation fees be used to protect areas adjacent to protected water supplies. Make this a specific component of the plans DEP is making.
- The USDA Forest Service recently completed a National case study for conservation of farm and forest to commercial and residential. Out of 15 watersheds at risk nationally, 3 are in Maine. There is a need to pursue land conservation. If those lands are converted to other uses there could be significant down stream impacts. Bond allotments could be increased. Incentive wise, for land conservation for permanent protection, we administer a couple of programs to encourage them to retain their property as farm or forest. There are funds available to offset the cost of non-income activities. Cost share rates; there are additional funding from fish and wildlife service. NRCS has a conservation security program that could provide funding.
- Forestry: The Forest Stewardship Council has a program for forests that are harvested in a sustainable way. This also goes towards protecting water supplies as well. Green vs. non-green certified lumber.
- MA has issued grants to farmers for best management practices.
- There is some resistance for private landowners. They would have an obligation to the federal government. The biggest challenge is to ward off conversion of property. Certification, you have a market-based incentive. They snap to when they hear 3rd party audits. Market pressure for 'green' wood is encouraging adoption.
- Develop a program for agricultural lands where following some responsible standards would provide a reduction in taxes for farms in a resource protection area. Town could get reimbursed from the state. Development done in a certain way could also be included in such a program. Kind of like the tree growth model.
There is an incentive for responsible subdivision development in current Site Location standards: density bonuses for clustering.
- More support of water conservation districts and triple the funding, would provide much benefit. They just don't have the funding to provide the public outreach, etc. More people are needed here to do the work.

- The biggest hurdle is finding more money. If TABOR passes, we won't be looking for money. Otherwise, we present the programs in need of more money with reasons why they should be funded. The cost benefit is incredible in prevention compared to cleanup.
- Example of savings: the Catskill watershed system in NY. Saving money through watershed protection so water does not need to be filtered. NYC provides funds and resources to the Watershed Agricultural Council to encourage responsible agriculture.

Recommendation #2

- I support it.
- I would want to see the language.
- Wholehearted support as long as the agricultural techniques are identified and non-recommended uses and recommended uses are identified.

- Local water users, see what their needs are.
- No objections. I am trying to think of other land uses, when we are talking about land conservation, it is an issue.
- Agriculture and forestry can be seen compatible with outdoor recreation. Use this as well. Adding a third compatible land use.
- Ok. I would like to see what you come up with. I would like to know how you are identifying sustainable. A: Minimal environmental impact, not necessarily organic. They should be good neighbors that stay in business. Not necessary USDA Organic.
- Sustainability and certification didn't mean anything to anyone. Responsible did. This may be more of a term that would be more inclusive. The people using the property are using it in a responsible manner. Sustainability issue would bring the question up as to what is being sustained.
- Not speaking for our board, we believe the concept to be agreeable.
- Show me the money. The resources are the focus. Is there a correlation that can be derived from agriculture and forestry use to manage these land uses. There has to be some generated source of income for these ideas.

Next steps:

Goal for next meeting is to try to draft up the recommendation section of the final report. The background has all been written but my goal is to have some language for all three recommendations and fleshes out some level of detail as to what we are going to be asking for after the election as well as monetary figures.

Recommendation #3: How far would we have to notch back to see if people would be comfortable with it and if it would be any good?

-PL761 amendment: accountability and teeth in it.

Recommendation #1: state agencies considered their impact on their water supplies. Cooperation with other state agencies is a key for everyone to succeed.

Tiers 1 – 3, what if support isn't there for all of them? How would it be presented back to the legislature? I am open to how we can make the report work; we will consider discussing recommendations that have less than full support, and presenting the arguments for and against each.

-The IF&W has a mandate to protect resources and provide reasonable use of these resources. Protection of ground water and land protection protects the land for our uses. So we are looking at two parts of the public in terms of protection. I don't think you are going to capture that in this discussion. I am here with concerns about reasonable public use.

Andy: prepare draft for next meeting, outline level sent out with the meeting announcement.

The Group is to bring back thoughts and other material to the next meeting.

How can you possibly present to the legislature in February that would present enough details, but it still wouldn't not show all of the details. A: There may be some discomfort around agreeing to something where all of the details are not available. There will always be more details to work out in the implementation of the recommendations. Our goal is to provide a structure that we can use to develop workable protection.

**Resolve, Chapter 140
Integrating Water Supply Protection in the State of Maine's Vision
Senator Inn, Augusta
October 26, 2006**

What brought you back?

- I've been reading the notes and materials and there is a municipal component here.
- Came back because the work is worthy of doing and am appreciative of the process to come to the point. The atmosphere is one that encourages participation. Maine Forest Service knows that forestry is a compatible land use for protection of water supply.
- I think the issues here are important for both water supply and landowner interests.
- This is an important issue that I want to follow through on.
- I want to relay the opinions of our board to the group.
- Staying involved because I have been involved in several related group processes dealing with water resources. Want to see what conclusions can be reached and to provide the Legislature an opportunity for support. Curious to see the outcome.
- Our public and private water supply is under controversy. There is a lot of independent and private activity on water use and protection.
- An important issue that interconnects with other issues which are on going.
- I think there are some opportunities for Land for Maine's Future projects to be useful in protecting water supplies and that these opportunities are properly balanced or integrated with LMF's primary mission of providing recreational access.
- Representing my department's interest to maintain compatible uses. Coordinating with a number of other ground water and surface water dialogues that I am participating in.
- I am curious about what has been going on. Protecting public health by protecting our public drinking water.
- Want to get caught up with the process. Ellsworth water supply has been going through changes and this is critical to our success as well as smart growth zoning issues.
- I am encouraged by this effort because it was too easy for activities to occur that would adversely affect our drinking water supplies.

Recommendation 1

Establish consistent policies among all State agencies to enhance source protection in all state decision making, development, and practices.

-So, would you be also including some of the answers to the questions or recommendations to them? (yes)

-When you get back up to the upper part for Inland Fisheries, we also provide technical assistance to DEP in evaluating applications. How it plays out across all of the agencies with MOUs and regulations, there is a lot there. (The details could take a year or so to work out.)

-If we are going to consider treating water supplies as protected natural resources so it has the same importance as other natural resources, so that there are certain standards that have to be addressed. (This is the kind of thing that could flow out of the commitment to having a unified state policy.)

-How do DOT's activities affect ground water supplies? Should they be included as part of the mix? (Yes)

-Implementation of how this might work, but I look at the first question to be answered, mitigation means that these things would happen, so how would these be addressed. Is there an alternatives analysis that should be conducted before we consider mitigation? In a recent application, the water district had to do an alternatives analysis before installing a dock. In the course of putting things together, we found a different way to develop the dock that didn't require driving piles. (That might mean reworking the "therefore" to include alternative consideration. We don't want the next generation to wonder what we meant by that.)

-Is there a companion piece for municipalities to consider their actions? (What can a state do to provide additional protection?)

-Are municipalities held at the same standard as others? (yes)

-All state agencies shall explicitly consider the impact in consultation with other state agencies...drinking water and DEP...trying to avoid tunnel vision. Prompt decision making with other dept. in the state without having a negative affect. Using language that allows districts to acknowledge and respond to changes. (Finding the balance between your job and everyone else's job.)

-Two things, one is it clear to all agencies that the resource is what we are working on here and is there a way to devise some sort of the filter that would overlay these concerns on their work plans so it provides awareness and planning ahead to protect the resource. (Every agency has work plans they have to prepare. That is the end state we are hoping for, we work through implementation at a state level then work into the work plans.)

-I recall when the ADA came out, whenever a work plan was developed, they had to follow specific questions to aligned with the plan.

-Is there any reason why some of the criteria of NEPA couldn't be used? (I have to some extent. A lot of our decision goes through this review. Whatever action you are taking has impact. It forces a level of review and discussion.)

-All federal agencies were required to review their regulations that could impact the environment, and there were 3 bullets that maybe some of these could be brought in.

-Recommendation 1: it is not clear if the state is following the recommendation under recommendation 3. I don't see "prohibit actions" here. (The intent was that this was the big picture umbrella. Under that there is a series of choices under 2 and 3. There are a bunch of state and local choices we need to make.)

-I can see the wording...where depending on the outcome the outcome of Rec. 3. (Refine the "whereas")

-Protection of future water supplies...how to address this and plan ahead. (There is a level of protection for future sand and gravel aquifers and does prohibit detrimental activities on top of them. The state has taken steps in this as well as some towns.) Is it a layer of a compressive plan or a requirement? (Some towns have taken it to the zoning level.) Is that a consideration for future planning efforts? (We could feed our desires into the State Planning Office process. I have had discussion with folks at SPO but I think that could be one of the outfalls of this level of public water supply planning...how to implement comprehensive planning.)

-What makes something a potential future water supply? Would any and all be considered at one or how would it be done? (Need a local and regional decision to set it aside and there a few places where there might be many places and some others that may have none.)

-In some towns if you were restricted to prohibit activities on an aquifer, it would leave little space for anything. Also, there are places where there maybe only one place.

-I find it out of place in Recommendation 1, so why would it be in Recommendation. 1? So why does the state have to or not protect public water supply. Can we agree to protect the ones we are currently using?

-Water suppliers know they need to maintain a margin of safety and some have identified future supplies. These plans are periodically updated. (PUC does require some level of planning. Some places do it, but we ask them to have a plan.)

-Any planning does not become requirement for protection.

- Water supply plans (in other states) come with a level of protection for future resources.
- Is it safe to assume to be all ground water or there is a surface supply. (Nearly all would be ground water.)
- Verbiage around aquifers, when there are restrictions on underground storage tanks, what does that pertain to? (Ten gallons of water per minute. We can't map the bedrock aquifer in the same way.)
- Every town identifies significant sand and gravel aquifers. They are already of their radar screen now. As far as protecting future water supplies, we haven't addressed it yet. Contingency plans will require them to identify future water supplies. I think we are going to have to address this and report back to EPA in the next few years.

Recommendation 2

Create an effective program to maintain agricultural and forestry land uses in source protection areas.

- As more of a mechanical matter, down in the possible implantation of the Manure Management program, there is nothing in a sense now that prohibits us from doing this is to do through some administrative process to fold some sort of water source protection into that. There may be a more surgical way to get at this question. (There are already things happening that are good but we just want to nurture them.)
- When I read this the first time and add agriculture and forestry, I think walking trails have a lesser impact, but a well managed farm would as well. Conservation easements discussed with people got a positive response especially if the property became publicly available. Preserve rural character, provide recreational opportunities and protect water supplies. The "Land for Maine's Future Program" has been successful, but I don't think that it has to be that the water supply protection has to be through that program, but it makes it more than a good thing.
- Forestry issues, there are times when parcels are undeveloped, has there been a thought process on making the standard smaller or open space option, would there be any avenue for land owners to lump their property together to get into the tree growth tax reduction program? Folks would like to get a tax break to put their smaller parcels into undeveloped tree growth.
- One of the premises is to reduce taxes is that parcels and tree growth to have a forest management plan having a harvesting plan. Parcels under ten acres are difficult to achieve that with out over cutting. Cooperative joining of parcels is interesting if the parcels are contiguous if they were to come under one plan, but in the future if land transactions occur it may have an impact at the individual level.
- Open space taxation might be an alternative.

- This might be of importance especially if they are over a ground water source.
- Is there a tax incentive for open space? The benefit is tiered.
- There is flexibility with towns on open space.
- Tree growth valued is rigid, but open space is more flexible.
- If you are trying to blend those objectives, just use the permanent option of open space. If they all agree to a conservation easement, I think that it gets more complicated with forestry. There are a fair amount of other administration issues. The next landowners could be an issue.
- Some people would be reluctant to the permanency of open space. A plus for tree growth...
- 5 years of protection is better than none.
- I wonder in local zoning you may have some land that you can't do anything with already. For example the land with in a group of homes in a development.
- Maybe having a road owners association, so that a small percentage of their taxes come back to their association for road improvement. Maybe provide incentive this way.
- Under possible implementation the second line down you close that with green certification is like a procedure. Certification has limited value to land owners. Technical assistance for sustainable forestry is a better term.
- Provided a dedicated bond based fund. Are there other ways to get funding other than bonding? It seems problematic. If people are getting the water supply then maybe they should be ...some sort of fee to protect that land added to their bill.
- PWS's do have the ability to set aside contingency funds.
- I would encourage you to think of public water supplies as statewide water significance. You benefit on a daily basis because the public water supply is available for commerce and industry. I look at other states that appropriate money to buy land every year. It is more forward looking to protect the major water supplies...to limit and provide more benefit overall to everyone.
- I wouldn't be opposed to have additional costs added to my bill for added protection of water supply.
- The water districts need to be part of the process, but they are resource limited.

-Does the PUC limit public water supplies from doing revenue bonding to protect its water supply?

-You don't get rates until you spend the money. Some systems are going into step rates.

-The Portland Water District watersheds' fund, we spent nine hundred thousand to buy an acre of land to protect the watershed. We couldn't make a dent in the process of buying the Sebago Lake watershed for protection.

-PUC rule that is limiting how much public water can buy to do water shed protection? It is the issue of priorities, it becomes a matter of what do we spend our money on? There just isn't enough money to do everything.

-Amend Manure management. I am not sure what we gain there, farm land is already required to have nutrient management plans.

(Maybe the amendment is that we have to find the money to do this.)

-Right to farm comes out and manure management stays? It is whether or not you want to the additional restrictions on it.

Recommendation 3

Mitigate the effects of existing and new development on drinking water quality through the use of education, incentives and enforcement.

Shoreland zoning revisions:

-Would there be an expansion of shoreland zoning to include streams near the intake?

-There are lots of little streams. (It is unusual for an intake to be close enough to shore so that the 1,000 foot zone extends more than 250 feet onto the shore.)

Diagram: Intake with 1000-foot radius, what we are talking about is there is a 250' and 75' shore land zone, if this 1000-foot expanded beyond it, what would be the benefit and cost of this? I could see if there are any of these pertaining to the 52 intakes. Is there a real world example of this? If you look at inlet streams, there are enough inlets that we could not do it. The inlet streams to Sebago, for example.

-Increase the mandatory zone to 250 feet is another possibility.

-I can see this might be significant elsewhere.

-If these are beefed up in the foot notes things like "52 intakes".

-I felt that the detail was missing. When issues came out, the scope of them came out, it seemed like that it could be useful in debate.

-Have a reason for zoning.

-If there was one page where there are facts listed about the specifics. Good framing would be useful.

-A map of Maine with water supplies and they could be numbered and use this as a reference using the data from GIS. This can be useful for debate.

-What is the origin of the 1000-foot radius? Administratively, it is to keep this as straight forward as possible.

Number 2

-Explain what the implications of this (including public water supplies as protected natural resources) would be just on surface water supplies? (No, both.) So if you only include them? How would the exiting standards work?

-NRPA there is a notification requirement to the public water supply so the supplier can comment. If it is considered a protected resource, then would the exiting standards apply, then there is a jurisdiction area around the resource. Water supplies are considered a state level protection of supply. So it can be done as simply as that. Right now that is broad enough for DEP to use the exiting standards...

-Great ponds already covered?

-So this would only affect ground water supplies. In theory, so the assumption is that there would be stricter scrutiny to those activities.

-Who could protect the activities, but are great ponds, so are ones being used as public water supplies being treated differently than one that is not? No.

-What is your latitude for scrutiny in this situation for dredge spoils? What is the guidance to us as the agency?

-All our discussion has focused around surface water, so how does this affect ground water? Default zones protect all ground water supplies, most are 300 feet. Do we want to put all 2,155 water supplies under this?

-We need to be clear on the definition. It is a 300 feet radius for more than 250 people for ground water.

-What typically is allowed within the 300 feet and what activities can get permits within the 300 feet? For ground water, we don't have permitting. The same activities that affect surface water may not be the same as those that affect ground water.

-Model municipal ordinance, do we look at what is or is not allowed? Look at the ordinance.

-I would like to see the numbers. Are the standards clearly referenced? Ordinance language somewhere, user friendly.

-Does DEP address ground water contamination under site law? (Yes)

-I need to communicate and get the feedback and I need to write this up and send this out to the towns, so the information needs to come first so they can make decision.

Numbers 3 and 4:

-The atlas, each town could have a one-pager, there needs to be a common ground that everyone can understand. The possible implications of NRPA.

-This only shows current natural resource areas.

-If you see an area that is in red, you would need.... so it would be easily for them to see what they can or cannot do in that area.

3.3 or 3.4

-This could be an either or NRPA protection of resources, can DEP manage the protection. I see potential overlap in local ordinance and NRPA permit.

-It is an overlap from the DEP perspective. You don't do both.

-Neither NRPA or local... (verbiage)

-What does it mean to be to be protected by local ordinance? Which of the two models is preferred?

-If NRPA were applied comprehensively, then direct local participation is not needed? Over time what is the impact of a number of project that don't need NRPA? What does it take to trigger NRPA at as a statewide basis?

-Draining or otherwise dewatering wetlands.

Filling, adding sand or other materials, alteration of the soil.

There are individual permits for major activities and permit by rule for smaller alterations.

Single-family residences could fall under permit by rule.

-Primary risks are septic systems and heating oil tanks. Permits by rule model here are the maps for each. I have to send in the notification, and as long as I am following these standards I can do it. If it were a bigger activity, it would need a full blown permit. Would it be better for the state or the towns, in some cases the town is better because they have a code office to observe these activities, sometimes not as effective. There are plusses and minuses in each situation being state or town level.

-Small towns while they would like to see some sort of protection they would fall more in the sentiment of letting the state do it as they have enough to do already.

-Language 3.2: Develop a plan to target enforcement (prioritize enforcement or increase compliance)

-State or municipal jurisdiction, protection from contaminants and level of technical expertise, and the level of case by case, smaller districts may not have resources to call upon. Risk assessment to allow x number of residents treating lawns what is the risk factors and who has the expertise to evaluate this? (My underlying goal is to put a floor on protection not a ceiling. There are many places not doing much so a statewide system could include the 80 percent not doing anything. There needs to be a way to make a difference. To recognize importance of the resources in their own towns that need managing.)

-Towns will still require building permits, so within this area you will recognize that it is a public water supply and give it an additional level of scrutiny? (Yes, there would be a zone that additional review would be applied or a certain level of standards.) If it were a protected resource by NRPA and at the state level or would it be permit by rule or permit by standards. (If either state or town applies standards, then they both don't do it. The town could issue the permit and there would not be an additional permit from the state.) Local control since they are already doing the permits. What is the additional benefit of having the state involved?

-Putting a floor under protection is what is important now. Many towns have none so we can establish this and they would have this to follow. There are standards that the state or the town can take over responsibility, there would be a choice. If the state has standards then there could be permit by rule. It seems pointless to have multiple levels of review. The town has the choice to review or pass it to the state.

-I think the towns would look closer at the maps if there is protection and permits were required.

-With ground water areas the towns are notified of our jurisdictions, some people are not going to know. It doesn't look like other areas.

-Don't the standards need to be different if it is a drinking water source, besides have a protected resource? Are the standards for any body of water sufficient for drinking water supply? (I think so, if they were strictly enforced. We need to work harder on the ones we have to drink.)

-Common theme: When you roll out all of the existing laws etc., it gives the impression we don't need any new, but how well and can they be enforced. The true protection ... is the reality. This might not be the end of the world; you are in a drinking water supply watershed.

-Under NRPA permitting for great ponds, you give water quality certification...does it maintain water quality for public water supply? There is not enough guidance and statute, but overall I think it is minimal.

-NRPA review by the DEP instead of the local municipalities, because of capabilities and level of expertise. DEP could give a focus that may not be available at the municipal level. The level of focus is more than at the local levels.

-A town manages the town's land and water use and in another situation, a municipality may be overseeing many areas without authority to do anything. DEP enforcement would be my preference over local.

Implementation options:

PL 761 option feedback –

-I think the burden of proof should be on the landowner to show that they are not doing anything harmful.

-The public water supply was treated like being an abutter. This recommendation that that is a requirement that the water utility be notified, but there is no guarantee that the water utility was notified. They could at least have input if they know what is going on in the area.

-If the existing system didn't work, what about having the developer send the information to the water utility and to receive the notice from the water utility.

-Having a sign off sheet to show that you have done what you need to do.

-It is allowed, but whether or not you have to get a sign-off is up the municipality.

-You could have it but you have to show that you went through the process. Does the process work, the simple notification process?

-I think it would work. The letter would be needed before going to the planning board. They would be aware of what is happening in the area; kind of like "access by permission only".

-761 says that you must tell the water utility of potential activity.

-Would this require statutory changes at the town level? (No, you would need one to require towns to have to comply with it.)

#2:

Require written acknowledgement

-I know I am in it and this is what I doing to protect it.

-Is there any disagreement?

-If there is an itemized check off, people might not know what they are agreeing to. The comments on one, a lot of them are either or, but 761 put the burden on the municipality, but then it is suggested to put it on the developer. The utility and municipality are now working together. They are both waiting on the developer to show the notification. Putting the burden on the developer makes more sense.

-Is there a requirement for disclosure in terms of real estate? There are specifics that are needed to be included. Notification about what is allowed in these areas. It isn't local zoning, but it is NRPA jurisdiction, showing disclosure at transfer.

-What is required now and where do they come from as far as notification? And not much is required by state law? Radon is not required by state law? Flood zone?

-The developers oppose including more disclosers on the transfer. Shifting the "buyer beware" to the seller versus the "buyer beware" option.

-NRPA check off list would practically be needed each time a transaction occurred.

-How would they know the requirements now, it would have to be in the local ordinance. This states the developer would need to know there in order to do business.

Local ordinance option:

-If we assume that we want to establish a floor of protection, who would prefer to see it at a local or state level?

Local: none

State: half

Opposed: 1

No opinion: about half

Hybrid option:

-The idea is that the state would set standards they would have to be follow by the towns could administer or state could. NRPA model; or like it. State could administer the rule or could pass it on. This is a subset of state law. The legislature establishes that there should be protection.

This option is different from a model by-law.

-Under the local adoption, if the utility is unsatisfied that the town is enforcing the state standards, DEP could intervene if there would be lack of local enforcement? I don't think there is formal intervention authority. Can't the board be petitioned to review the actions of the town?

-Shore land zoning, to require the towns to send notice of any applies to the state so that the state may intervene at the appeals level. This model could have a model where this at the lower level.

-This would be where the utilities could get support to see that the standards are held without going through the town's authority.

Proposing two pieces:

-NRPA site location at state level for ground and surface water

-Informed consent notification to put burden of notification on the developer with an option to sign off on possible hazards.

-Included in the state umbrella is that the locality can go beyond the state recommendation. This is a state minimum and you can do more in terms of protection.

-Is the state umbrella on pg. 4 similar in detail to the local ordinance stuff on page 6? It is very similar. The implication for enforcement will be different. There are the concepts that go at either level.

Feedback on the process of doing it this way, was it useful? (4 meetings)

I learned a lot and we can get we can get.

This worked and this was a better solution.

Good process.

Good opportunity to make and get points of view.

Good information.

This was the first time she sat in a room where anything was getting accomplished.

I liked the four meetings.

I appreciated the beginning and ending.

I think we did a good job in a short amount of time.

The notes were great and the materials on-line were great. I have a level of ignorance here, so dumbing some of it down would help. I don't know how to explain it to others, but I now know what is not being dumbed down. Problem and impacts of doing it is not clear.

I think it went well.

A reflection of the work you did between meetings.

Screening level but there is a lot of detail left.

We will be working over the next few weeks on a draft of recommendations and resource materials.