

**Water Quality Standards Advisory Committee
Meeting Minutes
NH Department of Environmental Services
March 24, 2010**

Members Present:

Robert Ball	NH Association of Conservation Commissions
Dan Blais	NH Home Builders Association
John Hodsdon	Farm Bureau
Tracy LaChance	BIA, Rath, Young & Pignatelli
Eileen Miller	NH Association of Conservation Districts
Larry Morse	NH Association of Natural Resource Scientists
Peter Rice	NH Municipal Association
Ken Rhodes	Associated General Contractors
William Schroeder	NH Lakes Association

Others Present:

Bill Arcieri	Vanasse Hangen Brustlin, Inc
Dan Blais	Home Builders Association
Dave Cedarholm	Town of Durham
Neil Cheseldine	Wright-Pierce
Jim Fitch	Woodward & Curran
Steve Goddard	Hoyle, Tanner & Associates
Mark Hutchins	Normandeau Associates
Mike Metcalf	Underwood Engineers

DES Staff Present:

Jeff Andrews	NHDES Wastewater Engineering Bureau
Jacque Colburn	NHDES for Bud Barry of LMAC
Paul Currier	NHDES Watershed Management Bureau, Administrator
Bob Estabrook	NHDES Watershed Management Bureau
Lisa Fortier	NHDES Watershed Management Bureau
Wayne Ives	NHDES Watershed Management Bureau
Jillian McCarthy	NHDES Watershed Management Bureau
Dan Mattaini	NHDES Dam Bureau
Dave Neils	NHDES Watershed Management Bureau
Phil Trowbridge	NHDES Watershed Management Bureau

1:30 – 1:35 Introductions

William Schroeder

Introductions were made around the room.

1:35 – 1:45 Approval of 1/27/2010 Meeting Minutes

William Schroeder

Larry Morse – The correct acronym for the New Hampshire Association of Natural Resource Scientists is NHANRS not NANRS and on page two it should be RSA 482A instead of 485A.

- **Peter Rice** brought forward a motion to accept the January minutes as corrected and **Larry Morse** seconded, a vote was taken and **all approved**.

1:45 – 1:50 Revise Membership in WQSAC Terms of Reference

Paul Currier

Paul Currier – The Terms of Reference were first written when WQSAC was created in July 2000 and they have been revised a few times. Today's revisions, on page 2, are to officially incorporate the NH Association

of Natural Resource Scientists and the Associated General Contractors, represented by Ken Rhodes, who have asked to become official members. They were active in the discussions relative to HB 1305 and HB 1348 and would like to be on the Committee so that their constituency is represented. We would like to ask for a vote on that today. The other item is housekeeping. We inadvertently left off some charter members from 2000 and they have been put back on the list so it truly reflects the membership.

Bill Schroeder – Those are the five that printed out in red beginning with the NH Waterworks? There are no other changes in terms of what we are and how we do it?

Paul Currier – That is right and I would be glad to answer any questions about any parts of the Terms of Reference and how they work.

Bill Schroeder – Can we have a motion to accept these? The new item that we would be accepting would be the Associated General Contractors having a seat at the table.

- A motion to accept membership for the Associated General Contractors was brought forward by **Peter Rice** and **Bob Ball** seconded it. A vote taken and all were in favor. The official representative for the Association is **Ken Rhodes**.

1:50 – 2:20 Update on Revisions to Env-Wq 1700

Paul Currier

Paul Currier – We haven't yet gone to rulemaking with changes that were made by this Committee before Christmas. There have been changes because of the Commissioner's review. As last reviewed by WQSAC, all of the "none unless naturally occurring" criteria for Class A waters were been removed, and the parallel change was to make antidegradation in Class A waters significant so project proposals would have to go through an antidegradation review. The full antidegradation review process for Class A waters is now gone out of the proposed rulemaking. There are two reasons it was taken out and one of them is that antidegradation is now the subject of one of the workgroups of statutory changes as a result of the activity on HB 1305. The second reason is that the Commissioner asked what making antidegradation significant in a Class A watersheds means, and we explained that it would add quite a longer decision making process to any proposals that would in fact result in degradation. He felt that shouldn't be done without sufficient notice to those that might be affected - people that might be planning projects in Class A watersheds. Everything else stays the same, except for housekeeping changes. We removed the phrase "disconnection of impervious surfaces" because it means the same thing as "infiltration of stormwater". If you are disconnecting impervious surfaces you are causing the stormwater to infiltrate rather than run off into surface water. There were words in the review and approval process that said the criteria was that the department has reviewed and accepted an alternatives analysis and information provided by the applicant pertinent to social and economic development and information pertinent to environmental impacts. It was pointed out that the meaning of "and accepted" is ambiguous. The requirement is that the department reviews what the applicant provides and then makes the decision and the findings in subpart 6: No feasible alternatives exist that would not involve degradation; the proposed degradation is the minimum necessary, and; the social and environmental benefits outweigh the environmental harm. Those are the three decisions we have to make. We don't have to accept anything provided by the applicant in making those decisions, we just have to review it and combine it with the other information we have and make the decision. The words "and accepted" have been stricken. It changes nothing and removes ambiguity. The final changes made as a result of legal review were words involving transfers and both the withdrawal and discharge to the receiving water shall be significant. That was changed just to clean up the wording. Previously, what we had proposed was that the transfer to the receiving water shall be considered significant for the purposes of antidegradation review. On legal review it was changed to the withdrawal from source water and the transfer to the receiving water shall both have been reviewed as significant impacts under the process specified under the Env-wq 1708.10 and determined to meet the criteria specified for approval. It basically means the same thing.

Mike Metcalf - Are these on the website?

Paul Currier – Not yet, when we file a request for financial impact statement we will e-mail everybody. The best time to do that is when we get the fiscal impact statements back and it appears in the rulemaking register and we will e-mail you the link to the rulemaking register and we will have the complete text, day, time and place of the agency hearing.

Bob Ball – I am missing the connection between HB 1305 and HB 1348 in this?

Paul Currier – There is none.

Bob Ball – You said some of what is in those two bills. What section do we affect in here?

Paul Currier - The antidegradation review where the proposal was “not unless naturally occurring” of the narrative standard for Class A waters was replaced with a provision that any proposed degradation would be considered significant for the purposes of antidegradation review. HB 1305 basically proposes to put antidegradation into statute.

Bob Ball – What if it dies in Committee? Do you have to come back to this again?

Paul Currier – Eventually we have to come back to it. The situation we find ourselves in is that we have discussed in previous meetings that DES has no way to interpret the “as naturally occurring” language in a way that we can apply to a specific situation. We will just have to deal with that. If these rules were to be adopted and (for example) Salem requested 401 Certification for their proposed transfer, we would have to figure out how to do that review. We thought that we had it fixed but the Commissioner had additional edits.

James Fitch – I am a little confused and I want to make sure we had this straight. The change to remove Class A was due to proposed legislation which would be enacted instead of inclusion.

Paul Currier – The reason it was removed was that it created a significant regulatory burden on applicants for permits in Class A watersheds, especially for Alteration of Terrain and Wetlands permits, without giving them the opportunity to understand what we are doing in changing the rule.

James Fitch - The significance of this rule is in all watersheds, except for Class A?

Paul Currier – The rule changes apply to all surface waters. The changes we deleted have not given them the opportunity to understand that is what we are doing in changing the rules.

James Fitch – The significance of rule is in all watersheds except for Class A then?

Paul Currier - The rule changes apply to all waters. What we deleted that applies only to Class A waters were the words that say “none unless naturally occurring” for some parameters for class A waters. DES will still be in a quandary as to how we interpret those words when we have numbers in front of us for those parameters.

Mike Metcalf – In your example of Salem, you thought you had it figured out as to how to apply it to them. Will this removal put you back in that quandary?

Paul Currier – Yes, take phosphorus for example, the proposed transfer contains phosphorus and it is a fairly straight forward argument to say that the transferred phosphorus is not naturally occurring to Canobie Lake because it was transferred from Arlington Pond. However, because the Canobie Lake watershed has development in it, every storm delivers phosphorus to Canobie Lake and that is not naturally occurring. We have a quandary in how to review the proposed transfer in a way that is consistent with what we know is going on with stormwater in the same watershed.

William Schroeder – I am trying to understand the Commissioner’s objection and I am still confused. I thought it was clear with procedures that we have in place now that a development or project in a Class A watershed had significant hurdles to be approved because it was a Class A watershed. With the deletion of all degradation to Class A waters being significant, now there is no difference between Class A and Class B.

Paul Currier – The Commissioner doesn’t want to create that difference. There are a number of parameters that are specified as “none unless naturally occurring” and it is easy to infer that it was intended to be more protective (for these parameters) in Class A waters than in Class B waters. Those of you who read the minutes will see that we spent a lot of time on this. We have no quantitative way to determine what is naturally occurring and what is not. We had agreement amongst the WQSAC and the staff and we couldn’t come up with a way that was satisfactory to do that. Our proposal was to pull “none unless naturally occurring” and substitute the more intensive antidegradation review that would require social and economic justification and would require those three things that I just read. No antidegradation or the degradation is the minimum necessary to achieve the applicant’s purposes and the social and economic benefit outweighs the environmental harm. For a significant project, those three things would have to be vetted through a public process every time degradation is proposed. For insignificant projects, 20% of the remaining assimilative capacity can be used without those three things being demonstrated and without any public output. For Canobie Lake, which is a proposed transfer, because the rule language that involves transfers says that all transfers shall be considered significant, a proposed transfer will still have to go through that social and economic justification process, irrespective of whether its to a Class A or Class B water.

Bill Schroeder – I think that there was a request earlier for a clean copy of the proposed rules that would be going forward. Is it possible to get it now or in the near future? I think some of us that went through the proposal would like to see what it looks like now. Could we get that sooner?

Paul Currier – I hope that we will be filing the request for Fiscal Impact Statement fairly shortly.

Jim Fitch – I suggest that you send this copy on screen

Paul Currier – I just want to make sure that what you will see is what we take to rulemaking.

Peter Rice – Could we see the markup copy as well as the clean? It is a quicker check.

Paul Currier – Then you want my unreliable copy. That is the only place that it exists.

Peter Rice – Before you accept all your changes you get to a point where it is reliable and then you can accept changes and they all disappear and you show the final copy, right?

Paul Currier – Only if you are doing rulemaking.

Bob Ball – This is something that we had consensus on. In the Terms of Reference you are supposed to agree unless you give a significant reason why and it sounds like the reason is that the Commissioner didn't like it. Is that the reason?

Paul Currier – The reason that I understood is that it would blind side people who live and own property and conduct business in Class A watersheds and who might want to get a permit that would involve degradation. They would now have to go through a process if degradation is proposed and all landscape change that gets an alteration of terrain permit, involves degradation. That is the norm. We have a few Alteration of Terrain Permits that don't have degradation.

Mark Hutchins – Will you attempt another way of addressing this or will you say that is it? As we discussed before, the problem is classification and not one of regulation. Are you going to rethink your approach?

Paul Currier – Yes, in the larger picture the agency would like to consider overhauling the WQ Standards and the classification system so you can actually use the Clean Water Act process to relate designated uses and various tiers of designated uses, as Maine does, to water quality criteria to support those uses. Right now we can't figure it out and we have no relationship (between classes of waters and designated uses). We have Class A waters that say "none unless naturally occurring". Why do they say that? What are we protecting? It is not defined. It is a personal hope that we will come up with some recommendations relative to statutory changes that address the issues, or were attempting to be addressed in HB 1305 and HB1348 and that leads to conversations about rethinking the classification system.

Unknown - Doesn't antidegradation to apply to all classifications, not just Class A waters?

Paul Currier – Antidegradation applies to all surface waters. NH has 20% de minimis exclusion. If it is under 20% of the remaining assimilative capacity for any parameter, the requirement for social and economic justification and public input isn't required.

Bill Schroeder? – You were only going to apply the initial proposal to Class A waters.

Paul Currier – We were going to make proposed degradation in Class A waters significant, which closes the 20% de minimis window and there would be no de minimis amount in Class A waters, which is what the rules going ahead have done for water transfers. There is no de minimis degradation for a water transfer. Any degradation proposed as a result of a transfer requires full antidegradation review, or will when we change the rules.

Bill Schroeder – But not existing transfers?

Paul Currier – Existing transfers don't need a 401 certification so they don't get an antidegradation review.

Bill Schroeder – What if your transfer already has a 401?

Paul Currier – The antidegradation rule applies to a change in the existing condition. I think we have been consistent in this. The existing condition for transfers of historical origin is they exist and happen and antidegradation review would apply to changes relative to the existing condition. That being said, existing transfers still can't result in violations of surface water quality standards.

Bill Schroeder – Are there any more questions discussion on this topic?

Eileen Miller – Any kind of thing, other than transfers, would allow for the 20% de minimis amount (before full antidegradation review)?

Paul Currier – Yes, in high quality waters, if it is a high quality water and it has remaining assimilative capacity, you can use 20% without any review.

Eileen Miller – So you are taking it down to the bottom of the ladder?

Paul Currier – That is just the way the rules work.

Eileen Miller – That sounds like an error somehow.

Paul Currier – As the Committee was aware, we worked with the Alteration of Terrain Program to put a section in the AoT rules that provided a way to answer the question of whether the project will cause degradation and if does, will it be less than 20%. There was an Antidegradation Workgroup but it wasn't making any progress and was put on hold and all the folks that were in that workgroup were invited to participate in the process that this committee will go through relative to HB1305 and HB 1348. The new rules define, substantially better than previously, the process for social and economic justification. The idea is that this Committee will review the federal requirements for antidegradation that require what ought to be in statute and make a recommendation for the legislature to put what the Committee recommends into statute. That will set the stage to deal more clearly with how to implement antidegradation with the various rules that the Department has that involve WQ Standards and permits whose intent is to uphold WQ Standards. It is going to take longer than we thought.

Larry Morse – For clarification, under the process, the only event that triggers that review under the federal permit requirement is aquatic water quality?

Paul Currier – Yes, or a transfer.

Brandon Kernen – You said federal or state?

Paul Currier – The state statute basically implements the federal requirement, which is, that anything that involves a discharge and requires a federal license or permit, needs to have a certification by DES that the construction or activity will not violate WQ Standards. That includes most (state) wetlands permits that are also federal permits under the SPGP, all federal 404 permits, all NPDES permits, all notices of intent under the federal NPDES Construction General Permit, which involves alteration of terrain of 1 acre or more, which doesn't have to be contiguous. All other federal general permits under NPDES as well, such as small MS4s, all need certification.

Larry Morse – Are there certifications by rule in place now for some of those?

Paul Currier – For a SPGP permit, we certify the general permit and we do the same thing for the Construction General Permit. If there is a particular project that has special circumstances that is not covered by the certification for the general permit, and additional monitoring or conditions are needed in order for us to be able to certify it, we write a modification to the General Permit with specific conditions for that project. Sometimes, instead of doing that, for example for Wetlands Permits, we ask the Wetlands Program to incorporate the certification conditions or requirements into the Wetlands Permit and then we can certify that permit.

Larry Morse - There is an internal review and you are making those determinations in-house?

Paul Currier – Currently, we do nothing with Construction General Permits. We have the ability to but we don't do it. We certify the General Permits but we don't review the Notices of Intent and we don't have a connection to EPA at the moment.

Bill Schroeder – Are there any other questions on this topic?

John Hodsdon – So, essentially, you are saying that if you have small, single lot developments that aren't connected to each other, they can go on over the whole watershed and can have significant degradation but anything that is big enough to trigger an Alternation of Terrain Permit needs to have some oversight on it?

Paul Currier – Yes, and that is an issue. An aggregation of things that a local building inspector can approve can result in a substantial increase in non-point source pollutant loadings. We have 319 Projects that are working on this issue and they are on Meredith Bay, Paugus Bay and Saunders Bay on Winnipisaukee.

2:20 - 2:55 Review of Draft Policy for Water Level Fluctuations

Phil Trowbridge

Phil Trowbridge - I apologize that we weren't able to send this out to you earlier today. We were working on it up until noon and it wouldn't have been much of a read ahead. This is a discussion paper. We are switching over now from discussing rules to guidance and we have a lot more flexibility and we are not proposing any guidance language yet. The point is to frame the discussion today. The copy we've handed out is a draft and isn't written in stone. We want to get your input today. We have covered the topic a couple of times in previous meetings. We are trying to find the right approach to help us deal with water level fluctuations. The 401 WQ Certificates are required for hydro projects where there may be water level fluctuations for power generation or for withdrawals from an impoundment which may also cause the water

level to fluctuate. The report shows that there is clear regulatory authority and that the WQ Standards apply to impoundments, both the WQ criteria as well as the antidegradation provisions. They apply in cases of hydro alterations, particularly if a dam operator wants to draw down for power generation or water management. That is something that is applicable under the WQ Standards and we have to certify these actions with our WQ Certificate to say that no WQ Standards would be violated. It is not just our WQ Criteria like DO, but also the biological aquatic community integrity criteria and refers to all organisms that living within the aquatic zone, furthermore we have to worry about the antidegradation provisions. The last time I made this presentation I had this flowchart. This was our first attempt at understanding the process. There are a lot of good comments, in particular comments about improving or adding de minimis thresholds for rate of change in water level. The first proposal only talked about the absolute magnitude of the water level change. We also need to think about frequency and duration. Fish & Game raised a lot of concerns about specific biological receptors like loons and fall spawning fish. There were some questions about whether we are going to be dealing with downstream uses and downstream flows. There was an interest in tying the whole thing to our regulations rather than floating it out there as its own guidance and make it an implementation of our existing rules but there are some general questions about the complexity. I started to modify the flow chart and I decided that it came out better as a memo. A lot of this is describing how we would go through the decision making through a regulatory process and putting it into yes and no questions to get through a series of steps. These are things that we would have to do anyway but would formalize it so that we know where we are in the process. I have condensed a lot of the numeric things that we discussed in the thresholds from the flowcharts to a “de minimis middle”. There is one step in the middle, step 6, where we focus on de minimis thresholds to rule out small projects that don’t require additional review and we added de minimis thresholds for the magnitude of the fluctuation, rate of change, frequency and flow of the release. Those are all things we need to discuss. I wanted to get you oriented to how this works. We are going through a series of steps that are largely questions guided by rule. The de minimis middle is where I think we should spend most of our effort in making sure these numbers are right or if they are the right questions to ask.

James Fitch – As this is written, it seems to apply only to impoundments, not water withdrawal for agricultural irrigation and impacts on stream flow depth and the aquatic community.

Phil Trowbridge – Right now this is just about impoundments.

Jim Fitch – Where does that other aspect fall?

Phil Trowbridge – We would have to certify that as well under a 401, but we don’t have a process.

Paul Currier – There is a process and it falls under the Instream Flow Program.

Phil Trowbridge – I am going to skip to step 1, which is applicability, on the top of page three. For now we are saying that this guidance only applies to an impoundment which is requiring a new or modified WQ Certificate. It is a limited scope.

Unknown – Is this tied in with the language for all the changes, for example if you had a causeway or elevated road or were changing a culvert or a bridge, changing how you are going to release the flows, due to changes in ponding?

Phil Trowbridge – Not now, we are really trying to keep this narrowly focused on impoundments with dams that are having some changes in their operations or a withdrawal.

Unknown – Would it be applicable to something like a peak flow continuator such as a detention pond in a subdivision where the subdivision wants to expand and the detention pond becomes bigger and somehow releases the water?

Paul Currier – Detention ponds are not surface waters, they are treatment units.

Unknown – Correct, but you are going to need the water to flow to surface water.

Paul Currier – We have six classifications of surface water, one of which is an impoundment and in order to have an impoundment you must have a dam. These are cataloged. Every dam that is on our list has an impounded reach associated with it and that reach is what this applies to.

Ken Rhodes – My office has designed some detention facilities that met the definition and were registered as a Class A or C high hazard dam. Which is it?

Paul Currier – C’s are high hazard?

Wayne Ives – They call them high hazard/low hazard.

Paul Currier – They still are not surface waters. You can have a dam and still not have a surface water body.

Ken Rhodes – Just for context, it has to meet both, not only that it is on the dam list, high or low hazard. You can have a dam, but if it does not meet the definition of a surface water, is it covered?

Phil Trowbridge – We are dealing with potential distressed biological resources. The language for this comes straight from the wording that you would use to make a significant versus insignificant determination under antidegradation. Fish & Game brought up lots of good questions about nesting loons and fall spawning fish and rare, threatened and endangered species. There was no way to automate this process and make up a number that would protect all things. We wanted to give Fish & Game and the Fish & Wildlife Service a front-end pre-application consultation to raise their concerns and require that a mapping be done of the rare, threatened and endangered species from the Natural Heritage database and that their concerns be addressed. In a perfect world all concerns would be addressed but in the world we live in there may not be an agreement between the applicant and Fish & Game. In that case, rather than holding up the process completely, it would fall back on us to make a site specific determination. We would not use the de minimis thresholds and would look at it thoroughly to make our determination.

Peter Rice – For clarification, the standard used is within 1 mile of impounded shoreline?

Phil Trowbridge – The buffer is a nice round 1 mile but we could do ten miles or we could do a half a mile. I don't know that there is a standard you can use. It is open to discussion.

Ken Rhodes – Do I understand the wording of second sentence below?

Phil Trowbridge – Where, in step 2?

Ken Rhodes – Yes. Is there anything within a mile? Have you contacted Fish & Game and do they have any concern? That is the summary of the first three questions. If the questions are answered affirmatively, keep going. If they are answered negatively, you haven't seen anything, you didn't contact them, and they don't have any concerns, the applicant should work with Fish & Game to address them.

Phil Trowbridge – The first question is if the applicant has mapped the location. You can do a map and it shows nothing but you still have done the map and can check that box. The second thing is have you contacted Fish & Game. The third thing is if all the concerns of Fish & Game been addressed. If they had no concerns then they have been addressed. If it is ambiguously worded we should change it. There is a basic mapping process to be done, whether you have anything or not, then you contact Fish & Game with the additional information and address their concerns.

Larry Morse – When you say map, do you mean contacting the Natural Heritage Program to find if there is anything listed within one mile of the shoreline or do you mean an actual survey?

Phil Trowbridge – Contact the Natural Heritage Bureau and ask them. If they don't disclose the information, that is fine and you don't actually need to make the map. Step 3 mirrors the previous one in the Antidegradation Rules, stress to sensitive biological resources, and the one below, potential stress to sensitive recreational water uses and water supply. In the Massachusetts guidance there is a large section on the effect on private or community wells so I thought that we should have something in here that mirrors that as well. The applicant should contact DRED for sensitive recreational uses and DES Drinking Water Bureau for sensitive water supply uses. It gives them a preview and a chance to voice their concerns. I didn't know if there was a better place than DRED for sensitive recreational uses. Anyone have one that is better?

Jeff Andrews – I have a suggestion about major withdrawals and how they affect of wastewater assimilation. You had a bullet on how it would affect the 7Q10 and if there was a discharge downstream of this withdrawal.

Phil Trowbridge – Step 4 is straight from the regulations. We are trying to narrow our scope to only go further if we can demonstrate that all other water quality standards can be met. We didn't want to make a decision based on water level fluctuations for the biology but still have dissolved oxygen impairment in the impoundment. That doesn't help us and we still couldn't certify the operation. Before we go any further we need to make sure that all the other water quality criteria, besides the biology, will be met by the operation of this facility and not only will they meet the criteria, but there will be no degradation provisions. That is what those two questions deal with.

Jim Fitch – I am going back to the point that we just made with about 7Q10. That is an impact outside of impounded area. Does that run against what you set upfront?

Paul Currier – I don't think an impoundment fluctuation would help with any change to 7Q10.

Jim Fitch – If it were a withdrawal it could.

Paul Currier – We are not talking about withdrawals, we are talking about fluctuations.

Phil Trowbridge – It could be a withdrawal that causes a fluctuation.

Jim Fitch – I believe it could be because 7Q10 is a result of a low-flow condition. If you are choosing to impound during a low flow condition to maintain head within an impoundment to be used at a later time during the year.

Phil Trowbridge – It's a downstream impact. You are holding back the water which affects the downstream flow and the 7Q10 within receiving waters. We'll discuss that because it will take some sorting out. For Step 5, one of the things that prompted the whole thing was the passage of rules protecting instream flows and the establishment of Water Management Plans to protect the downstream flows. The idea may be to manage the water in an upstream impoundment in order to supply water to downstream reach to provide for the protected instream flows on these designated rivers. There is a whole process outlined in Env-wq 1900 for establishing water management plans, going through a stakeholder process where you balance the interests of the upstream and downstream users, different types of biology and formally adopting those rules. If you have gone through that process already, which only affects the designated rivers which have water management plans (which would be the Souhegan and the Lamprey), we don't need to give this a second review because it has already gone through a large stake holder review that has balanced interests.

Jim Fitch – Another point to raise for consideration, because this reflects something that the state of Maine does to control the water level in Sebago Lake and the Presumpscot River, is erosion. Erosion of shoreline became major issue in Sebago Lake and not sure erosion is captured here in any of your upfront stuff, so you may want to highlight that also.

Phil Trowbridge – Step 5 affects a relatively small section of the state because it has to be a designated river that has adopted a Water Management Plan. In Step 6 the idea is to set up de minimis thresholds to determine compliance. When we deal with requests for 401 we are currently operating in an area without a lot of boundaries and it is hard to know what an acceptable level is, whether it is a one foot or ten foot draw-down, fluctuating daily or once a year. It is hard to know and we spend a lot of time trying to justify to ourselves or understand the justification presented to us and whether whatever is going to be done with this dam will be meeting the WQ Standards. We thought it would be helpful to establish some de minimis thresholds. These would be things that would be the low bar and if an impact is below them we don't need to spend any more time on it. That doesn't mean that the applicant can't propose something greater than this. They would just have to be in the realm where we have to evaluate the application on a case by case basis. Think of this as kind of extreme examples that would help us weed out the small cases. We set up four of them. One of them is magnitude, which is what I presented before and this is adopted straight from what they use in Maine. The withdrawal or release will be one foot or less in the period between April 1st and July 1st, and the period between August 1st and March 31st will be two feet or less. As an important footnote, the way it is approached in Maine is that it is done in conjunction with all the releases and all the withdrawals and natural variability. If you have a wet year with a lot of water you can release down to a foot. If you have a dry year and you have already come down a foot from full pool, you cannot release any more. We have adopted their language as the magnitude de minimis. That doesn't mean that the applicant cannot release more than that. We would just go into a more detailed assessment. As far as the rate of change, there is a big difference from dropping the water level a foot in four hours versus dropping it a foot in two weeks. We made the assumption that fresh water mussels are one of slowest organisms and, if they can migrate faster than the water level change, then is the proposal would be acceptable. 0.1 foot a day is the rate that the Dam Bureau strives for when they do a managed release. It is a not a requirement but is something they use as good practice when they do a managed release.

Tracy LaChance – Do you know the average speed of a fresh water mussel?

Phil Trowbridge – No. That is why we said the "speed of a freshwater mussel" and not an exact number. The guidance can be better but we are trying to get a frame on it. As far as the frequency, you can have an operation that cycles daily, or once a year. We want to set up a de minimis for that and right now it is arbitrarily set at four times per year. It is certainly open to discussion and there are a lot of questions. One of the questions raised about the frequency is the primary impact of the frequency of cycling. Fish & Game's take on it is that it is mostly about mercury methylation and its release from organic soils. Does it really matter if we have a de minimis magnitude of change? If we are only going up and down a foot, does it really matter how often we do that? It is an open question and what counts as a cycle? If you drop the water level

by six inches and then refill, if that one release, or did you have to drop by the full amount to consider it one release. I think there is still a lot of work to be done with the frequency question.

Peter Rice – With frequency, what about duration?

Phil Trowbridge – They are inverses.

Peter Rice – If you are in a drought condition, which you can predict based on historic stuff, can you show that refill will be within two weeks of going low? Or, the longest duration when water levels would naturally be low? Natural wetland habitats go through drought conditions and come back after they get inundated again. If the duration is two years, that the impoundment comes back up to the full elevation in two years, obviously that is a problem.

Phil Trowbridge – The last of the de minimis thresholds is flow. I picked this up from guidance from Massachusetts regarding their draw-downs for their aquatic use and species management. They set some limits on the flow of water out of your impoundment that would consider acceptable. The idea is that when you are releasing the water, you should not release more than the equivalent of 4 cfs for your drainage area. When you are refilling, you should not release any less than 0.5 cfs. The idea is that you are not totaling flooding out the downstream area during the release and you are not drying up the downstream area completely when you refill it. These are the thresholds that Massachusetts uses and we decided to put them in as a starter.

Bob Ball – Does it make sense that magnitude rate of change are absolute numbers, rather than just percentages of the total size? A one foot variation in a 90' deep impoundment is very different than a one foot variation in a 5' impoundment. For the last threshold, you have a parameter that is sized for the impoundment. It seems that the rate of change and magnitude thresholds are absolute numbers.

Phil Trowbridge – A lot of people asked where the numbers from Maine come from? Maine DEP felt that they were science based and they would see changes to the order of a foot or two feet over the course of the year and that was independent of the size of the lake. That is why it is an absolute number. It is just from evaporation water level changes. They felt that one to two feet was pretty much what all the lakes should be doing, whether they were big or small.

Unknown – In relation to this whole guidance, particularly regarding building storage versus draw-down, is this going to apply across state, including municipalities? What comes to mind is Lake Massabesic, where Manchester Water Works uses it for storage and they deliberately planned to store water at certain times of the year and draw-down at certain times of the year. They adjust that due to lake levels because they are also controlling the downstream water levels in the watershed. Does this guidance apply to them?

Phil Trowbridge – Not a lot. This is not even regulation. It is just guidance. If they do something that requires 401 WQ Certification we would look to this guidance for our approach. It doesn't mean that they would have to meet the de minimis thresholds. They are just what we use to screen out small projects.

Unknown – But suppose they are not building a new water intake but are just changing their ongoing operations, does that mean that they are going to be counted as an impoundment?

Paul Currier – No, WQ Standards are required to be met, at all surface waters at all times. If they are not, and we know about it, we make the determination that it is impaired and we put it on the list of surface waters that should be fixed by somebody at some point. Massabesic is a surface water and surface WQ Standards apply to Massabesic as well as all other impoundments no matter what they are used for. The process that we are trying to formalize is one for answering the question of whether a water body meets surface water quality standards when that question comes up. In this specific case, we are talking about when it comes up in the context of a 401 WQ Certification. There are examples when it just comes up and nobody has proposed to change anything and no one wants any permits. The one that I can remember was a drought. Canobie Lake was down ten feet and we got a couple of calls from people around the lake saying that we think that aquatic life not being supported at a ten foot level and would you please investigate that. We did and we made the determination that what had been dewatered was hard bottom and there was no WQ violation at that level. We have to make those decisions on occasion and without any trigger from any permitting process whatsoever. This kind of thing helps us with that as well.

Bill Schroeder – I am concerned about time and I don't think we will finish today. Is there something we can do to help you out?

Phil Trowbridge – If we don't meet the de minimis thresholds, any one of them, then we would go into this impoundment specific evaluation, which is essentially where we are now. The applicant needs to come to us

and demonstrate that they are going to meet the WQ Standard and we have to figure it out. I think one of the most misunderstood things about this guidance is that we are not setting rules, limits, or laws on applicants. What we are trying to do is to give ourselves some guidelines to weed out the small things and give applicants some idea of the way we are going to look at it. In the last steps here, number seven and eight, are straight from the law and say that if we can't meet the standard or we have significant degradation under the antidegradation provisions, then we have to do the social and economic justification or a use-attainability analysis. This is just mechanics of working our way through to the ultimate end if we can't meet the standards. When we post our meeting materials for this meeting, I will post this document and we will e-mail it out to you. I would appreciate any comments you want to give me on it: Whether you think it is really lacking in terms of process, and also specifics about the de minimis steps that could be improved.

2:55 – 3:15 Presentation on Numeric Nutrient Criteria for Rivers

Dave Neils

Dave Neil's presentation was curtailed because of time constraints.

Dave Neils – This is the preliminary data analysis that we have done and an overview of the approach that we plan on taking. This is a quick review of the data that we have and how we are going to approach things in the future. We have a narrative standard in our Administrative Rules. The problem is because it is narrative criteria we don't have a way to evaluate nutrients concentrations in flowing waters and numeric criteria so we know when we are above a critical level that influences the integrity of the aquatic community. Everyone knows that nutrients in high numbers are not good so I won't spend a lot of time on this. The Wadeable Streams Assessment, which came out in 2006 found that nitrogen and phosphorus were the two highest contributors to the poor conditions for aquatic communities. They were two times more likely to have poor condition areas than streams without high nitrogen and phosphorus. That is one reason we need this numeric criteria. It is important to protect the waters and EPA says we have to do it. They have been asking all the states in the country to work on numeric nutrient criteria since 1993 and said that all states should have it in place by 2003. As of 2008, six states have adopted numeric nutrient criteria for rivers and streams so we are not way behind. Initially, we want to look at what regional criteria have been proposed to date. We have a lot of data already on nutrients. We think that it is important to recommend interim nutrient criteria because it is going to take some time to develop the rest of the criteria. One of the important parts of development of nutrient criteria is that you can show a response by the biological community to help set where those impairments occur. EPA is really stressing that you use multiple lines of evidence and multiple response indicators as well as looking at the quantitative data that you have. We are going to talk about just phosphorus today and we will do the exact same thing for nitrogen in the future.

Here is an overview of what has been done in the region so far. For a long time EPA used 0.1 mg/L at 7Q10. Everybody realizes that is too high and it is an outdated numeric standard. EPA has done some future work and took all the state's data from the region and crunched the information. ENSR, through some money from NEIWPC, did a similar exercise and came out with 0.012 mg/L. ME & NY have done some good work and have used multiple lines of evidence, including stress response indicators and have come up with some numbers that are higher and much more realistic. What we are shooting for here is something in those neighborhoods and using multiple lines of evidence. The analysis today is based solely on water quality data without regard for biological response and represents 1 line of evidence. EPA had a couple different recommendations to get to these numbers based on frequency distributions. First, they said that if you pick a set of reference sites, to assure the best quality streams and rivers, and take the 75% distribution of that data and use that as an indicator of a potential numeric threshold. Looking at all of our data we identified a reference set based on sampling locations with a conductivity of less than 50 μ mhos with 5 or more phosphorus records. We identified a secondary reference set as sites without a dissolved oxygen impairment. Alternatively, you can take all your data and use the 25% percentile of the data distribution. For this we used data from all sites with 5 or more phosphorus records. As a final point of interest we also included all sites for which a dissolved oxygen impairment has been documented and considered phosphorus concentrations at these locations.

Based on the EPA recommended "all data" approach the 10th and 25th percentiles and ended up with a range between 5 and 9 μ g/L. If we utilize the EPA recommended "reference approach" based on low

specific conductance and use the 75th and 90th percentiles we get a range of 15-23 µg/L. If we utilize the EPA recommended “reference approach” based on lack of dissolved oxygen impairment and use the 75th and 90th percentiles we get a range of 20-35 µg/L. Lastly, for sites with dissolved oxygen impairment the 10th and 25th percentiles were 11-18 µg/L which tells us even when phosphorus conditions are low we can still have DO impairments. Cumulative distribution plots help us compare our results to what Maine and Vermont have established as numeric nutrient criteria targets. For the “all data” option we came out with numbers that were much lower (5-9 µg/L) than Vermont (35 µg/L) and Maine (30 µg/L) which correspond to somewhere between the 80th or 90th percentile of our data distribution. For the “low conductance” reference approach we end up with criteria between 15-23 µg/L. For this distribution the Vermont and Maine would fall somewhere between the 95th and 100th percentile. For “no DO impairment” reference approach the criteria would be between 20-35 µg/L with Vermont and Maine criterion between the 80th and 90th percentiles. This approach resulted in numbers most comparable to the Vermont and Maine criteria (See Summary categorical comparison slide for full account of results). As far as response, we talked about biological condition being inversely related to nutrient concentrations. We have some preliminary data showing a weak relationship between invertebrate community condition and nutrient concentrations. We plan to further explore this relationship over the next 2 years through a grant from EPA. By the end of 2011 we hope to have 100+ data points. We also hope to add algae as a second stress response indicator in the future but need money and staff support to pull this off. Based on our early results it looks as if a total phosphorus concentration around 30µg/L is good starting point. Further discussions will be necessary to determine how realistic this number is.

Paul Currier – EPA has applied the old Gold Book Standard, 0.1 mg/L at 7Q10, which translates roughly into .065 mg/L on a growing season median. There are two permits in NH. Keene’s permit is being issued and Jaffrey’s permit is under appeal. The numbers presented today are lower than what has been applied in NH and would result in phosphorus removal from virtually all the treatment plants in NH in future freshwater permits.

Jim Fitch – I was part of task force that worked on the Maine standards. We strove not to have a one-size fits all standard number for that exact reason, that you would be removing phosphorus at great expense from the environment, as far as I am concerned, with limited or no measurable impact. What Maine did was look at a four box square. My suggestion that if you are looking at something long-term and intermittent that you recognize that phosphorus is not a toxic, so it is not a direct impact compound, that it is a secondary or tertiary compound. Rather than regulate based on phosphorus concentrations alone, that you look at the effect of phosphorus on the system. This allows you to place each facility in one of four boxes, only one of which is in non-compliance and would require treatment.

Paul Currier – That is a good point. We have a similar box for nitrogen in estuaries and phosphorus in lakes and our intent is to do that. We wouldn’t blindly apply one number for phosphorus, irrespective of what is going on in the rest of the system.

Bill Schroeder – I would like to suggest that if you have thoughts or information, please corresponding to Dave. Will you the presentation be included?

Phil Trowbridge – Yes, we will post the files to the website.

Dave Neils – We have some other documents from Maine, Vermont and possibly New York that I will try to make available on the website. They are fairly easy to read.

3:15 – 3:30 Plan for Legislative Study Commission Meetings

Paul Currier

Paul Currier – The memo that you received in your packages summarizes what we would like to accomplish. There are no RR&D Legislative Committee members here. The General Court is in session today but they intend to participate. There are four topics outlined and the thought was to create four workgroups. The desire is to move forward expeditiously so the Advisory Committee is able make recommendations for the next legislative session. That is somewhat a soft deadline. If we don’t make it this session we can always do it in the next session. The idea was that we would try and produce something that could be introduced next session as part of the interim study process. We should probably form the workgroups fairly soon. DES will staff the workgroups and ask those workgroups to get organized and meet prior to the next WQSAC meeting and do a report at the meeting of the workgroups understanding of the

issues and tasks before them and the plan for addressing them. The next meeting is June 23rd in the auditorium, if we have it in the auditorium. The auditorium is free on the 22rd and the 25th and Lisa has already booked it for those if we want to have it in the auditorium with more people. That is a basic logistical question about what the next meeting will be and who will be invited. If we have a hundred people then we need to have it in the auditorium.

Bill Schroeder – I am thinking there might be some discussion about the way to proceed here.

Paul Currier – I will pass around a sign up sheet for workgroups. Please give name, e-mail, affiliation and which workgroup you would like to participate in. If you just want to be on the e-mailing list, just check that box. You don't have to be a member of the Committee to be on the workgroup.

Bill Schroeder – We ought to find a way to make others aware of it such as an e-mail inviting response. In first paragraph in the handout, where you are describing your situation, it says “refer to interim study...”. The responsibility for developing the recommend bill language would be upon the WQSAC. That seemed a little odd to me. It seems to me that it should be upon DES with the WQSAC providing guidance, like other stakeholders. Is that what you really meant, or did you mean it some other way?

Paul Currier – I guess we would use the process in the Terms of Reference.

Bill Schroeder – Yes, usually what we do is we deliberate and discuss. Sometimes we don't reach agreement and DES says thank you for your input and then comes up with a decision to move things forward and recognizes the input as best they can. That would have DES ultimately being responsible for producing language instead of the WQSAC.

Paul Currier – I don't think that it matters. The default condition for an interim study bill is that it dies. The reason is that there will be an election next year and a new legislature and there is very little continuity between the Committees of this session and the Committees on next session. Without a consensus recommendation, any action is likely to die, no matter what DES recommends. The thought with RR&D is that these are important enough issues so there ought to be a process other than it goes to interim study and dies. The Advisory Committee provides that process and, if the Committee comes up with language that the Committee has consensus on, then the language would go forward as bill the next session.

Bill Schroeder – How do you visualize the collaboration with RR&D happening?

Paul Currier – They will sit on workgroups. Representatives Spang and McClammer indicated that they would have been here today if they weren't required to be elsewhere.

Bob Ball – Is there a version online that has the wording that DES is proposing?

Paul Currier – Yes, we have draft language to start with and you can get it from the General Court website by just by typing in the bill number.

Bob Ball – There has been a lot of work done on it and we are going to modify what is there. You have text that has been taken out already. What confuses me is that HB 1348 already went to Executive Session, according to this, since our last meeting. It sounds like somebody in the executive session has already worked on it, whereas the other one is not due until next year some time.

Paul Currier – I think that they did an Interim study on it at their executive session.

Bob Ball – The other one is not scheduled until next year.

Paul Currier – I think that is a result of Interim Study.

Bob Ball – I think that there are two different timeframes.

Paul Currier – They should be the same. They go to interim study and that means RR&D can work on it. For anything useful to come out of Interim Study it has to be worked on between now and the deadline for proposing legislation.

Bob Ball – Which study groups are best tied to House bills?

Paul Currier – The first one is HB 1305 and the last is HB 1348.

Phil Trowbridge – Paul, could you give us a brief thumbnail of the stumbling blocks that we need to get over?

Peter Rice – Yes, as well as the driver behind it? I know it makes your life easier but I know the surface water definition is problematic because of the federal issue, so maybe you can give us an idea of the context of the driver.

Paul Currier – DES initiated the requests to the RR&D Committee and found sponsors last session. The purpose is to, make the WQ process more understandable in the statutory language and take things that have been, for historical reasons, put into the regulations and put them where they belong in statute in light of their

importance in the WQ Standards process. The first one is the definition of surface waters, in which we have a federal requirement that in order to be approved, state water standards have to cover the same population of waterbodies that are included in surface waters of the US under the federal law. We have a definition of surface waters in the WQ Statute and another one in rule. The reason for that is that it is not clear in the statutory definition that it includes all the waters of the US. The EPA lawyers would not approve our standards unless they were sure that it would include all the waters of the US. We have a different definition of surface waters that goes along with RSA 482-A. RSA 482-A doesn't have a definition but in the preamble it refers to surface waters of the state and there are some other definitions to go along with that. The idea is to make all the definitions the same so people are talking about the same thing and we say that our WQ Standards include all of the waters of the US to EPA they understand that we are telling the truth and they can approve our WQ Standards. That is no small task. The second one is to specify designated uses. EPA requires that our WQ Standards have designated uses, criteria to support the uses, and an Antidegradation Policy. You have to have all three things and they have to cover all the waters of the US for our WQ Standards to be approved by the EPA under the Clean Water Act. Has anyone tried to find our designated uses, either in our statute or our rules? I wager that you won't have much success because they are hidden in a bunch of language. The place to best understand them is in our Consolidated Assessment Listing Methodology(CALM), in which we have done our best to identify what the statute means and we have identified them in words that relate to the Clean Water Act and what other states have as designated uses. The idea was to specify it in the statute. These were important because designated uses say the benefits that humans derive from surface waters that are important enough to create criteria to preserve those uses. Our proposed language in HB 1305 takes what we think the statute says, in combination with our rules, and tries to put it into more concise language. It adds a new designated use called geomorphic integrity, which we will talk more about later. The third one is antidegradation, which does not appear in statute. It is a requirement of the federal Clean Water Act. It is all in the rule. Antidegradation to meet the federal rule is a performance specification. In our rule, the performance specifications get mixed up with the process and you can't figure out what is going on. The idea is to put the performance specifications in the law and our proposed language in HB 1305 mimics the federal rule. That will set the stage to disentangle the performance specifications out of the rules and write rules that are clearer. The fourth one is a proposal to catch up the enforcement authority for WQ Standards with the current scope from WQ Standards. WQ Standards has grown over time to become applicable to activities that don't involve discharges but may never the less result in violations of WQ Standards.

Bill Schroeder – Is that one of the drivers here? Is there concern that putting enforcement issues in legislative language will surprise people who think that DES has or will be doing these things and they will push back?

Paul Currier – That was the testimony that we got at hearings. It was a surprise to everyone (e.g., NHANRS, RR&D Committee, and the Associated General Contractors) that we claimed the authority was already there, just not very clear in the statute. We have the authority to enforce on these issues because have the force of law. If you violate our instream flow rule, which is a narrative standard, we can make the determination and do something. It is not a violation of statute, but it is a violation of rule. If you are discharging something then that is a violation of law and we have the authority of the law behind us.

Phil Trowbridge – Paul, who do you need to come to this meeting? Do we need all this other space?

Paul Currier – My hope is to get workgroups going and the Committee would go back to your constituencies and with the information. The next meeting would be a substantial briefing by the workgroups that will have done some work between now and then of what the issues are and what the work groups think will transpire to work up language. There may be a fair amount of interest. Everyone on the AoT workgroup expressed interested in being involved in this.

Bill Schroeder – This may be the agenda for the next WQSAC meeting and it may be more than two hours.

Paul Currier – We wear out after two hours and I think we can do this in two hours.

Phil Trowbridge – Shall we invite the RR & D Committee?

Paul Currier – Yes.

Tracy LaChance – What are the next steps after June meeting in terms of finalizing language for the fall?

Paul Currier – That would probably be up to the workgroups. We probably wouldn't have an Advisory Committee meeting over the summer. The work groups could proceed as fast as they are able and DES will

provide the staff to keep up with them to the extent that we can. DES would have to be out in front providing discussion papers, revising things and getting new materials out before each meeting for all of the work groups. The fall is a soft deadline. These are important issues and they are worth working over seriously and if we don't have a proposal by next fall there is always the session after that. The default is that we always have processes in place and things that work now and the idea is to make them work better.

Phil Trowbridge – Do all four things need to be resolved?

Paul Currier – No, they are independent of each other. If any one of these lags behind, that would be fine. If one workgroup says they know what to do and propose recommended language, then we are done and can propose that the next session.

Ken Rhodes – You will take any progress that you can get?

Bill Schroeder – It may be possible for one bill may go forward and another doesn't.

Paul Currier – It could be a piece of a bill. Basically, these four topic areas are completely separated. We will send out e-mails inviting people to sign up electronically to what is circulating around. Knowing that the workgroups are going to form, we will work to get the materials for the first workgroup meeting and will be working on that as soon as this meeting is over.

Bill Schroeder – It seems to me that we might need to set some kind of a deadline for people to be on a workgroup. Not that you can't be on it if you don't sign up by that date but to try to encourage people quickly. You said that you would assign staff to the workgroups. For the first workgroup meeting where you don't have a Committee chairman yet, I would think that the DES coordinator would have to take a place, set a date, and communicate with those who signed up about the location of the first meeting.

Paul Currier – I will call first meeting and I will probably do a doodle poll sort of thing, once we have people signed up.

Jim Fitch – If we are going to use the auditorium will we have to move that date?

Phil Trowbridge – We have two options for the Auditorium. One is Tuesday the 22nd and 25th in the afternoon.

Bill Schroeder – Would we like to try for Tuesday the 22nd at 1:30 pm time?

Jim Fitch – You may want to schedule it for the full amount of time. I respect what Paul said about running out of gas after 2 hours but there could be some good detailed discussions.

Phil Trowbridge – We could schedule from 1-4 and see how long we last.

Lisa Fortier – No one usually schedules the auditorium after 4:00.

Bill Schroeder – The suggestion is that it would be from the 22nd from 1:30 to 4:30, or so. Can we have a motion to that effect because we are changing an official meeting date?

- Motion to change meeting date to June 22nd in the Auditorium, was brought forward by **Ken Rhodes** and **John Hodsdon** seconded. A vote was taken and all approved.

Phil Trowbridge – We will be getting things out to WQSAC members were not here, the AoT work group and the RR & D Committee. We hope to get a lot of attendees at the meeting. There is nothing worse than having a meeting in a big room and having no one there.

3:30 – 3:45 Other Business and Confirm Next Meeting Date

William Schroeder

- A motion to adjourn was brought forward by **Dan Blais** and **Larry Morse** seconded. No vote was taken

Adjourned at 3:45