

Appendix J
Written Comments

Lamprey River Water Management Plan

August 2013



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

Mr. Ted Diers, Administrator,
Watershed Management Bureau
New Hampshire Department of Environmental Services
P.O.Box 95
29 Hazen Drive
Concord, New Hampshire 03302

June 20, 2011

Re. Proposed Lamprey Designated River Watershed Management Plan

Dear Mr. Diers:

Thank you for the opportunity to comment on the Proposed Lamprey Designated River Water Management Plan (WMP). EPA is providing these comments in its role as a member of the Instream Flow Technical Review Committee (TRC) for the Lamprey River. It is our understanding that Lamprey River River Instream Flow Report's (DES, 2009) Protected Instream Flows (PISFs) will be maintained through implementation of the Proposed Lamprey River WMP. Although we have not actively participated the development of the WMP, to the extent that it relies on the findings of the PISF, we are providing comments. Our comments focus on two topics: elimination of the 4 cubic feet per second (cfs) cut off flow and the proposed relief flows.

Cut off flow of 4 cfs

The Draft PISF included a recommendation that a 4 cfs minimum be maintained at the USGS gauge at Packers Falls.

“The lowest naturalized flow recorded in last 30 years was 3.7 cfs at the Packers Falls gage. Hence, allowing flows to fall under this level creates unpredictable, catastrophic conditions that are not protective to the aquatic community. Therefore we recommend that the flows should never be allowed to fall below 4 cfs.

That recommendation was not included in the Final PISF or in the Proposed Lamprey River WMP. In a response to a comment on this by the National Park Service on the Draft PISF, DES stated,

“It should also be noted that the recommendation that “flows never be allowed to fall below 4 cfs” has been withdrawn from the report. It is believed that the remaining flow protections, when implemented under the Water Management Plans, will prevent abnormally low flow

conditions. If flows were to reach these levels because of natural conditions, it is likely that emergency status would be declared by the Commissioner under RSA 483:9-c.IV.

While we recognize if natural flows that drop to this level it may constitute an emergency situation, it seems that having no floor in the PISF is not protective of aquatic life. We believe that you can have both, a floor to withdrawals and a provision for emergency use (Chapter 483:9-c s)

Proposed Relief Flows

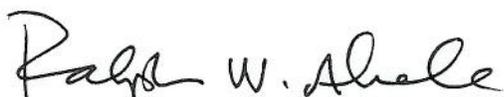
The WMP contains provisions for relief flows. (Table 7 and Appendix F) According to the WMP, aquatic experts on the project team suggested that

... the stress on the aquatic ecosystems due to flows being below the protected instream flow could be reset by the occurrence of least one day where the river flow exceeded the protected instream flow magnitude.

To the best of our knowledge the concept of relief flows was not examined by the Technical Review Committee nor is included in either the Draft or Final Lamprey River Instream Flow Report. The relief flow volume, according to the Proposed WMP, was computed as the amount of water deficit for the two day period immediately after each persistent and each catastrophic duration was reached in the historic record. Not surprisingly, an examination of Table 7 shows that it is roughly the same percentage of the volume needed to meet historical deficits for each bioperiod. While two days of relief flows would give some aquatic species some relief from lows flows, the biological rationale for a two day relief period for each bioperiod should be re-examined by either the Technical Review Committee or other appropriate scientists. The relief flows would require releases from two upstream impoundments. We understand that the WMP looks at balancing water uses with PISF recommendations; however, a better scientific rationale for the length of the pulse releases would make that process more transparent.

Thank you for the opportunity to provide comments. Please contact me at (617) 918-1629 if you have any questions about our letter.

Sincerely,



Ralph W. Abele
Instream Flow Coordinator
EPA Region 1

-----Original Message-----

From: Lee Bartlett [mailto:leebartlett@juno.com]

Sent: Monday, June 20, 2011 3:24 PM

To: Ives, Wayne

Subject: Lamprey River Water Management

Mr. Ives,

Thank you for extending the comment period regarding the Lamprey River plan.

I have concerns regarding instream flow management and its reliance on Pawtuckaway Lake as a reservoir. The study seems to have been limited to management of a small section of the Lamprey without any study of the impact that might result to the Pawtuckaway and to the wildlife in and around the streams that feed into the lake. There also seems to be no limit to the number of discharges and the total volume per year that could be released.

As a lakefront property owner, a change in the level of the fall drawdown increases the probability of damage to docks. I am unsure what that level means to my property and others have voiced the same concern. As the usual drawdown will occur this fall, would it be possible to stop the drawdown at the proposed level for a period of two weeks before resuming to completion? This would give property owners, as well as DES time to assess the conditions at that level.

Thank you for your consideration.

Lee Bartlett
36 Barderry Lane
Nottingham, NH

Wayne Ives, Instream Flow Specialist
Watershed Management Bureau
NH Department of Environmental Services
PO Box 95 - 29 Hazen Drive
Concord, NH 03302-0095

RE: Comments on Lamprey River Water Management Plan; Public Comment Period

20 June 2011

Dear Wayne,

Please accept these comments on the Lamprey River Water Management Plan (WMP). The mission of The Nature Conservancy is to preserve the plants, animals, and natural communities that represent the diversity of life on earth by protecting the lands and waters they need to survive. The Conservancy's freshwater conservation includes decades of working to balance human and ecosystem needs in rivers.

We applaud the use of similar methods employed by DES and its partners, particularly basing flows on magnitude, duration, and timing necessary to sustain river life, as defined by the Natural Flow Paradigm. We also applaud DES and its partners for defining human needs, such as recreation and water supply, as part of the list of Instream Public Uses, Outstanding Characteristics, and Resources (IPUOCRs). We support balancing water for nature and people, particularly where management actions resulting in minor adjustments provide relatively high benefit for the majority of uses and resources.

In general, we support the method, science, and approach used by DES throughout the Instream Flow Program's pilot study. While there are multiple ways to define and protect instream flows, the methods used by DES are science-based, detailed, and can serve as base line against which to compare future conditions. The staff at DES has been responsive to input and comment from multiple parties. We urge DES to employ an adaptive management approach in the future, which will allow for flexibility, and requires employing new information and tools as they become available.

While we do not offer comments on specific recommendations for each dam owner and water user, we do support DES's proposal that during emergency drought periods (catastrophic low flows), water from impoundments be released to protect downstream resources. Based on the available data, such draw-downs would be rare, and would have minor impacts to human and ecosystem needs relative to the benefits downstream. Similarly, we support retaining more water in impoundments during winter months to ensure there is enough water storage for potential use in summer months. Retaining higher winter pools would also support lake ecosystem processes and can help maintain long-term water quality and wildlife habitat. We believe reducing the winter drawdown can be done in a way that achieves both human and ecosystem objectives.

We recommend that DES identify a catastrophic flow level, regardless of duration, that will require management if, or when, it is reached. For example, if during severe drought, the cubic feet per second (cfs) flow falls below XX cfs, water releases would be utilized to maintain a minimum flow level. DES should define that minimum flow based on the combination of historic hydrograph data and the IPUOCR analysis already performed. While conservation measures may already be in place during such a rare

event, it seems important for an Instream Flow Program to define the absolute minimum allowable flow, no matter its duration, timing, or seasonality.

We also recommend that DES define a monitoring and adaptive management approach that will inform future Instream Flow management and program decisions. The online tools that compare current flow data against Protected Flow thresholds are a good start – they allow for comparison between defined thresholds and actual flow conditions. How will DES provide for changes in thresholds and/or management decisions, particularly as patterns of climate and extreme precipitation events change over time? River flows fluctuate over time, and patterns are not necessarily detectable over a few years or even decades. DES should address how they will adapt given new information. Because fisheries are one of the primary IPUOCRs defining flows, monitoring their response to flow management would be an essential part of any long-term adaptive management approach.

In closing, we would like to re-iterate our support of DES and its partners for developing a systematic, detailed, and science-based Water Management Plan. River ecosystems and the human and natural resources they support, are inherently complex and notoriously difficult to manage. DES has, for years, utilized the best tools and data to develop comprehensive decision-support protocols for Instream Flow, and we support and applaud their efforts. We hope they continue to act in a way that is responsive to human needs, and protects the resources under their charge.

Sincerely,

A handwritten signature in cursive script that reads "Doug Bechtel". The signature is written in black ink and is positioned to the right of the word "Sincerely,".

Doug Bechtel
Director of Freshwater Conservation

From: [Collins, Luke](#)
To: cboudreau@verizon.net
Cc: alarson@normandeau.com; Ives, Wayne; tom.ballestero@unh.edu; Couture, Steve
Subject: RE: Pawtuckaway Lake involvement with Lamprey River Water management plan
Date: Thursday, May 19, 2011 8:08:10 AM

Dear Ms. Boudreau,

Thank you for your comments. They have been received.

Luke Collins

Luke Collins, Intern
Watershed Management Bureau
Phone: 603-271-2963
Fax: 603-271-2867

-----Original Message-----

From: cboudreau@verizon.net [mailto:cboudreau@verizon.net]
Sent: Wednesday, May 18, 2011 1:54 PM
To: Ives, Wayne
Subject: Pawtuckaway Lake involvement with Lamprey River Water management plan

May 18, 2011

To: wayne.ives@des.nh.gov

Regard: Lamprey River Water Management

My family has been part of Pawtuckaway Lake since 1948. I remember when the lake was drawn down each summer for “water rights” even though the mills in Portsmouth no longer used water to make their energy. We were unable to use the lake at all in the summer time—it was a mud puddle. When the water drawn-down stopped, the properties on the lake were developed and the state park came in, which as everyone knows, is a hugh asset for southern NH.

A few years ago the town of Nottingham assessed each owner of lake front property a minimum of \$250,000 plus the regular assessment for land. That computes to \$1,000,000/acre since my family has but 1/3rd acre of land on Pawtuckaway Lake. How much do you think the lake front properties are going to be worth if the water is reduced in the summer time to take care of the lower Lamprey? The answer will be zero and the town of Nottingham will be bankrupt.

Pawtuckaway Lake has many wonderful attributes, both for the property owners and the thousands of visitors that come there year round. Destroying this beautiful lake by drawing down the water in the summer to support the lower Lamprey is a crime.

We have already had to deal with a foreign company trying to tap into the water table above the lake to sell commercially bottled water. We have been fighting evasive

weeds, farm fertilizer and animal waste contamination, etc. for years to protect this resource.

One responder wrote “let nature take care of its own”. Unfortunately, that true to only a certain extent. Pawtuckaway is a man-made lake. Its’ resources are used (and abused) by many. We need to be good stewards of this asset. Reversing 50 years of policy (no draw-down) for whatever reason, is a very bad idea.

Sincerely,

Claire Boudreau
55 Mooers Road
Nottingham, NH

Original Message-----

From: Jim Breen [mailto:jimbosr@comcast.net]

Sent: Monday, June 13, 2011 9:06 AM

To: Ives, Wayne

Subject: Re: Lamprey River Water Management Plan Report

Mr. Ives,

I am a resident of the Pawtuckaway lake area and listened to your comments this past weekend. I have some questions for you.

1. Was a legislative study, showing negative impact to the designated river area, done prior to enacting this legislation funding you and your study? It appears the whole focus of this report is to sell the river flow whether or not it makes scientific sense.
2. You studied the river flow for many years and used this to justify your report, but couldn't be bothered to study the history of the Pawtuckaway Lake pool levels during this time frame. Instead you use "Change in water level is based on a starting point of full pool. Lower starting points will result in larger changes in water level." This is where your report is totally unrealistic. If you are using drought figures for your river flow rates, justifying water draws, why wouldn't you use drought conditions for the level of your water source to draw from. No science here. Just political salesmanship. Much easier to justify just 3 inches from full pond level than 8 inches from a pond already down a foot!
3. You stated the draw down will only affect 75 acres 10% of Pawtuckaway's 750 acres. Since you didn't do any study of Pawtuckaway, is this using the volume of the lake as if it were a flat bottom with square sides? So if 50% of Pawtuckaway's acreage is located in the first 3 inches, at full pond level, your draw down could affect 375 acres. But that would require a proper study, which is not the case here.
4. Your 2 day draw is to restore a minimal flow to the designated area of study for 1 day. I have to ask if you looked at how many acres are we affecting with this restored flow? If the river area we are looking at is 12.05 miles long and the restored river is 25 feet wide (Optimistic), we have restored 36 acres of the river for ONE day. Yet you claim to be disturbing 75 acres of Pawtuckaway for the remainder of the drought period (Many Days). This doesn't make sense to me! Then you talked about the reclaiming properties of the lake. That requires rain. But if it rains you don't need the draw down?

I will admit I am not an engineer, however my common sense would tell me, running a couple of days of water across a dry river bed is not much help to the environment, when all areas of the environment are being stressed. Ask your "Grass engineers", who tell us not to water a lawn with a minimal amount of water, because the grass will be better able to take care of itself through a dry period without it.

Your comments Saturday, seem to indicate, all the water held in Pawtuckaway lake is un-natural and the reason for the river flow being low. Seems to me, if all the damns

were removed and all the water were allowed to flow into Great Bay all year long, a drought would have the same effect on your designated area as it does now. Plus, all the wetlands, marshes etc. now created from the damns would be gone also.

In conclusion, your study and report is far short of a truly impartial look at the benefits versus the side effects of this river flow plan. We need a third party impartial review of the whole thing prior to pulling or leaving boards in the damns of these lakes.

James Breen
14 Brustle Rd.
Nottingham, NH.

6/17/11 UNH Campus Recreation Comments (Sailing, Crew, General Outdoor Recreation)

Lamphrey River Emergency Drawdown Notes:

Sailing:

The University of New Hampshire Sailing Program uses Mendums Lake, in Barrington eight months out the year for its various programs, March (pending ice out) – Early November.

During the academic year the UNH Sailing Team provides sailing lessons and racing programs for over 50 collegiate students. The collegiate team also hosts several regattas at Mendums. At each of these events there are between 90-130 participants. During the spring of the year in addition to the collegiate team we also serve a large number of junior and senior high school students from the neighboring towns/schools. We host the NH State Championships and several other regattas, including the Mark Trophy the New England Team Racing Championship which saw over 100 competitors for the weekend. In addition we run an instructional program for the UNH Family Boatbuilding Program and their docents. During the summer the Summer Community Program serves over hundreds of different family members, including children ages 6-18 **and** adults.

After our devastating fire last year (March '10) the local sailing community, families, various regional and national yacht clubs and team parents helped raise over \$85,000 in order to purchase new sailboats. In addition seacoast community members also loaned and donated various boats for the Sailing Programs' use.

In the fall and early spring the effects of the current lowered/normal water levels has presented significant safety issues as well as damage concerns for all of our sailors and boats. When sailboats come close to the shore damage can be significant. Rescue becomes more difficult, often damaging safety boat propellers in addition to the damaging sailboats. Often rocks are closer to the surface in areas not expected. All costs money, time and decreases the availability of use. These costs are borne by the sailing team members.

The availability of boats negatively impacts the Sailing Program both for practice and hosting events. In addition the lowered water level makes it extremely difficult to both launch and remove safety boats as well as our docks from the water. In years past when the water level was low in the spring the Sailing Program was unable to have our docks and boats accessible to the shoreline, instead we had to anchor docks 100 feet away from shore creating access difficulties for all concerned and putting our sailboats and sailors at greater risk. Additionally participation decreased as a result. A side consequence was access by homeowners as they too have less area in which to recreate.

The thought of lowered water for more than a week or so puts the entire University of New Hampshire Sailing Program in serious jeopardy, impacting hundreds of kids and adults. It spells potential disaster for the only community sailing program in the state of New Hampshire.

All kids on the seacoast should know how to sail.

Crew/Rowing:

- Extremely difficulty in launching the safety/chase/coaching launches in the cove that houses the team docks and boat ramp.

- As depth decreases, the danger of hitting rocks increases around the sailing cove and the sailing practice area.

- The navigation/hazard markers, throughout the pond, will need to be updated in a very timely manner, to help prevent damage to persons and property.

General Outdoor Recreation:

There are a few concerns we would like to share regarding the emergency drawdown recommendations by DES. The first and foremost comment offered is 1. safety of our participants, 2) reduction/elimination of recreational opportunities for the UNH and Barrington communities. Assuming normal depth reduction due to weather and supply issues, we would see a significant safety risk to those using Mendums for recreation, swimming, boating, canoeing, kayaking and fishing. The pond itself is, at point of high water, always a safety concern. The area around the key swimming and boating areas are shallow, with intermittent rocks throughout. Some of the rocks are easily seen, many are at water level or just slightly below water level, regardless of water depth. Assuming a drought condition and normal evaporation/weather related conditions, a 4" lowering of this body of water will make the recreational area a greater risk for those utilizing the area. Swimming may need to be eliminated or restricted to a level that children are not allowed to participate. Boating will likewise be affected as the 'informal beach like' areas, the islands, the sailing bay (also a loon nesting area) and surrounding areas are rife with both hidden rocks, those rocks in plain sight and those just under the surface. Marking the rocks or problems areas will be problematic/difficult. We are not sure of the effect of a drawdown on the portable docks and safety launches as we have not mapped the bottom when the pond is drawn down in the late fall...we will be doing this, this next fall drawdown period. The last major concern I would like to mention is one which was highlighted during the Pawtuckaway Lake Improvement Assn. meeting on Sat June 11 in Nottingham. That fact is: that the studies done have been done with Pawtuckaway Lake and the river in mind, but the detailed studies have not been completed to the same level at/for Mendums Pond. I would think this would be a major concern in implementation at this point-from the perspective of Mendums.

Please let me thank you for your consideration of these concerns and we all here at UNH would be happy to discuss this further at any point in this process!

Respectfully,

Denny Byrne, Director
UNH Campus Recreation
128 Main St.
Durham, NH 03824
603-8622-2073



June 16, 2011

C. Wayne Ives, P.G., Hydrogeologist
Instream Flow Specialist
Watershed Management Bureau
NH Department of Environmental Services
PO Box 95 - 29 Hazen Drive
Concord, NH 03302-0095

RE: Lamprey River Water Management Plan Report NHDES-R-WD-11-9

Dear Mr. Ives,

The Lamprey River Advisory Committee (LRAC) appreciates the opportunity to comment on the Lamprey River Water Management Plan Report NHDES-R-WD-11-9, hereinafter referred to as the "Plan."

As with its previous comments on instream flow, the LRAC's principal concerns regarding this subject are ensuring that there is adequate flow in the Lamprey River for ecological needs and recreational use. The LRAC continues to believe that if adequate flows are protected to support and maintain these uses there will be ample flow for other protected uses.

The LRAC generally supports the protected instream flows and the triggers for the seasonal bio-periods. The LRAC also supports in general the three-pronged strategy for managing instream flows—Conservation Plans, Dam Management Plans, and Water Use Plans. However, the LRAC also offers the following comments and concerns regarding the Plan.

1. There is some confusion among the stakeholders as to the pilot nature of the two-year program. The introduction to the Plan should make that clear. The LRAC suggests that an evaluation be made **one year** after implementation to inform stakeholders and the public as to how the Plan is working and to make any adjustments for the next year. In 2013, we understand that the pilot program in its entirety will be evaluated, but feel that an interim evaluation is necessary as well.
2. The Plan should articulate how the pilot program would be extended to the rest of the Lamprey and several of its tributaries which have just been designated into the program

as well as how other rivers designated under the NH River Management and Protection will be included in the Plan.

3. The water conservation plans should be mandatory for drinking water suppliers that withdraw water from the Lamprey River. We believe that these water conservation plans should be made enforceable through a town ordinance with penalties for non-compliance.
4. According to the Instream Flow report and subsequent advisory management meetings, the River should never fall below 4 cfs and the protected flow is established at 16 cfs. However, the Plan is structured in such a way that the potential exists for the flow at the USGS gage 01073500 Lamprey River (Packer's Falls location) to drop to zero for as many as 25 days during the rare flow, catastrophic duration during the July 5—October 6 bio-period before Stage 4 conservation actions are taken. Such a situation would clearly result in negative effects to ecological resources, including but not limited to the rearing and growth of the shiner. This is contrary to RSA 483:9-c, IV which states: "The protected instream flow levels established under this section shall be maintained at all times..." The LRAC urges that some provision tied to flow magnitude, not duration, be added to the Plan to address this possible scenario. Further, it is unclear to us why the 4 cfs protected flow value was removed from the Plan. Please explain.
5. We are uncertain that the proposed relief pulses are of adequate duration to address the negative ecological effects that occur during low flow periods. Natural relief in the form of precipitation tends to be widely dispersed throughout a watershed. Consequently, runoff and infiltrated precipitation are gradually delivered to the stream network in a dispersed and staggered manner. By contrast, the relief pulses presented in the Plan are delivered in short bursts to the largest components of the network. While they may buy some time, it is uncertain if they will be effective at offsetting the ecological effects of low flow. Please explain how the Department of Environmental Services intends on evaluating whether or not the relief pulses are having the desired effect.
6. The LRAC is mindful that the relief pulses during the summer and winter seasons may result in drawdowns which could negatively affect upstream lakefront property owners. While unwanted, the summer drawdowns are likely to be infrequent with little change to lake level. However, winter drawdowns are more ecologically problematic and less manipulation of the impoundment levels would be preferred. The LRAC encourages further examination of this management strategy.

Thank you for this opportunity to comment. The LRAC looks forward to the implementation of instream flow protections for the Lamprey River and its tributaries.

Sincerely,


Sara Callaghan,
LRAC Chair

From: Collins, Luke
To: casescove@comcast.net
Cc: alarson@normandeau.com; Ives, Wayne; tom.ballestero@unh.edu; Couture, Steve
Subject: RE: Lamprey Designated River Water Management Plan
Date: Monday, May 16, 2011 2:53:19 PM

Dear Mr. Case,

Thank you for your comments. They have been received.

Luke Collins

Luke Collins, Intern
Watershed Management Bureau

-----Original Message-----

From: casescove@comcast.net [mailto:casescove@comcast.net]
Sent: Sunday, May 15, 2011 12:23 PM
To: Ives, Wayne
Cc: Tom Duffy
Subject: Lamprey Designated River Water Management Plan

Good Morning Mr.Ives,

I have supported the Nomination of the Lamprey River Water management effort from almost the start. I have voted for this designation on two occasions in the "House". I hope that I will not be sorry that I have taken these actions.

We have been land holders on the shore of Pawtuckaway Lake since 1963. We have had our primary residence here since 1984. As home owners here, we are concerned about the recent discussion of action to be taken to protect the "watershed areas of the Lamprey River" This action is the draw-down of both Pawtuckaway Lake and Mendums Pond.

I can only express my concerns in regards to Pawtuckaway Lake, as we are owners of shore line property and if the 5 1/2 foot instead of the usual 7 foot draw-down does not drain the water from our docks, there is the possibility of damage to docks, by out going ice. Many of us on the shore line also pull our pontoon boats up on shore in the fall and then when the lake is dropped the 7 feet, our boats are on dry land for the winter.

I am also concerned about the effect that this could have on our wild life, such as beavers, game fish,the loons and other wild birds who nest here at Pawtuckaway Lake.

Lastly, there is a possibility of "infrequent" 2.5 inch drawn-downs during the late summer months, which concerns every one on the lake who travel around the lake by boat. With there "infrequent" and probably unannounced withdrawals which would cause rocks not usually exposed or just under the surface, which if struck by a boat motor would do damage to the propeller and possibly the transmission shaft and pontoons or boat

hulls. Pawtuckway Lake is known for the many rocks now in existence, thus the use the term 'A Pawtuckaway Propeller", we do not need to have more rocks exposed during the summer months.

Frank.....

Frank G.Case,RPh.
NH State Representative
Candia
Deerfield
Northwood
Nottingham



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UNH/DURHAM WATER SYSTEM
100 STONE QUARRY DRIVE
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June 24, 2011

Mr. Wayne Ives, P.G.
NHDES – Watershed Management Bureau
P.O. Box 95
Concord, NH 03302-0095

**RE: Comments from UNH/Durham Water System on the
Draft Lamprey River Water Management Plan**

Dear Mr. Ives:

The University of New Hampshire/Durham Water System (UDWS) is pleased to provide the below comments relative to the Draft Lamprey River Water Management Plan provided by NHDES in PDF form and dated April 11, 2011, and earlier versions in MS Word format of specific sections pertaining to the UDWS which are attached. The UDWS has been in discussion with NHDES regarding specific language in the proposed UDWS Water Use Plan, the Wiswall Dam Management Plan, and the UDWS Water Conservation Plan. A public meeting between representatives of the UDWS, NHDES, and NHDES's contractors was held on April 6, 2011 to discuss this specific language and the operational realities of complying with the draft plans. It is understood that at least one more meeting will be held to revise and finalize the language.

The following are general comments:

1. Originally, drafts of the proposed UDWS Water Use Plan, the Wiswall Dam Management Plan, and the UDWS Water Conservation Plan were provided in MS Word format for UNH's and the Town of Durham's comments and as mentioned above we have been in discussion with NHDES for some time now regarding specific language. In April 2011, the bulk of the three draft plans were then incorporated into the body of the Draft Lamprey River Water Management Plan, which was provided in PDF format only, and the individual draft Plans were included in separate appendices in the PDF. This has unnecessarily complicated the comment process since now the same information exists in essentially three places with potentially three different versions making proofing of the final information very difficult. Hence, the reason most of the below comments contain three references. Does NHDES plan to maintain the format of having the bulk of the information from the three plans in the body of the Water Management Plan and entirety of the individual plans included in separate appendices? The UDWS does not feel this makes practical sense since

it will make revising the information moving forward even more complicated than it already is. It is our recommendation that the body of the Water Management Plan not contain so much redundant information and instead refer to the individual plans which would be contained entirely in their own appendices.

2. The title of Table 3 on page 19 is “Affected Dam Owners”, however it is a list dams not the actual owners. A column should be added that list the owner of the respective dams.
3. The discussion about manageability of instream flows and the need for it is based on a comparison of statistical analyses that were used developed the flow duration curve of the Lamprey River, projections of population increase, and assumptions about water demand. It is important to bear in mind that neither regional population projections nor per capita water use can be expected to follow current trends with a great deal of confidence. Per capita water use has been in decline since the 1970s, which is why the UDWS’s water demand is only at 25% of what was projected in 1970.
4. Page 25, first paragraph in the PDF. This paragraph exaggerates the per capita use of users in the watershed (150 gallons per person per day is about 50-100% greater than the per capita use in most area Towns) and therefore exaggerates its impact on the Lamprey River. There is lack of source references to support this discussion. In addition, the last sentence states: “So on average, there is plenty of water, however often demand exceeds supply”. The use of the word “often” in this statement is contrary to the lengthy preceding discussion which makes the case that demand exceeds supply infrequently.
5. Page 26, 2nd paragraph in the PDF incorrectly refers to a Newmarket gage. There is no stream gage in Newmarket. The Packers Falls gage is located in the Town of Durham, however for some reason the USGS refers to it as “near” Newmarket.
6. Page 39, 3rd paragraph in the PDF states “prior to obtaining approval for the proposed new source, but no later than June 1, 2012, UDWS will finalize it proposed Water Conservation Plan in accordance with Env-Wq 2101”. A deadline of June 1, 2012 may be unrealistic; however, UDWS will commit to making a reasonable effort to finalize the proposed Water Conservation Plan prior to this deadline.

The following comments are provided primarily to prevent an unreasonable burden from being placed on the operations of the UDWS, and to ensure that basic operational constraints do not result in an accidental violation of the **UDWS Water Use Plan**. The first page reference refers to the MS Word document of UDWS Water Use Plan (see attachment) followed by the page reference(s) in the complete PDF Water Management Plan document.

7. Page 6, paragraph following bullet list (pages 54 and 224 in the PDF): The ability to base the 1 inch per day drawdown on a weekly average is needed in order to manage the reservoir outflow by removing 1 stop log at a time which would result in a release of “slugs” of water much like a relief pulse. This is also essential if for some reason outflow is managed with a

low level gate in which case it is extremely tricky to maintain a steady drop in pool elevations.

8. Page 6, last paragraph (Page 55, 2nd paragraph and page 225, 3rd paragraph in the PDF): The notification requiring the UDWS to acknowledge within 24 hours is workable, unless the notification is received on a Friday or a weekend in which case acknowledgment will be provide on the following Monday.
9. Page 7, 1st paragraph (page 55, 2nd paragraph and page 225, 3rd paragraph in the PDF): All the language regarding DES plan to create relief flows, the estimated timing of the pulse arrive, and the estimated volume of the flow expected to arrive at the Wiswall Dam are only estimates since the operation of creating a relief flow on the Lamprey River is completely untested the UDWS is extremely uncomfortable with the prescriptive requirements prior to actual trials being conducted. The language suggests that the owner of the Wiswall Dam could create a relief flow “equal to the current bioperiod’s 90th percentile event volume, but without the volume of the 20% buffer released to compensate for losses” has great potential failing and cause the UDWS to violate the conditions if the volume that arrives at the Wiswall Reservoir is inadequate. Because the concept of creating a relief flow is untested, the UDWS has little confidence that the 20% buffer released from the upstream sources will provide enough of a buffer to allow the UDWS to maintain compliance without losing a significant amount of stored water that would otherwise be available to meet public drinking water requirements. It may also require the Wiswall Reservoir be drawn down more than 18 inches total. The following language should be inserted: “Provided that an adequate volume of water is released from upstream sources arrives at the Wiswall Dam, UDWS will make a reasonable effort to create a relief flow that is equal to the current bioperiod’s 90th percentile event volume, but without the volume of the 20 percent buffer released to compensate for losses”.
10. Page 7, 2nd paragraph (page 55, 3rd paragraph and page 225, 4th paragraph in the PDF): The text currently states: “When stream flows in the Lamprey are below 18 cfs, the system’s water sources will comprise the Lee Well, the Oyster River surface water withdrawal and the remaining storage within the drawdown limits of Wiswall Reservoir”. This apparently implies UDWS will be required to maintain inflow equal to outflow at Wiswall, however the designated critical flow of 18 cfs has an associated allowable duration of 15 day. UDWS proposes to use this 15 day allowable duration to begin scaling down the operations at the UNH Water Treatment Plant, and requests the ability to withdraw 0.8 cfs from the Lamprey River instream flow when flows fall below 18 cfs for a period of plus 7 days, and the ability to withdraw 0.4 cfs from 7 days to 15 days. This is necessary for the UNH Water Treatment Plant to more reasonably transition from a high to lower operational level, and to preserve the capacity in the Lee Well until absolutely necessary as prescribed on page 9, 4th paragraph (page 57, 5th paragraph and 227, 6th paragraph of the PDF).

11. Page 9, 1st paragraph (page 57, 2nd paragraph and 227, 3rd paragraph in the PDF): In order for the UDWS to impose mandatory water use restrictions, the Durham Town Council would need to adopt an ordinance to require such actions and impose penalties. UDWS shall work with the Town and UNH to establish procedures to implement mandatory water use restrictions and water conservation measures consistent with this water use plan. Discuss procedure and schedule for adopting water use restrictions as part of a new or updated Town Water Ordinance.
12. Page 9: Cost considerations (page 57 and 228 of the PDF): The following language more accurately reflect the UDWS's true costs and should be inserted: "The management activities would be performed by UNH and Town staff and/or a consultant and the annual costs to implement and maintain the water use plan is expected to range from \$10,000 to \$30,000. The reduced water withdrawal capacity imposed by the protected instream flow program may trigger the permitting, engineering, and installation of associated infrastructure for a new water source and ranges from \$4 million to \$6 million".

The following comments are provided primarily to prevent an unreasonable burden from being placed on the operations of the UDWS and the Town of Durham, and to ensure that basic operational constraints do not result in an accidental violation of the **Wiswall Dam Management Plan**. The first page reference refers to the MS Word document of Wiswall Dam Management Plan (see attachment) followed by the page reference(s) in the complete PDF Water Management Plan document.

13. Page 2, 3rd paragraph (page 46, introductory paragraph and page 191 of the PDF): Chapter 332 from 1965 referenced both the Town of Durham and UNH.
14. Page 3, 3rd paragraph (page 192 in the PDF) – The estimated volume of the impoundment of the top 12" is 12,142,211 gal or 1,623,290 CF or, 37.3 ac-ft per 8-25-10 email correspondence with Wayne Ives.
15. Page 3, 5th paragraph (page 193 in the PDF) – The primary purpose for reservoir is clearly for water supply storage and recreation is secondary. This was the conclusion of the 2003 Dufresne-Henry study. The NH Dams Data Sheet 071.04 referenced in the paragraph needs to indicate "water supply storage" as the primary purpose. The UDWS requests that NHDES revise NH Dams Data Sheet 071.04 accordingly.
16. Page 3, 3rd to last paragraph (page 193 in the PDF) – The last sentence of this paragraph is confusing.
17. Page 3, 2nd to last paragraph (page 193 in the PDF) – There may be approximately 3 miles of river downstream of Wiswall Dam, but the vast majority of this stretch of river is impounded. This should be acknowledged here.
18. Page 3, last Paragraph – (page 46 last paragraph and page 194, 1st paragraph in the PDF): As evident in Table 6, the volume of the Wiswall Reservoir is not "large" as stated in this paragraph, and for this reason it does not provide a significant potential to attenuate the

relief flow. The soon to be installed outflow notch/weir will be self regulating which will help to reduce the potential for attenuation. In addition, for the reason stated in the previous paragraph it does not provide a great potential to provide significant relief flow for the mostly impounded downstream reach. DES is imposing requirements based on assumed behavior the system. They also have practical problems in that no one knows or can measure how much attenuation occurs between the Pawtuckaway dams and our reservoir since the upstream gage is on a side branch of the Lamprey. It is reasonable to assume that some degree of attenuation will occur upstream of the Wiswall Reservoir, but how much? The statewide drawdown in 2009, which was used to assess the relief flow volume needed, was conducted in mid October. The antecedent moisture conditions during this time would typically have been very different from what would be expected during a drought when an actual relief flow would be considered.

19. Page 4, starting with the 3rd Paragraph (pages 47 and 194 in the PDF) – Regarding relief flows: Without conducting some actual relief flow tests that would provide NHDES and the UDWS with some real data of what flows to expect and when, and to what degree the new notch/weir of the dam might actually have on flow attenuation, it is unreasonable to insist that the UDWS come up with a plan to “ensure the relief flows are conveyed” without some amount of attenuation. Pulling stop logs in anticipation of an untested relief flow increases the UDWS’s liability of loosing drinking water storage during a potentially critical period of demand. Depending on when it happens, it could result in prematurely declaring Stage 4 (Water Emergency). What is a “controlled release”? The UDWS has proposed the accuracy as being what can be obtained by pulling a 4” stop log. What degree of control is expected? This is a natural system with natural variability. The degree of precision implied is inconsistent with the system being controlled, and this is all based on untested hypothetical information. The high degree precision of dam outflow controls will not exist to manage small changes in pool elevation. There needs to be a reasonable range of pool elevation variability by which the UDWs will be required to operate the dam.
20. Page 4 (Page 194 in the PDF): Delete the first bullet list. It is redundant with the following bullet list.
21. Page 4, bullet Item #1 (page 47 and 194, 1st bullet item in the PDF): This paragraph is confusing and it is not clear what the final phrase “whichever is less” is referring to.
22. Page 4, bullet Item #2 (page 47 and 194, 2nd bullet item in the PDF): The requirement to confirm receipt of DES’s notification within 24 hours is unrealistic for a municipality where the responsible staff may not be available, particularly if the notification arrives on a Friday or weekend . The planning involved in a relief flow release would happen at least a week before the actual release, and as such it seems reasonable that an “Affected” dam owner could be given more than 48 to 72 hrs notice.

23. Page 4, bullet Item #3 (pages 47 and 194, 3rd bullet item in the PDF): Maintaining inflow equal to inflow on an “instantaneous” basis would require a staff person to continually reside at the dam and is simply unrealistic. The alternative approach proposed in the Water Use plan, and as suggested above, the following language should be considered here: “Provided that an adequate volume of water is released from upstream sources arrives at the Wiswall Dam, UDWS will make a reasonable effort to create a relief flow that is equal to the current bioperiod’s 90th percentile event volume, but without the volume of the 20 percent buffer released to compensate for losses”. However, UDWS would prefer to simply agree to cooperate with NHDES to develop reasonable relief flow protocols based on experience from actual relief flow trials.
24. Page 5, bullet Item #4 (pages 47 and 195, 4th bullet item in the PDF): The outflow weir will be self-regulating, and if the UDWS is not withdrawing then we do not plan to pull additional stop logs.
25. Page 5, bullet Item #5 (pages 47 and 195, 4th bullet item in the PDF): The water level drop is proposed to be based on a 7 day average of 1 inch per day.
26. Page 6, bullet Item #6 (pages 47 and 195, 5th bullet item in the PDF): Again, this level of monitoring will require a staff person to reside continuously at the dam. Automated measurements will consist of pool elevation at the Pump Station and flow at the Packers Fall USGS gage.
27. Page 6, 2nd paragraph (page 48 and 196 in the PDF): The paragraph regarding cost needs to be revised to more accurately reflect the Town of Durham’s true cost with the following language “The estimated annual costs associated with this work will be dependent upon the number of personnel involved, and either the degree of automation of the system or the number of site visits required to perform the necessary flow management actions and the travel time and mileage, and is expected to range from \$200,000 to \$400,000 in infrastructure improvements (dam outflow controls) and \$10,000 to \$100,000 for operation and maintenance”.

NHDES recently informed the UDWS that they have changed its plan to nullify or supersede Durham’s §401 Water Quality Certificate upon adoption of the Lamprey River Water Management Plan, and instead has suggested that they would prefer to modify to the Certificate’s language to simply refer to the Lamprey River Water Management Plan. As recently as October 2010, the Administrator of the Watershed Bureau, Paul Currier, informed the Durham Town Council that the §401 Water Quality Certificate would become null and void upon adoption of the Lamprey River Water Management Plan. The basis of nullifying the Certificate is because ALL the conditions included in the current Certificate will be updated and incorporated into the Water Management Plan. Once the Water Management Plan is adopted, the Certificate will serve no practical purpose and would only perpetuate unnecessary bureaucracy and redundancy regulatory oversight if maintained in some modified form. The UDWS insists that NHDES proceed with nullifying

Durham's §401 Water Quality Certificate upon adoption of the Lamprey River Water Management Plan as was promised to the Durham Town Council.

We look forward to receiving NHDES's responses to the above comments, and working through the final language of the Lamprey River Water Management Plan in the near future. Please contact us with question and/or to schedule a follow-up meeting.

Sincerely,



David Cedarholm, P.E.
Durham Town Engineer



Paul Chamberlin, P.E.
UNH Assistant Vice President of Energy and
Campus Development

cc: Todd Selig, Town Administrator
Michael Lynch, Director of Public Works
James Dombrosk, UNH Director of Energy & Utilities
Michael Metcalf, P.E., Underwood Engineers
Dana Bisbee, Esq., Devine, Millimet & Branch

From: [Collins, Luke](#)
To: tucklake@comcast.net
Cc: alarson@normandeau.com; Ives, Wayne; tom.ballestero@unh.edu; Couture, Steve
Subject: RE: Concerns regarding Pawtuckaway Lake drawn down proposal
Date: Wednesday, May 18, 2011 10:04:22 AM

Dear Ms. Chaurette,

Thank you for your comments. They have been received.

Luke Collins

Luke Collins, Intern
Watershed Management Bureau
Phone: 603-271-2963
Fax: 603-271-2867

-----Original Message-----

From: Lauren E. Chaurette [mailto:tucklake@comcast.net]
Sent: Wednesday, May 18, 2011 9:18 AM
To: Ives, Wayne
Subject: Concerns regarding Pawtuckaway Lake drawn down proposal

Wayne,

Please see my attached letter outlining my concerns over the proposed drawn down of Pawtuckaway Lake. I am a 20+ year resident in the Tuckaway Shores neighborhood and together with my immediate and extended family we have worked hard to maintain the integrity of this lake through the weed watcher program, boat inspections and participation and organization of educational programs through the Pawtuckaway Lake Improvement Association. In addition both my son and husband are avid fishers of the Pawtuckaway waters. This proposed random drawdown is of great concern and needs more time and attention put into it before any such procedure would be put into effect.

Thank you,

Lauren E. Chaurette
21 Brustle Road
Nottingham, NH 03290
tucklake@comcast.net

May 18, 2011

Mr. Wayne Ives, DES

I would like to express my concerns regarding the proposed potential drawn down of Pawtuckaway Lake:

1. Although I applaud the intent of creating a plan that takes into account water management, conservation, and dam management, I find the plan lacking in the very essence of its stated purpose, which is to protect the integrity of surface waters and in-stream flows in the Lamprey watershed area. No study or impact of the entire watershed area, more specifically with Pawtuckaway Lake, has been done. The focus on the lower Lamprey area in my estimation makes this entire report invalid as a guideline for all three stated goals.
2. It appears that the study did not involve any knowledge of the Pawtuckaway Lake. During a drought, the lake levels are in as much stress as the lower Lamprey River. The water levels are usually 6 to 8 inches lower than full pond. If DES is going to drain another 3 inches of water, this would further impact the lake. There is no inflow to replenish the water levels for Pawtuckaway and through natural evaporation the lake loses up to 1/4 of an inch of water daily. By releasing more water, this would impact the shallows and make it virtually impassable for boating, an activity that creates revenue for the state and the local economy through usage of the state park campgrounds.
3. I own Property on Pawtuckaway, Lake and have never been notified of any surveys in the year 2000 or even notified that this committee was being formed to address any proposals related to the lake level -- summer or winter.
4. I am against changing the drawdown in the winter months. It will affect the ability of residents to repair docks. It will affect the quality of the water; weeds will not be killed off as in the past. It will increase property damage that the state is so concerned about during the spring floods while there is ice on lake. That would be in direct contradiction to previously stated policy.
5. The evidence in this report does not support keeping additional water in this lake during the winter.
6. The entire report fails to consider the same stress related to the Pawtuckaway Lake that the plan is proposing to draw water from. Has there been a study to the impact of a drought to the Pawtuckaway Lake area, tributaries and upper watershed? It's quite possible that these areas would have a greater requirement for water than the lower Lamprey area.
7. Why is the health of the lower Lamprey River more important than that of the Pawtuckaway Lake area?
8. If water is added to the lower Lamprey area during stressful times, is there any data to suggest that the marine life and other bio-features will be impacted? What kind of damage to the lake biology would occur at the lake areas where the water is taken from? No study addresses this.
9. Conservation and water management plans are a positive step for entities that take water from the watershed area, but the idea of trying to adjust bio habitats by controlled dam releases might have a temporary positive impact on one area, but adversely affect another.

10. You stated that there is no study to the impact on the lake biology. This needs to be addressed to have a comprehensive plan in place. The premise of having a water management, conservation, dam management plan in place without taking into consideration the impact of the entire watershed would be grossly irresponsible at best.
11. The entire report characterizes the lake areas as storage impoundments. These are not just water storage areas that can be used at your leisure. Every lakefront property will be affected and they need to be notified in writing just as any abutter is notified when a building permit or septic permit is requested for an adjacent property that would affect their property value and border. This lake is my adjacent property.
12. It is my understanding that the water management plan has passed its legislative statute and was not approved or adopted by the September 30th, 2010 required date. I think this entire plan needs to go back to the drawing board or be scrapped.
13. There are large numbers of No Wake areas on the lake due to shallow water. The intent of a no wake area is to protect the shoreline as well as protect the bottom from being turned up by boat propellers. Turning up the bottom releases phosphorous and other sediments that were deemed harmful to plant and fish life. These are state mandated areas and enforced by Fish& Game and Marine Patrol. By lowering the water level, these areas should be banned from boating altogether. This would mean closing the public boat ramp in the Fundy Area and canceling all scheduled fishing tournaments. All this to protect the bio-areas which is the plans stated goals.
14. My confidence and the ability to have the State to be in charge of controlled water releases during the summer is suspect at best. I have been living on this lake for over 20 years and have seen the State: A. forget that there are 2 dams on Pawtuckaway and miss the spring rains leaving the lake 1-1/2 feet below full pond for the summer and: B. Put the boards in the dam upside down leaving tremendous leakage and again leaving the lake below full pond for the summer. There should be more local contact / input for any dam issued whether it might be a drawdown or fill in the spring.

Thank you for your time and attention to my concerns.

Lauren E. Chaurette
21 Brustle Road (Tuckaway Shores Neighborhood)
Nottingham, NH 03290
603-895-4854
tucklake@comcast.net



Loon Preservation Committee

Box 604, Lee's Mills Road, Moultonborough, NH03254
476 -LOON (5666) / Fax 603-476-5497 / www.loon.org

20 June 2011

Wayne Ives
Watershed Management Bureau
NH Department of Environmental Services
PO Box 95 - 29 Hazen Drive
Concord, NH 03302-0095

Greetings Wayne and all concerned,

Thank you for the opportunity to comment on the Lamprey River Water Management Plan and for your email response to my earlier comments in May, which I mention below. The Loon Preservation Committee has monitored loon presence and nesting success on Mendums, Pawtuckaway, and Onway Lakes since the mid-1970s. In the last decade, loons have consistently nested on all three lakes, with two territories on Pawtuckaway. Loon nests are always at the waterline because loons can't move easily over dry land. Changes in lake level during the four-week nest incubation period can flood the nest or strand it too far from water.

Our main concern with the proposed management plan is that drawdowns of Mendums or Pawtuckaway Lake during active loon nesting periods could strand a nest, causing the loons to abandon it. Your email in May addressed those concerns, and you pointed out that the proposed summer drawdowns are relatively small (approximately 2 inches or less). I agree that in most cases, a drawdown on that scale would be unlikely to impact nesting loons on either Mendums or Pawtuckaway. However, I encourage planners to offer a clear summary of the proposed drawdown regime in further drafts of the Management Plan, specifically:

- whether multiple drawdowns could occur in a single season
- the likely timing of the drawdowns (nesting peaks in June, may occur from early May until early August)
- how often drawdowns may be required (the report seems to indicate about four in ten years).

I recognize that some of this information is contained in the existing report, but the report is lengthy and it may reassure stakeholders concerned with potential loon impacts to clarify this information in the summarizing material. LPC comments provided here are intended to summarize our concerns about loon nesting based on a preliminary review of the Management Plan Report; we welcome discussion about potential loon impacts with all stakeholders, including NH Fish and Game, NH DES, and interested lake residents.

Thank you in advance for your consideration,

John Cooley, Jr.

Senior Biologist, Loon Preservation Committee
jcooley@loon.org

CC: Harry Vogel, LPC
Emily Brunkhurst, NHFG
Elizabeth Kotowski, Pawtuckaway Lake resident

May 17, 2011

Gary and Lynn Cox

I have the following concerns regarding the public hearing session held in Durham on May 11:

1. We own property on Pawtuckaway Lake and have never been notified of any surveys in 2000 OR notified that there was a committee being formed to address any proposals related to the lake level at any time.
2. In regards to the history of Pawtuckaway Lake, during a drought, the lake levels are in as much stress as the lower Lamprey River. The water levels are usually 6 to 8 inches lower than full pond. If DES is going to drain another 3 inches of water, this would further exasperate the situation. There is no inflow to replenish the water levels. The lake loses up to one quarter of an inch of water daily due to evaporation. By releasing more water, this would impact the shallows and make it virtually impassable for boating.
3. I am against changing the drawdown in the winter months. It will affect the ability of residents to repair docks. It will affect the quality of the water; weeds will not be killed off as in the past. It will increase property damage that the state is so concerned about during the spring floods while there is ice on Lake. That would be in direct contradiction to previously stated policy.
4. There is no evidence stated in this report that water levels would be kept (additional water) in the lake during the winter months.
5. The entire report fails to consider the same stress related to the Pawtuckaway Lake that the plan is proposing to draw water from. Has there been a study to the impact of a drought to the Pawtuckaway Lake area, tributaries and upper watershed? It's quite possible that these areas would have a greater requirement for water than the lower Lamprey area.
6. Why does the lower Lamprey River area take precedence to the Pawtuckaway Lake area?
7. If water is added to the lower Lamprey area during stressful times, is there any data to suggest that the marine life and other bio-features will be impacted? What kind of damage to the lake biology would occur at the lake areas where the water is taken from? No study addresses this.
8. Conservation and water management plans are a positive step for entities that take water from the watershed area, but the idea of trying to adjust bio habitats by controlled dam releases might have a temporary positive impact on one area, but adversely affect another. Leave Mother Nature to resolve these issues by herself!
9. You stated that there is no study to the impact on the lake biology. This needs to be addressed to have a comprehensive plan in place. The premise of having a water management, conservation, dam management plan in place without taking into consideration the impact of the entire watershed would be grossly irresponsible at best.
10. The entire report characterizes the lake areas as storage impoundments. These are not just water storage areas that can be used at your leisure. Every lakefront property will be affected and they need to be notified in writing just as any abutter is notified when a building permit or septic permit is requested for an adjacent property that would affect their property value and border. This lake is my adjacent property.

11. It is my understanding that the water management plan has passed its legislative statute and was not approved or adopted by the 30 Sept 10 required date. I think this entire plan needs to go back to the drawing board or be scrapped.
12. There are large numbers of No Wake areas on the lake due to shallow water. The intent of a no wake area is to protect the shoreline as well as protect the bottom from being turned up by boat propellers. Turning up the bottom releases phosphorous and other sediments that were deemed harmful to plant and fish life. These are state mandated areas and enforced by Fish& Game and Marine Patrol. By lowering the water level, these areas should be banned from boating altogether. This would mean closing the public boat ramp in the Fundy Area and canceling all scheduled fishing tournaments.
13. My confidence and the ability to have the State to be in charge of controlled water releases during the summer is suspect at best. We have lived on Pawtuckaway Lake for 13 years and have seen the State: A. forget that there are 2 dams on Pawtuckaway and miss the spring rains leaving the lake 1-1/2 feet below full pond for the summer and: B. Put the boards in the dam upside down leaving tremendous leakage and again leaving the lake below full pond for the summer. There should be more local contact / input for any dam issued whether it might be a drawdown or fill in the spring.

Respectfully submitted,

Gary and Lynn Cox
52 Lakeview Drive
Nottingham, NH 03290

-----Original Message-----

From: Dwight & Ellie [mailto:decrow1@juno.com]

Sent: Friday, June 17, 2011 12:03 PM

To: Ives, Wayne

Subject: Instream Flow & Pawtuckaway Lake

Att: C Wayne Ives, P.G., Hydrogeologist

Re: Instream Flow & Lamprey River Watershed Management

As pertaining to Pawtuckaway Lake Area

I wish to express my displeasure to think the DES could and would regulate the flow and drawdown at Pawtuckaway Lake based on the assumption that maybe water will be needed down stream at some unpredictable time..

I would like the drawdown to remain at 7 feet, the boards to be maintained and regulated as they are now. We have had very high water level seasons and very low ones and it seems to depend on the weather not man.

The weed watchers here are doing a super job of keeping the exotic weeds eliminated and they need the water level drawn down to continue keeping "your and our" lake healthy.

Please consider this a request to leave the drawdown at 7 feet with no changes. I would appreciate being on your email list. DECROW1@juno.com.

Sincerely,

Eleanor Crow,
34 Barderry Lane
Nottingham, NH 03290

-----Original Message-----

From: Daley, Michelle [mailto:michelle.daley@unh.edu]

Sent: Monday, June 20, 2011 4:34 PM

To: Ives, Wayne

Subject: RE: Lamprey WMP comments - deadline extension to June 20

Hi Wayne,

Unfortunately I have not been able to thoroughly review the proposed instream flow rules, but I hope that the extension for public comment has allowed a more comprehensive review from groups like the Pawtuckaway Lakes association etc. My main comment is that a lot of work and data collection went into this analysis and it would be useful to have this raw data publicly available on the internet and presented in tables or spreadsheets (instead of PDFs) so that I can easily be used in other capacities.

Thanks for your efforts on this,

Michelle

Michelle L. Daley

Research Scientist

Associate Director NH Water Resources Research Center (<http://www.wrrc.unh.edu/>)

Manager Northeastern States Research Cooperative Theme 2 (<http://www.uvm.edu/envnr/nsrc/>)

Department of Natural Resources and the Environment

University of New Hampshire

114 James Hall

56 College Road

Durham, NH 03824-2500

Office: 126 Nesmith

Phone: 603-862-1794

Fax: 603-862-4976

Email: michelle.daley@unh.edu

From: [Collins, Luke](#)
To: alarson@normandeau.com; [Ives, Wayne](#); tom.ballestero@unh.edu; [Couture, Steve](#)
Subject: RE: Against implementation of the Lamprey River Water Management Plan
Date: Wednesday, May 18, 2011 8:47:48 AM

Dear Ms. Danis,

Thank you for your comments. They have been received.

Luke Collins

Luke Collins, Intern
Watershed Management Bureau
Phone: 603-271-2963
Fax: 603-271-2867

-----Original Message-----

From: Ives, Wayne
Sent: Wednesday, May 18, 2011 8:39 AM
To: Collins, Luke
Subject: FW: Against implementation of the Lamprey River Water Management Plan

C. Wayne Ives, P.G., Hydrogeologist
Instream Flow Specialist
<http://des.nh.gov/organization/divisions/water/wmb/rivers/instream/index.htm>

-----Original Message-----

From: Donna Danis [mailto:ddanis@comcast.net]
Sent: Tuesday, May 17, 2011 4:22 PM
To: Ives, Wayne
Subject: Against implementation of the Lamprey River Water Management Plan

I have the following comments/concerns re: Lamprey River Water Management Plan:

1. It seems remarkably clear that those involved in the study have little or no local knowledge of the Pawtuckaway Lake. During a drought, the lake levels are in as much stress as the lower Lamprey River. The water levels are usually 6 to 8 inches lower than full pond. If DES is going to drain another 3 inches of water, this would further exasperate the situation. There is no inflow to replenish the water levels. The lake loses up to one quarter of an inch of water daily due to evaporation. By releasing more water, this would impact the shallows and make it virtually impassable for boating.
2. The entire report fails to consider the same stress related to the Pawtuckaway Lake that the plan is proposing to draw water from. Has there been a study to the impact of a drought to the Pawtuckaway Lake area, tributaries and upper watershed? It's quite possible that these areas would

have a greater requirement for water than the lower Lamprey area. Why does the lower Lamprey River area take precedence to the Pawtuckaway Lake area?

3. The entire report characterizes the lake areas as storage impoundments. These are not just water storage areas that can be used at your leisure. Every lakefront property will be affected and they need to be notified in writing just as any abutter is notified when a building permit or septic permit is requested for an adjacent property that would affect their property value and border. This lake is my adjacent property.
4. The study does not seem to consider a maximum lake and win-win proposals, such as a maximum limit on the amount that the lake can be drawn down. Wouldn't it make more sense to suggest something like 8" from full pond, rather than an open-ended, unlimited drawdown?

This effort requires a full study of the entire watershed area before an aspect of implementation is considered.

Donna Danis

24 Brustle Road

Nottingham, NH.

Comments Received From:

Eric Danis
24 Brustle Road
Nottingham, NH.
erdanis@comcast.net

Source: email dated May 15, 2011

I attended the public hearing session held in Durham on May 11 and have the following comments/concerns:

Comment DAN-1:

Although I applaud the intent of creating a plan that takes into account water management, conservation, and dam management, I find the plan lacking in the very essence of its stated purpose, which is to protect the integrity of surface waters and in-stream flows in the Lamprey watershed area. No study or impact of the entire watershed area, more specifically Pawtuckaway Lake, has been done. The single minded focus on the lower lamprey area in my estimation makes this entire report invalid as a guideline for all three stated goals.

Response:

Comment DAN-2:

It seems remarkably evident that the study and those involved have little or no local knowledge of the Pawtuckaway Lake. During a drought, the lake levels are in as much stress as the lower Lamprey River. The water levels are usually 6 to 8 inches lower than full pond. If DES is going to drain another 3 inches of water, this would further exasperate the situation. There is no inflow to replenish the water levels. The lake loses up to one quarter of an inch of water daily due to evaporation. By releasing more water, this would impact the shallows and make it virtually impassable for boating.

Response:

Comment DAN-3:

I own Property on Pawtuckaway, Lake and have never been notified of any surveys in the year 2000 or even notified that this committee was being formed to address any proposals related to the lake level -- summer or winter.

Response:

Comment DAN-4:

I am against changing the drawdown in the winter months. It will affect the ability of residents to repair docks. It will affect the quality of the water; weeds will not be killed off as in the past. It will increase property damage that the state is so concerned about during the spring floods while there is ice on Lake. That would be in direct contradiction to previously stated policy.

Response:

Comment DAN-5:

The evidence in this report does not support keeping additional water in this lake during the winter.

Response:

Comment DAN-6:

The entire report fails to consider the same stress related to the Pawtuckaway Lake that the plan is proposing to draw water from. Has there been a study to the impact of a drought to the Pawtuckaway Lake area, tributaries and upper watershed? It's quite possible that these areas would have a greater requirement for water than the lower Lamprey area.

Response

Comment DAN-7:

Why does the lower Lamprey River area take precedence to the Pawtuckaway Lake area?

Response:

Comment DAN-8:

If water is added to the lower Lamprey area during stressful times, is there any data to suggest that the marine life and other bio-features will be impacted? What kind of damage to the lake biology would occur at the lake areas where the water is taken from? No study addresses this.

Response:

Comment DAN-9:

Conservation and water management plans are a positive step for entities that take water from the watershed area, but the idea of trying to adjust bio habitats by controlled dam releases might have a temporary positive impact on one area, but adversely affect another. Leave Mother Nature to resolve these issues by herself. She usually does a great job.

Response:

Comment DAN-10:

You stated that there is no study to the impact on the lake biology. This needs to be addressed to have a comprehensive plan in place. The premise of having a water management, conservation, dam management plan in place without taking into consideration the impact of the entire watershed would be grossly irresponsible at best.

Response:

Comment DAN-11:

The entire report characterizes the lake areas as storage impoundments. These are not just water storage areas that can be used at your leisure. Every lakefront property will be affected and they need to be notified in writing just as any abutter is notified when a building permit or septic permit is requested for an adjacent property that would affect their property value and border. This lake is my adjacent property.

Response:**Comment DAN-12:**

It is my understanding that the water management plan has passed its legislative statute and was not approved or adopted by the 30 Sept 10 required date. I think this entire plan needs to go back to the drawing board or be scrapped.

Response:

House Bill 63, an act extending the instream pilot program for one year (from September 1, 2010 to September 1, 2011) was passed by the House and Senate and then signed by the Governor (Chapter 0034) on May 9, 2011. The Final Lamprey River Water Management Plan will be submitted to the DES Commissioner prior to September 1, 2011 for his consideration and adoption.

Comment DAN-13:

There are large numbers of No Wake areas on the lake due to shallow water. The intent of a no wake area is to protect the shoreline as well as protect the bottom from being turned up by boat propellers. Turning up the bottom releases phosphorous and other sediments that were deemed harmful to plant and fish life. These are state mandated areas and enforced by Fish & Game and Marine Patrol. By lowering the water level, these areas should be banned from boating altogether. This would mean closing the public boat ramp in the Fundy Area and canceling all scheduled fishing tournaments. All this to protect the bio-areas which is the plans stated goals.

Response:

Comment DAN-14:

My confidence and the ability to have the State to be in charge of controlled water releases during the summer is suspect at best. I have been living on this lake for over 20 years and have seen the State: A. forget that there are 2 dams on Pawtuckaway and miss the spring rains leaving the lake 1-1/2 feet below full pond for the summer and: B. Put the boards in the dam upside down leaving tremendous leakage and again leaving the lake below full pond for the summer. There should be more local contact / input for any dam issued whether it might be a drawdown or fill in the spring.

Response:

-----Original Message-----

From: deckerjc@comcast.net [mailto:deckerjc@comcast.net]

Sent: Friday, May 27, 2011 7:47 AM

To: Ives, Wayne

Cc: Groen, Fenton; Case, Frank; Duarte, Joe; Reagan, John; Tasker, Kyle; Sullivan, James; Lynch, John; news@forumhome.org

Subject: Draft Lamprey River Water Management Plan Report (NHDES-R-WD-11-9)

Dear Mr. Ives:

I am a long-time resident of Pawtuckaway Lake, and I am writing to express my concern about the Draft Lamprey River Water Management Plan Report (NHDES-R-WD-11-9). I understand that this plan is being considered to maintain adequate flows within the portion of the Lamprey River designated under The Rivers Management & Protective Act.

I unfortunately did not attend the public session or read the entire 327 pages of this plan and do not claim to fully understand the impacts of low flows within the Designated River. I do however understand some of the impacts that low water within Pawtuckaway Lake would have on the residents and other users of the lake. The impacts on Pawtuckaway Lake and/or Mendums Pond do not appear to be a concern within this report.

As you probably know, Pawtuckaway Lake is a relatively shallow lake with many boulders below the lake surface and a large shallow area know as Fundy Cove. The lake is marked quite well for boaters when the lake is at full pond but still can be tough to navigate for people unfamiliar with the lake. When levels are low, this could be disastrous. I recall a few years back when for some reason the dam was not closed in a timely fashion and lake levels remained low all season long. I witnessed several people hit boulders and break props if not do more damage than that. If the lake is just a few inches below full pond which it is many summers, the risk increases for hitting an underwater obstacle. The public boat launch is deep within Fundy Cove and boaters need to navigate through a narrow channel to get to the main body of water. With low lake levels, I foresee boaters getting stuck and/or further stirring up the bottom of this already shallow area. There are several loon families that return each year to nest and they are subject to changes in lake level as well.

In the hot summer months the lake temperature can get quite warm and the lake has been known to produce blooms of cyanobacteria. I believe that lower lake levels will further contribute to more frequent blooms of this potentially deadly poison which may have impacts further downstream.

The basic problem is that when water levels are low downstream the probability is that water levels are low upstream. Unfortunately we have no control of the weather and a drought is a drought. Without considering the entire impact on all water levels, I find this plan flawed.

I am also concerned with the means of controlling any outflows from the dams. The seasonal draw down is controlled by removing boards from the spill way. Each board is approximately six inches or so therefore removing a single board could result in lowering the lake by this amount. This does not seem to be a smooth control of downstream water flow. There is a lower gate at Dolloff Dam but I have not seen that operated since the large drawn down in the '80s for dam repairs. I am not sure if that is the intended control but am concerned that if this is the cooler water from below would be the water taken from the lake further increasing lake temperature.

I believe there are additional risks with changing the winter water level of the lake as well. This becomes especially concerning if the lake level varies during the period in which it is frozen. This could cause the ice to become unstable or inaccessible and people or pets may be more subject to falling through the ice and into the water. Keeping the winter level higher may additionally cause undue hardship on some property owners as they will now need to modify preexisting docks and/or add bubblers to keep ice from damaging these docks. This would also lead to additional energy consumption that has been unnecessary in the past.

Furthermore, with the proposal to designate the remaining portion of the Lamprey along with the North Branch, North, Little Pawtuckaway and Piscassic Rivers into the Rivers Management and Protection Program as described in The Lamprey, North Branch, North, Little, Pawtuckaway and Piscassic Rivers, A Report to the General Court (R-WD-11-2) adds additional concern as these additional 87.7 miles of proposed protected rivers are not addressed within the plan and may provide further stress to Pawtuckaway Lake and/or Mendums Pond in later versions of this plan.

It would seem that a full Pawtuckaway lake increases surrounding property values. A low Pawtuckaway Lake, on the other hand, will increase potential risk for further unknown concerns and will decrease property values. I am completely opposed to changing the seasonal drawdown.

In the end I find this plan to be immature and incomprehensive and relate it analogous to "robbing Peter to pay Paul". Are these the tradeoffs that we really want to make? I am looking forward to your response.

Sincerely,

John Decker

June 19, 2011

C. Wayne Ives
NH DES
29 Hazen Drive
Concord, NH 03302

Subject: comments on the Draft -Lamprey River Water Management Plan
(hereinafter, "THE PLAN")

Dear Mr. Ives,

As you can see from the many comments that you have received from Pawtuckaway Lake residents, "THE PLAN" has raised many serious concerns and appears flawed in many respects.

Some of the concerns that residence have expressed to me:

1. The drawdown numbers presented are theoretical. They have not been actually tested or measured by experiment. There is no evidence that the plan would even work, ESPECIALLY in time of DROUGHT. Simply stated, there is hypothetical statistical projection, but there is NO SCIENCE.
2. There should be a downside limit to the removal of waters in the Spring, Summer, Fall. For example, if the lake measure is full to minus 12 inches, perhaps 5 inches (as projected in the report) could be supplied downstream. However, if the lake level is already decreased by more than a certain measure – as in -12 inches in the above example, the drawdown will cease.
3. Water impoundment in the winter? It appears that the report has changed it mind on this, even in the last 90 days. In "THE PLAN", the lake drawdown in Winter has decreased from a 5 foot drawdown to a 4.7 foot drawdown, as presented on June 11, 2011, This has happened during the public comment period. How can "THE PLAN" keep changing

4. One main feature of the Plan centers on Winter impoundment of water for emergency purposes. Meanwhile, there are DES and Coastal Management plans to remove dams on the Lamprey! How does this fit the impoundment strategy? Recently, the dam on the Lamprey at Rt. 27 in Epping (Bunker Dam) has been released. Page 1 of a DES archaeological report says, "Removal of the dam will eliminate the pond upstream and may lower water levels in the area by as much as nine feet (Finemore 2009:2)." WHERE IS THIS STRATEGY IN THE INFLOW PLAN? So how does removing it affect all the flow calculations in the DES plan? There are inherent conflicts in planning even at the NH DES.

5. "THE PLAN" looks like a cover to supply Durham and the State University with water. The University has grown to over 15,000 who use facilities. YET, THEY DON'T HAVE A PRIVATE WATER SUPPLY! They have an aquifer that is recharged from the LAMPREY RIVER !

At a recent meeting , I was told "oh, they are planning on drilling a well." When? How much water is projected from it? Why not drill the wells, supply the water needed via the wells, and shelve this plan until there is truly an emergency.

The fact is, in the event of a true emergency, the NH DES can lower all the lakes that feed the lamprey and take as much water as they deem necessary. The State controls the flowage rights.

Therefore, if we are going to make a plan such as, "THE PLAN", let's think it through, test it for soundness, and then proceed.

I recommend that you do not implement the Lamprey River Water Management Plan as written.

Sincerely,



Tom Duffy, President ,
Pawtuckaway Lake Improvement Association
PO BOX 30
Raymond, NH 03077

Lake Residence: 23 Jampsa Trail, Nottingham, NH 03290

-----Original Message-----

From: John Edwards [mailto:john-edwards@comcast.net]

Sent: Wednesday, June 15, 2011 2:02 PM

To: Ives, Wayne

Subject: Lamprey WMP Comments

Dear Mr. Ives,

My name is John K. Edwards. My wife and I built a new waterfront home on Pawtuckaway Lake and have resided here for 15 years.

Prior to moving to Pawtuckaway Lake we enjoyed camping at the State Park nearly every year since the park opened.

I attended the June 11th 2011 PLIA meeting where you presented the DES Lamprey River watershed plan.

I do not recall receiving any notice in 2000 nor in 2010 from DES concerning this plan.

Concerning the "7 foot Winter Drawdown" of Pawtuckaway Lake:

You stated that the reason for the proposed change to a much smaller drawdown was to insure that there would be sufficient Pawtuckaway water and head pressure to re-flood the Lamprey watershed in a 2-day cycle in mid winter if the river level became so low that the ice might settle on the riverbed, thereby threatening the fish and other aquatic life.

Further, you stated that **this threatening riverbed condition has never occurred in the past history**. So the change to the annual Pawtuckaway Lake fall drawdown from 7 feet to a lesser amount is just a "precaution" the DES has decided should be implemented, regardless of its significant impact upon Pawtuckaway waterfront properties.

That history does not justify such significant change action to the annual 7 foot Fall drawdown.

I understand the DES plan has a 2-day flow-rate based on head pressure from Pawtuckaway Lake to refill the Lamprey watershed.

I propose that there is no legitimate reason for a 2-day period. I observed one of your "remote flow-rate reporting units" on the Lamprey on Route 27 in Raymond, NH which transmits flow rate data automatically via its antennae to your management system 24 hours a day. I must assume you have installed these units along areas in the lower reaches of the Lamprey watershed as well. **Therefore you have up-to-the-minute river flow data year round**. Should DES detect an imminent winter flow problem, dam operators could open the last gate at Dolloff Dam. It may require more than 2 days flow to restore the Lamprey watershed to satisfactory levels due to low head at Pawtuckaway. However, your "early warning system" and 5-Day weatherforecasts should easily enable DES to manage flow levels. This suggested change to your Plan would prevent the disastrous damage to waterfront owners docks expressed in many of the comments from Pawtuckaway Lake waterfront owners. And in all likelihood may never have to be employed!

Thank you for the opportunity to comment,

John K. Edwards
53 Mooers Road
Nottingham, NH 03290



United States Department of the Interior

NATIONAL PARK SERVICE

Northeast Region Office
15 State Street
Boston, Massachusetts 02109-3572

IN REPLY REFER TO:

June 17, 2011

C. Wayne Ives, P.G., Hydrogeologist
Instream Flow Specialist
Watershed Management Bureau
NH Department of Environmental Services
PO Box 95 - 29 Hazen Drive
Concord, NH 03302-0095

RE: Lamprey River Water Management Plan Report NHDES-R-WD-11-9

The National Park Service is pleased to offer the following comments regarding the proposed Lamprey River Water Management Plan. We have reviewed the Plan in the context of the state and federal protection of the Lamprey, and as a partner of the Lamprey River Advisory Committee on whose behalf I have participated as a member of the Lamprey WMPAAC.

Before commenting on the Plan, the NPS would like to express its overall support for the process employed by NH DES for conducting the Lamprey Protected Instream Flow pilot study. Specifically, we commend the DES for taking a science based, seasonally sensitive approach to determining the instream flow needs for identified ecological and recreational attributes of the protected Lamprey River. This process included technical review by a well qualified and diverse Technical Review Committee and an open bid process to evaluate and select the most appropriate and qualified scientific consultants to undertake the required evaluations and analysis. This establishes an important precedent critical to the value of this pilot effort.

Comments on Proposed Water Management Plan

1. The National Park Service supports the results of the Protected Instream Flow Study as it has established flow requirements and various seasonal "trigger" flows that would serve as indicators of ecological stress and triggers for contemplated corrective actions.
2. The National Park Service asks that the removal of the 4cfs minimum flow from the final PISF and from the Water Management Plan be reconsidered. As presented to the WMPAAC and the public as a key recommendation of the PISF in public meetings held in late 2008 and early 2009 (see attachments), the NPS, other WMPAAC and TRC members, and other interested parties were under the impression that this would be carried forward into the WMP. To date, no substantive rationale for not doing so has been provided. It clearly would do dramatic ecological harm to allow the Lamprey to drop to zero flow between relief pulses (as the current WMP would allow). It is very difficult to maintain or establish credibility of a pilot instream flow protection process that ignores the very real danger that the Lamprey could realistically (based on the evidence within the period of record and the documented human development related flow trends in the watershed) cease to flow.

3. The National Park Service supports the three tiered concept for managing flows presented in the Plan: 1) Conservation Plans for water users; 2) Water Use Plans to shift, spread and reduce water use; 3) Dam Management Plans for relief of catastrophic events.

4. The National Park Service asks for further consideration of a 4th element to long-term maintenance of Protected Stream Flows: long-term watershed strategies to maintain a healthy, natural ecosystem. Such strategies as long-term planning re impervious surfaces, aggressive BMP's for watershed-wide stormwater management; comprehensive basin-wide planning for water resources; etc. Over the long haul, these sorts of proactive investments will help reduce the need for "catastrophic Interventions" etc.

5. We support the statement in the Plan that communities with affected municipal water supplies need to adopt ordinances that allow for mandatory water conservation.

6. We support the notion that the Plan should clearly establish a maximum lake drawdown (Mendums & Pawtuckaway) for the June 20 through Oct 6 (GRAF Spawning; and Rearing & Growth) summer period. Data on this is confusing and poorly presented in the current Plan, and many have misconstrued and over-estimated the potential cumulative drawdown that might reasonably occur. A stated maximum (human induced) drawdown supported by a clearer analysis of the actual likely cumulative effects based on the period of record would be beneficial.

7. The NPS supports the immediate implementation of the first two phases of the Plan: Conservation Plans and Water Use Plans. This is the "bread and butter" of the Plan - - reduce as much as reasonable man's direct water use impact upon stream flow during times of extreme ecological stress (i.e. when the trigger thresholds are reached).

8. The NPS believes that there should be a scientific re-evaluation of the two day "relief pulse" concept. Two aspects of this seem particularly troublesome:

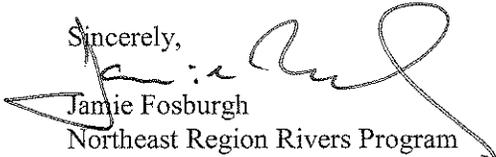
A. Overwintering Period. During this time of year, flows are relatively high, and man's combined influence on winter flows are extremely small (relative to the overall flow). The value of relief pulses during this time period seems particularly suspect. In addition, the 1.5 ft of less winter drawdown in Pawtuckaway is very controversial and particularly destructive to docks, etc. This deserves to be re-evaluated.

B. During a persistent summer drought (as in 2002, for example) two day relief pulses will become very controversial as Mendums and Pawtuckaway levels fall. At some point, it would be counterproductive to pulse high water flows through the Lamprey, when between pulses the River could approach zero flow. The wisdom of the relief pulse concept in the face of a long, persistent summer drought needs to be re-evaluated. No scientific references are provided in the Plan for the ecological benefit of the "relief pulse" concept. One completely different approach to potential dam releases would be to quantify the degree to which human-causes in the watershed are contributing to extreme low-flow scenarios (even after the conservation plans are in effect). Cumulative watershed development (impervious surfaces, lawns, individual wells, unregistered users, etc.) is having a quantifiable impact on summer stream flow. Dam releases could be made to offset this impact based on the PISF-established triggers. Such an approach should be evaluated as an alternative to the "relief pulse" concept.

9. The Management Plan appears to require the Town of Durham to manipulate Wiswall gates and install a new guage to ensure that relief pulses pass through Wiswall without delay or attenuation. NPS comments on Durham's draft Water Use Plan supported Durham's position that the Town should be allowed to simply take no action, i.e. not retain the pulse. The effect would be that the pulse would be slowed and peak pulse flow (cfs) would be reduced (attenuated) in the reservoir - - but ultimately (over an additional day or so) the whole pulse would pass. We continue to believe that the requirement of active gate manipulation and gauge installation and monitoring is overly complicated and onerous.

Thank you for this opportunity to comment. Please feel free to contact me or Jim MacCartney (603 226-3436) with questions on these comments or to discuss any related matters.

Sincerely,

A handwritten signature in black ink, appearing to read "Jamie Fosburgh", written over the typed name.

Jamie Fosburgh
Northeast Region Rivers Program
New England Team Leader
(617) 223-5191

Copy:

Sarah Callaghan, Chair LRAC
Richard Kelley, Chair Lamprey WMPAAC

From: [Collins, Luke](#)
To: [Ives, Wayne](#); ggalp@extremeadhesives.com
Cc: alarson@normandeau.com; [Ives, Wayne](#); tom.ballestero@unh.edu; [Couture, Steve](#)
Subject: RE: Pawtuckaway Lake
Date: Friday, May 20, 2011 2:45:58 PM

Dear Ms. Galpin,

Thank you for your comments. They have been received.

Luke Collins

Luke Collins, Intern
Watershed Management Bureau

Phone: 603-271-2963

Fax: 603-271-2867

-----Original Message-----

From: Ives, Wayne
Sent: Friday, May 20, 2011 2:37 PM
To: Collins, Luke
Subject: FW: Pawtuckaway Lake

Appears to be a duplicate.

C. Wayne Ives, P.G., Hydrogeologist
Instream Flow Specialist
<http://des.nh.gov/organization/divisions/water/wmb/rivers/instream/index.htm>

-----Original Message-----

From: Gwen Galpin [mailto:ggalp@extremeadhesives.com]
Sent: Friday, May 20, 2011 11:45 AM
To: Ives, Wayne
Subject: Pawtuckaway Lake

May 15, 2011
Wayne Ives,

I share the same concerns and comments to the following issues submitted by Eric Danis, who attended the public hearing session held in Durham on May 11.

1. Although I applaud the intent of creating a plan that takes into account water management, conservation, and dam management, I find the plan lacking in the very essence of its stated purpose, which is to protect the integrity of surface waters and in-stream flows in the Lamprey watershed area. No study or impact of the entire watershed area, more specifically Pawtuckaway Lake, has been done. The single minded focus on the lower lamprey area in my estimation makes this entire report invalid as a guideline for all three stated goals.
2. It seems remarkably evident that the study and those involved have little or no local

knowledge of the Pawtuckaway Lake. During a drought, the lake levels are in as much stress as the lower Lamprey River. The water levels are usually 6 to 8 inches lower than full pond. If DES is going to drain another 3 inches of water, this would further exasperate the situation. There is no inflow to replenish the water levels. The lake loses up to one quarter of an inch of water daily due to evaporation. By releasing more water, this would impact the shallows and make it virtually impassable for boating.

3. I own Property on Pawtuckaway, Lake and have never been notified of any surveys in the year 2000 or even notified that this committee was being formed to address any proposals related to the lake level -- summer or winter.
4. I am against changing the drawdown in the winter months. It will affect the ability of residents to repair docks. It will affect the quality of the water; weeds will not be killed off as in the past. It will increase property damage that the state is so concerned about during the spring floods while there is ice on Lake. That would be in direct contradiction to previously stated policy.
5. The evidence in this report does not support keeping additional water in this lake during the winter.
6. The entire report fails to consider the same stress related to the Pawtuckaway Lake that the plan is proposing to draw water from. Has there been a study to the impact of a drought to the Pawtuckaway Lake area, tributaries and upper watershed? It's quite possible that these areas would have a greater requirement for water than the lower Lamprey area.
7. Why does the lower Lamprey River area take precedence to the Pawtuckaway Lake area?
8. If water is added to the lower Lamprey area during stressful times, is there any data to suggest that the marine life and other bio-features will be impacted? What kind of damage to the lake biology would occur at the lake areas where the water is taken from? No study addresses this.
9. Conservation and water management plans are a positive step for entities that take water from the watershed area, but the idea of trying to adjust bio habitats by controlled dam releases might have a temporary positive impact on one area, but adversely affect another. Leave Mother Nature to resolve these issues by herself. She usually does a great job.
10. You stated that there is no study to the impact on the lake biology. This needs to be addressed to have a comprehensive plan in place. The premise of having a water management, conservation, dam management plan in place without taking into consideration the impact of the entire watershed would be grossly irresponsible at best.
11. The entire report characterizes the lake areas as storage impoundments. These are not just water storage areas that can be used at your leisure. Every lakefront property will be affected and they need to be notified in writing just as any abutter is notified when a building permit or septic permit is requested for an adjacent property that would affect their property value and border. This lake is my adjacent property.
12. It is my understanding that the water management plan has passed its legislative statute and was not approved or adopted by the 30 Sept 10 required date. I think this entire plan needs to go back to the drawing board or be scrapped.
13. There are large numbers of No Wake areas on the lake due to shallow water. The intent of a no wake area is to protect the shoreline as well as protect the bottom from being turned up by boat propellers. Turning up the bottom releases phosphorous and other sediments that were deemed harmful to plant and fish life. These are state mandated areas and enforced by Fish & Game and Marine Patrol. By lowering the water level, these areas should be banned from boating altogether. This would mean closing the public boat ramp in the Fundy Area and canceling all scheduled fishing tournaments. All this to protect the bio-areas which is the plans stated goals.
14. My confidence and the ability to have the State to be in charge of controlled water releases during the summer is suspect at best. I have been living on this lake for over 20 years and have seen the State: A. forget that there are 2 dams on Pawtuckaway and

miss the spring rains leaving the lake 1-1/2 feet below full pond for the summer and: B. Put the boards in the dam upside down leaving tremendous leakage and again leaving the lake below full pond for the summer. There should be more local contact / input for any dam issued whether it might be a drawdown or fill in the spring.

Respectfully submitted,

David Galpin

Nottingham, NH.

gdgalp@comcast.net

Neighborhood Guardians
PO Box 104, West Nottingham, NH 03291

June 18, 2011

Mr. C. Wayne Ives
NH Department of Environmental Services
PO Box 95, 29 Hazen Drive
Concord, NH 03302-0095

RE: Comments Pertaining to the Draft Lamprey Designated River Water Management Plan Report

Dear Wayne:

I am submitting these comments as the volunteer chair of the Neighborhood Guardians (NG) for the past 5 years. For background purposes the NG are a Nottingham-based local citizen action group which is **dedicated to protecting and guarding groundwater, property values**, the health and safety of the residents of Nottingham and the surrounding communities in this special region of New Hampshire.

I first want to thank you for your presentation at the Pawtuckaway Lake Improvement Association's (PLIA) annual meeting. As you know you have received many substantive comments and concerns from various stakeholders, including PLIA members. The most recent comments that I have read were from the Nottingham Board of Selectmen which details apparent deficiencies in the above-referenced 'Plan'.

Rather than to repeat the concerns outlined in the Selectmen's comments and on behalf of the NG, **I would like to also recommend that a complete and adequate environmental impact study of the Lamprey River Watershed must be completed before any changes in the management of water levels in Pawtuckaway Lake be approved and that no reallocation of water resources be done.**

As a former selectman who completed the Selectperson's Institute I can certainly empathize with the PLIA and the Nottingham Selectmen on the potential adverse impacts to property values that this 'Plan' may cause to almost 400 taxable waterfront and water access parcels around Pawtuckaway Lake. Under state statute (RSA 41.8) Selectmen 'shall manage the 'prudential affairs' of the town'.

As stated in Chapter 278, HB 1449-A, the final version passed in the 2002 legislative, 'DES shall consider the public comments received in any revisions to the protected instream flow levels and water management plans for the Lamprey River'. The PLIA has a large investment in their lake-side properties for recreational purposes. Although there is an avenue available (RSA 483:9-c,VI) for 'any party who is aggrieved by a determination establishing such protected instream flows to petition the commissioner for a hearing to review such determination', it would be worthwhile if DES found a remedy beforehand.

If you have any questions, please contact me by email at jhadley@metrocast.net.

Sincerely,



Jim Hadley, Chair ~ Neighborhood Guardians

Cc: Nottingham Board of Selectmen (via email)
Representative Frank Case (via email)
PLIA (via email to Therese Thompson and Liz Kotowski)
Ted Diers and Steve Couture, DES (via email)

From: [Collins, Luke](#)
To: bearpaw8ph@comcast.net
Cc: alarson@normandeau.com; [Ives, Wayne](#); tom.ballestero@unh.edu; [Couture, Steve](#)
Subject: RE: Lamprey River management project
Date: Monday, May 16, 2011 3:25:36 PM

Dear Mr. Herald,

Thank you for your comments. They have been received.

Luke Collins

Luke Collins, Intern
Watershed Management Bureau

-----Original Message-----

From: bearpaw8ph@comcast.net [mailto:bearpaw8ph@comcast.net]
Sent: Monday, May 16, 2011 2:35 PM
To: Ives, Wayne
Subject: Lamprey River management project

Dear Wayne;

Having been on lake Pawtuckaway for the past sixty years, I find it alarming to think that the State would be thinking of

having draw offs to support the lamprey river. The water flow hasn't changed much in the last forty years, we have spill ways

on both dams, plus the opening of the dams themselves done with the removal of boards. The lake is brought up in the early

spring, which shuts the water down for about a month, when high water is reached the water flows over the spill ways, or the

boards themselves which is the actual water accumulated in the lake, and continues until the fall when the lake is lowered, plenty

of water flowing then and continues flowing in its natural state until the following spring. What you plan on doing is to supplement

a natural flow of water entering the lamprey, with an unnatural flow from Pawtuckaway lake, disrupting our water level ,

I would like to think you would leave our water level alone, the Lamprey has servived the past sixty years and will probably servive

sixty more, why change something that seems to work, and flow water out of Pawyuckaway, which wasn't established to increase,

or decrease the supply of water to the Lamprey. Have you had a survey on what the effects will be on Pawtuckway Lake?

Thank You:

Paul Herald

From: [Collins, Luke](#)
To: [Ives, Wayne](#); kjordan882000@yahoo.com
Cc: alarson@normandeau.com; [Ives, Wayne](#); tom.ballestero@unh.edu; [Couture, Steve](#)
Subject: RE: I do not support changing the drawdown to Lake Pawtuckaway
Date: Wednesday, May 18, 2011 9:26:36 AM

Dear Mr. Jordan,

Thank you for your comments. They have been received.

Luke Collins

Luke Collins, Intern
Watershed Management Bureau
Phone: 603-271-2963
Fax: 603-271-2867

-----Original Message-----

From: Kevin Jordan [<mailto:kjordan882000@yahoo.com>]
Sent: Tuesday, May 17, 2011 5:39 PM
To: Ives, Wayne
Subject: I do not support changing the drawdown to Lake Pawtuckaway

Dear Wayne Ives,

There are a great many wildlife issues beyond the lower Lamprey River area. Following are a few that I recently came across that come to mind. There are issues with invasive weeds in Lake Pawtuckaway that the winter draw down helps to regulate. And a further drawdown in the summer would be contradictory to improving wildlife on the lake.

Though I do see why people along the lower Lamprey would want more water in the river, in many summers, we who live on the lake would like more water in Lake Pawtuckaway. Robbing Peter to pay Paul leaves Peter's well empty. So, I know I speak for many on the lake who would vehemently oppose an increased drawdown in the summer, and higher water levels in the winter.

I think the discussion needs to be opened up to all the communities that will be effected, not just the lower Lamprey. And, I for one, have not heard of this issue until today, which means we were not properly notified.

Thank you,
Kevin Jordan

1. Although I applaud the intent of creating a plan that takes into account water management, conservation, and damn management, I find the plan lacking in the very essence of its stated purpose, which is to protect the integrity of surface waters and in-stream flows in the Lamprey watershed area. No study or impact of the entire watershed area, more specifically Pawtuckaway Lake, has been done. The single minded focus on the lower lamprey area in my estimation makes this entire report invalid as a guideline for all three stated goals.

2. It seems remarkably evident that the study and those involved have little or no local knowledge of the Pawtuckaway Lake. During a drought, the lake levels are in as much stress as the lower Lamprey River. The water levels are usually 6 to 8 inches lower than full pond.

If DES is going to drain another 3 inches of water, this would further exasperate the situation. There is no inflow to replenish the water levels. The lake loses up to one quarter of an inch of water daily due to evaporation. By releasing more water, this would impact the shallows and make it virtually impassable for boating.

3. I own Property on Pawtuckaway, Lake and have never been notified of any surveys in the year 2000 or even notified that this committee was being formed to address any proposals related to the lake level -- summer or winter.

4. I am against changing the drawdown in the winter months. It will affect the ability of residents to repair docks. It will affect the quality of the water; weeds will not be killed off as in the past. It will increase property damage that the state is so concerned about during the spring floods while there is ice on Lake. That would be in direct contradiction to previously stated policy.

5. The evidence in this report does not support keeping additional water in this lake during the winter.

6. The entire report fails to consider the same stress related to the Pawtuckaway Lake that the plan is proposing to draw water from. Has there been a study to the impact of a drought to the Pawtuckaway Lake area, tributaries and upper watershed? It's quite possible that these areas would have a greater requirement for water than the lower Lamprey area.

7. Why does the lower Lamprey River area take precedence to the Pawtuckaway Lake area?

8. If water is added to the lower Lamprey area during stressful times, is there any data to suggest that the marine life and other bio-features will be impacted? What kind of damage to the lake biology would occur at the lake areas where the water is taken from? No study addresses this.

9. Conservation and water management plans are a positive step for entities that take water from the watershed area, but the idea of trying to adjust bio habitats by controlled dam releases might have a temporary positive impact on one area, but adversely affect another. Leave Mother Nature to resolve these issues by herself. She usually does a great job.

10. You stated that there is no study to the impact on the lake biology. This needs to be addressed to have a comprehensive plan in place. The premise of having a water management, conservation, dam management plan in place without taking into consideration the impact of the entire watershed would be grossly irresponsible at best.

11. The entire report characterizes the lake areas as storage impoundments. These are not just water storage areas that can be used at your leisure. Every lakefront property will be affected and they need to be notified in writing just as any abutter is notified when a building permit or septic permit is requested for an adjacent property that would affect their property value and border. This lake is my adjacent property.

12. It is my understanding that the water management plan has passed its legislative statute and was not approved or adopted by the 30 Sept 10 required date. I think this entire plan needs to go back to the drawing board or be scrapped.

13. There are large numbers of No Wake areas on the lake due to shallow water. The intent of a no wake area is to protect the shoreline as well as protect the bottom from being turned up by boat propellers. Turning up the bottom releases phosphorous and other sediments that were deemed harmful to plant and fish life. These are state mandated areas and enforced by Fish & Game and Marine Patrol. By lowering the water level, these areas should be banned from boating altogether. This would mean closing the public boat ramp in the Fundy Area and canceling all scheduled fishing tournaments. All this to protect the bio-areas which

is the plans stated goals.

14. My confidence and the ability to have the State to be in charge of controlled water releases during the summer is suspect at best. I have been living on this lake for over 20 years and have seen the State:
A. forget that there are 2 dams on Pawtuckaway and miss the spring rains leaving the lake 1-1/2 feet below full pond for the summer and: B. Put the boards in the dam upside down leaving tremendous leakage and again leaving the lake below full pond for the summer. There should be more local contact / input for any dam issued whether it might be a drawdown or fill in the spring.

From: [Collins, Luke](#)
To: jim@jimkelly.net
Cc: alarson@normandeau.com; [Ives, Wayne](#); tom.ballestero@unh.edu; [Couture, Steve](#)
Subject: RE: comments on proposed Lamprey River Water Management Plan
Date: Friday, May 27, 2011 10:25:27 AM

Dear Mr. Kelly,

Thank you for your comments. They have been received.

Luke Collins

Luke Collins, Intern
Watershed Management Bureau
luke.collins@des.nh.gov
Phone: 603-271-2963
Fax: 603-271-2867

-----Original Message-----

From: Ives, Wayne
Sent: Friday, May 27, 2011 10:07 AM
To: Collins, Luke
Subject: FW: comments on proposed Lamprey River Water Management Plan

C. Wayne Ives, P.G., Hydrogeologist
Instream Flow Specialist
<http://des.nh.gov/organization/divisions/water/wmb/rivers/instream/index.htm>

-----Original Message-----

From: Jim Kelly [<mailto:jim@jimkelly.net>]
Sent: Friday, May 27, 2011 9:57 AM
To: Ives, Wayne
Subject: comments on proposed Lamprey River Water Management Plan

Dear Mr. Ives,

I am a resident of Pawtuckaway Lake and I take issue with the Lamprey River Water Management Plan's conclusion that "55 percent of those polled in 2000...were in favor or accepting of conditions that changed the fall drawdown to a lesser amount." The actual results of that poll show that 45% were opposed and 32% were in favor. The rest was a mixed bag, many expressing no preference. To add all the mixed answers to the 32% favorable and come up with 55% is both preposterous and deceptive. For example, those expressing no preference may have been uninformed and unable to provide a meaningful answer. To suggest that these answers fall in the "I don't care" category is just plain wrong.

Further, the reason for the investigation resulting in the 2000 decision was a concern about low water levels in summer months. That problem has been successfully addressed through better management of Pawtuckaway's dams. Some people hoped a lesser drawdown would solve the low summer water levels experienced in 1999, and so their answers reflected that concern. Using that old polling data to support this recent decision for a lesser drawdown is thoroughly disingenuous. The issues are completely different in the two scenarios.

Moreover, since 2000 many changes have taken place on Pawtuckaway that would affect the answers to this poll were it taken today. Large numbers of summer camps have been converted to year round residences, and the population of lake dwellers has increased accordingly. Through its Pawtuckaway Lake Improvement Association, lake property owners have become educated about water quality monitoring, invasive weed and algae growths, shoreline conservation, lake stewardship, phosphate loading, septic issues, and the impact of the Shoreline Protection Act, enforcement of which has only been a recent phenomenon.

The DES is now announcing "a revision to the December 19, 2000 Notice of Decision on Determination of Lake Level Regarding Pawtuckaway Lake (DES, 2000)." In that decision, the DES concluded that the drawdown of Pawtuckaway Lake in the fall should remain at 7 feet. Now, without any updating of its data, the DES has unilaterally decided that the fall drawdown will be 5 1/2 feet. Eleven years have passed, conditions have changed, and a public hearing and further polling must be conducted before this reversal of a decision may be decreed.

One of the Plan's premises is that "(m)anaging water levels on Pawtuckaway Lake for the purpose of flow management on the Lamprey Designated River should not have a significant effect on shoreline properties or on recreational opportunities on the Lake." It should be clear from the substance of the comments already received that this premise is false. A lesser drawdown threatens docks with damage from ice in the winter. Shoreline property owners constructed docks designed for the 7 foot drawdown, especially since the DES announced its decision on December 19, 2000. The DES cannot deny that property owners were entitled to rely on the December 19 decision, just as it cannot now abruptly reverse that decision without giving affected parties the right to be heard on the issue. I believe that lawyers call this principle promissory estoppel. If the public had a right to be heard in 2000, why do they not have a similar right when a new decision is being contemplated?

Perhaps it is time for a new petition to be filed similar to the one that resulted in the 2000 investigation. At least we could then expect a new survey and public hearing before a decision is rendered.

Sincerely,
James Patrick Kelly
35 Sachs Road
Nottingham, NH 03290

TO: THE NH DEPARTMENT OF ENVIRONMENTAL SERVICES
RE: PUBLIC COMMENT ON LAMPREY DESIGNATED RIVER WATER
MANAGEMENT PLAN

I have been a year-round resident of Pawtuckaway Lake for eleven years. I read the Study and the Report of the Lamprey Designated River Water Management Plan and I attended the public hearing in Durham on May 11, 2011. The following are the comments that were solicited from interested persons in accordance with the law mandating the Study and Plan:

It is clear that much time and effort have been devoted to studying Lamprey River instream flows and devising a plan to manage them, but it strikes me that the attitude of the Plan toward its impact on Pawtuckaway Lake is cavalier at best, ignorant at worst. I understand that the mandate, and thus the scope, of the Study and resulting Plan was to develop a strategy for protection of instream flows. Targeting Pawtuckaway as a water "impoundment" was an easy choice and concluding that releasing its water would be effective to manage instream flows is probably valid. But in using the word "ignorant" I mean "without knowledge or information," in the sense that the Plan *assumes* that the only impact of water releases on Pawtuckaway will be a "minimal" drop in lake water level. The Report states that this "should not have a significant effect on shoreline properties or on recreational opportunities on the Lake." Based on what evidence? And what about other considerations like the overall ecosystem of the lake? There is no reference to studies or facts on which *these* conclusions are based, because in point of fact, *there are none*.

I accept that this study was not supposed to focus on these areas but DES cannot simply ignore them when rolling out this "comprehensive" Plan. Government action must take into consideration the relative costs and benefits to *all* interested stakeholders, and in this case lake dwellers and users have had little voice in the process. Moreover, they have absolutely *no* means of providing feedback by way of actual data about the impact the Plan will have on the lake when it is implemented. If there are any adverse effects, it will be too late to do anything about it. Most of us understand the benefit of being proactive rather than reactive. It's a more cost effective and intelligent way to proceed. Hence we have seatbelts, smoke detectors, and other protective measures we all recognize as preferable to injuries, fire damage, and other preventable harms. Some things are irreparable, and maybe damage to Pawtuckaway will be one of them.

Further, the decision to lessen the fall drawdown of the lake appears to have somewhat arbitrary or at least ambiguous origins. Is it really necessary to the Plan or does it just seem like a good idea? The Report itself concedes that "(i)t is not clear what will be the effects of reducing the fall drawdown", but concludes that people who were polled didn't object. Really? No lake residents of my acquaintance were polled. And without knowing what the effects would be, how can *anyone* validly or responsibly make a judgment like that? Do we administer medication to patients without knowing what side effects or long-term damage might result merely because they consent to take it? Obviously not! I submit that in this case, deciding *on the basis of no evidence*

whatsoever that a lesser fall drawdown will be acceptable is extremely irresponsible and downright dangerous. As a small example, there are docks and other shoreline improvements (for which property owners pay handsomely through enhanced real estate tax assessments, by the way) that will be jeopardized by a smaller fall drawdown resulting in lake ice at higher levels, hence closer to shore where it can damage structures that project into the lake. The State Park does not have such concerns, so its opinion on this issue is immaterial.

What disappoints me most is that when it comes to evaluating the health of instream flows and figuring out what solutions will work, this Study and Plan leave no stone unturned and rely on exhaustive data and scientific evidence in reaching conclusions, yet when possible effects on Pawtuckaway and its residents and ecosystem are mentioned in passing, *opinions, guesswork, and assumptions* are relied upon, with a figurative shrug and little apparent concern for whether there are any underlying facts to support them.

Accordingly, in order to remedy this glaring defect in the Plan and its implementation, I propose the following:

- **That advance notice be provided to Pawtuckaway Lake residents or their representative organization before any drawdown or water release is performed.**
- **That the first 24 months be considered a trial period (or pilot project) during which careful assessment of the impact of all aspects of the Plan affecting Pawtuckaway be conducted.**
- **That a strategy be devised to monitor the ecosystems of Pawtuckaway Lake to determine whether changes or damage have been caused by reason of any part of the Plan's implementation.**
- **That this strategy include studies of weed and algae growth and drift, loon habitat, water quality, and fish populations.**
- **That anecdotal feedback from lake dwellers or users be solicited and collected to establish a pool of data or measurements from which conclusions may be drawn about the impact of implementation of any part of the Plan on property use, recreation, and safety.**
- **That the above information be analyzed and used to weigh the cost to Pawtuckaway Lake of implementing the Plan and that revisions to the Plan be considered accordingly.**

Respectfully submitted, _____

Pamela D. Kelly
35 Sachs Road, Nottingham, NH 03290
603-895-6125 pdkelly@comcast.net

_____ Date

-----Original Message-----

From: Donna King [mailto:kingernh@comcast.net]

Sent: Tuesday, May 17, 2011 3:15 PM

To: Ives, Wayne

Subject: Pawtuckaway Lake draw

Dear Sir:

I am a homeowner located on Pawtuckaway Lake. I have received a notice about the intentions of releasing water for the wildlife (fish) downstream from the lake.

Have you ever been on Pawtuckaway Lake? Have you been to Pawtuckaway Lake during the middle of August or early September? The water is usually very low at this time of the year, especially if we are experiencing a dry period. These are important questions as the summer goes by the quality of the lake changes due to all the use and abuse on the lake. Pawtuckaway Lake is a shallow lake, especially over near Fernald's property and the public boat ramp, draining the lake will really affect this area and make it a danger as there will be no water for the boaters and Pawtuckaway has lots of rocks along with it being very shallow. Not a good thing for the property owners and visitors to the lake.

If we experience a drought draining the lake will have severe consequences with the wildlife in and on our lake the draw down will also be a danger to the loon's habitat and nesting areas and please also consider the herons, cormorants, moose and turtles that live in and on our lake.

I don't think this was thought out correctly as to whom and what it would affect but would be correcting another problem farther downstream which is only affecting wildlife (fish). I think you should come up with another solution and leave Pawtuckaway alone, we have enough problems on our lake and I love our lake.

Thank you.

Donna King
20 Brustle Road
Nottingham, NH 03290

May 26, 2011

Comments on the April 11, 2011 Draft Lamprey River Water Management Plan Report (NHDES-R-WD-11-9)

Dear Mr. Ives: As someone who has read DES's near-final Water Management Plan Report for the Lamprey River and attended the public hearing on May 11, 2011 in Durham, I've had a chance to consider and discuss the 327-page proposed plan, as well as hear from you directly. In addition, I participated in the Lamprey River Watershed Association's meeting in West Epping on May 24, 2011 to ask further questions of you and Mr. Couture on the specifics (or in many cases, the lack of specifics) in this plan as they relate to watershed impacts.

My opinion is that the Draft Lamprey River Water Management Plan Report (LRWMPR) is full of inaccuracies, undocumented and unstudied assumptions, and dangerous conclusions.

Comment 1

Table 1 indicates that an overwinter flow rate (12/8 to 2/28) should be 265% of the previous period's flow rate. This undocumented assumption forces inaccurate calculations for the overwinter period. During the public hearing on May 11, you indicated that there was difficulty measuring winter flows because the gages used frequently froze and access to them was limited as well. Due to this difficulty, the information for the overwinter period has not been adequately studied and the assumptions and calculations are in error.

Comment 2

The higher water level proposed for the overwinter period is also in error. The report states that the amount of additional water needed for this period is 1.53 feet. However, the amount of water actually necessary, using the report's own data, is only 0.66 feet. I have attached a spreadsheet to these comments that calculates the additional impoundment necessary to achieve the reported flows.

In a discussion after the meeting, you indicated that there were no boards remaining in the Dolloff Dam in the overwinter period, so extraordinary measures would be needed to ensure adequate impoundment, necessitating the increased impoundment (more than double the necessary amount?). The information about all boards being removed during the winter may not be correct because I've heard otherwise from someone who lives on the lake near the dam. If that's the case, no extraordinary measures would be needed.

At the Lamprey River Watershed Association's meeting in West Epping on 5/24, you indicated the lake level change due to overwinter releases of 0.33 may be in error. What else is wrong in the report?

Comment 3

In the public hearing and subsequent meeting I attended you indicated that the lake level would only decrease by about 2 inches in the summer months. This is incorrect. The potential decrease due to releases is about 11 inches. I have attached the calculations in the same spreadsheet as in comment 2. During the meeting in West Epping you said DES would adjust the report to show the maximum allowable lake reduction and that this number would be less than 11 inches. Even at this late stage of the planning process, you did not know what number this would be. The report is incomplete if this number is not disclosed. There would also be no public comment on this change in the report as required by law.

Due to the inaccuracies and incorrect calculations in this one part of the report I doubt the accuracy of the complete report. Furthermore, why should average citizens need to do calculations in order to find what the effect would be on all watershed resources? This was the job of the experts DES hired for the task.

Comment 4

The report assumes there will be negligible effects on Pawtuckaway Lake, despite the fact that the dam has been managed solely for recreation for more than 50 years. Although the plan states that summer releases and overwinter increases will not significantly alter recreation or water quality in the lake, there is no evidence provided to back that up. DES, the Fish and Game Department, and the Department of Resources and Economic Development have invested a great deal of money and staff effort on the protection of Pawtuckaway Lake and Pawtuckaway State Park. The risks of making a hasty decision are serious because the lake would lose much of its current value if water quality and recreation were impaired.

Part of the mandate for this report was to study the effect on water users, not just the river. I understand that in water management studies the term “water users” refers just to water supplies and companies that withdraw water from the watershed, but a meaningful report would have included the detailed impacts on other “users” of the water that’s released from the lakes for downstream purposes. The fact that no study or recent survey of residents was done on the lake and its associated ecosystems means that DES has based the LRWMPR on incomplete information. Without complete information on likely watershed impacts above the dams, manipulating water levels to achieve downstream goals could damage the lake environment if implemented, even for a test or pilot period.

Some effects on the lake would be:

1. Decreased spring and summer lake levels would threaten loon habitat during the spring and summer nesting season. That season extended from late May until July 28 in 2010 (the date of the last hatch on Pawtuckaway). One of the pairs on Pawtuckaway nests on an island not far from Dolloff Dam. The lowering of water over a 48-hour period, even by a few inches, could strand loon nests and prevent incubating and hatching.

2. Decreased lake levels will affect water quality within the lake. The lowering of lake levels will have a measureable effect on the water quality in Pawtuckaway Lake. The lake already experiences algal blooms and E. coli and cyanobacteria outbreaks in the summer months. To lower water levels without any study of the potential impact is dangerous to both wildlife and public health. The state park beach on Pawtuckaway is already subject to beach advisories and closures due to fecal coliform in the summer. Shallower, warmer water from the summer drawdowns proposed in the LRWMPR will only increase the likelihood of beach advisories.

3. Decrease in lake levels would create a dangerous situation for boaters. Recreational use of this lake would suffer if the water level is lowered. This is a shallow lake with many rock outcroppings.

4. Increased overwinter levels will cause damage to property along the shore. Improvements to property and docks on the lake would be destroyed by ice if this plan is implemented, even on a test or pilot basis.

5. Increased overwinter levels have the potential to promote the spread of invasive weeds. The overwinter lowering of lake levels protects this lake from weed infestation. Any weed infestation would ruin the fisheries in this lake and the lake as a general recreation resource.

None of the above items seem to have been considered in the report. These items need to be addressed before anything is finalized.

Comment 5

The report is so narrow in scope that it doesn't consider the effect the actions it proposes will have on anything outside its limited view. In answering questions on the report at the public hearing, the consultant hired stated that things were "outside the scope of this study" even when the questions asked concerned the water resources they were proposing be reallocated. The scope that the consultant used was only a segment of the stream. He didn't seem familiar with Pawtuckaway Lake and didn't consider the upstream effect of the increased or decreased flows on Pawtuckaway Lake or its environs. Any conclusions in this report that have been drawn without the benefit of an environmental impact study are irresponsible. This study did not achieve its goal and should therefore be scrapped.

Comment 6

The public hearing on this plan, which was held in Durham, was not well publicized. The abutters on Pawtuckaway Lake were not notified. The town of Nottingham Board of Selectman and the Nottingham Recreation Director were unaware that the hearing would involve changes to the water level at Pawtuckaway Lake and Mendum's Pond because the hearing notice did not mention either water body. None of the neighborhood associations on Mendum's Pond were notified, nor were the people in charge of the University of New Hampshire's 200-acre Recreation Center on Mendum's Pond in Barrington. The UNH facilities include a brand new boat house for sailing and the

university's crew team, a beach, and a summer day camp. It also appears that various state agency advisory committees and environmental organizations with a stake in the outcome of the plan were not asked to provide input.

During the 5/24 meeting Wayne Ives stated that "they could not find any lake associations on Mendum's Pond". In one afternoon we were able to identify three neighborhood associations (Holiday Shores, Mendum's Landing, and McDaniel Shore), as well as the UNH people responsible for the facilities on Mendum's Pond. Draw your own conclusions here, but in my view this is an attempt to do just the minimum to pass the legal hearing requirements. Could it be that the report is so flawed the authors didn't want it to be subject to public scrutiny?

Conclusions

The report uses inaccurate assumptions.

The report contains miscalculations.

The report considers only effects on the river environment and downstream water users with only minimal consideration given to the watershed as a whole and Pawtuckaway Lake and Mendum's Pond in particular.

The report is incomplete.

Public comments were not solicited from all stakeholders as required.

For these reasons I respectfully request that this plan not go forward.

Furthermore I ask that the recommendations contained in this report to adjust the water flows out of Pawtuckaway Lake be studied fully before anything is implemented.

Sincerely,

Edward T. Kotowski
14 Indian Run
Nottingham, NH 03290

Pawtuckaway Lake Draw Down Exposure

Table 1
(page 11 of the report)

TIME PERIODS		RARE FLOW (RF)			
FROM	TO	RF (cfs)	RF(CFSM)	ALLOWABLE DURATION	CATASTOPHIC DURATION
12/9/99	2/28/00	73	0.4	7.3	30
3/1/00	5/4/00	146	0.8	4	9
5/5/00	6/19/00	57	0.31	2	10
6/20/00	7/4/00	16	0.087	5	3
7/5/00	10/6/00	16	0.087	6	15
10/7/00	12/8/00	20	0.11		11
					TOTAL

Table B.5
(page 136 of the report)

CHANGE IN WATER LEVEL PER RELEASE
0.33
0
0.14
0.02
0.05
0.09
TOTAL

Calculated fields

DAYS WITHIN BIOPERIODS	POTENTIAL # RELEASES WITHIN BIOPERIOD	POTENTIAL LOWERING OF LAKE LEVELS	SPRING AND SUMMER LOWERING OF LAKE
81.00	2	0.66	
64.00	7	0	
45.00	4	0.56	0.56
14.00	4	0.08	0.08
93.00	6	0.3	0.3
62.00	5	0.45	
TOTAL		2.05	0.94

June 20, 2011

Mr. C. Wayne Ives
NH Department of Environmental Services
PO Box 95 - 29 Hazen Drive
Concord, NH 03302-0095

Dear Mr. Ives:

Over the years I've been very impressed with the quality of the reports, plans, fact sheets, and other documents produced by the NH Department of Environmental Services. As a NH resident, I have also been proud of the effectiveness of DES's programs and the dedication and professionalism of the staff who carry them out. Therefore, I have high expectations for what the instream flow program needs to accomplish and want to know that the science and planning methodology used by DES are the best possible, not only for the Lamprey River but also for the other designated rivers in New Hampshire that will have instream flow plans developed for them by DES.

Attached are my comments regarding the DRAFT Lamprey River Water Management Plan Report (NH DES-R-WD-11-9) dated April 11, 2011. Unfortunately I consider this plan to be far from adequate. There is a tremendous amount at stake here for the Lamprey River, the 14 municipalities in the watershed, and the two recreational lakes in Nottingham and Barrington that are targeted to support downstream water users and anadromous fish habitat.

Thank you very much for considering my comments.

Sincerely,

A handwritten signature in cursive script, appearing to read "Elizabeth S. Kotowski".

Elizabeth S. Kotowski
Nottingham

My husband and I first visited Pawtuckaway Lake in 1992. After that we came every September to camp, orienteer, and canoe with friends. Finally, in 2006, we bought a year-round log home on the lake. Although we still work full-time, our life on Pawtuckaway has been a joy. We listen to loons as we fall asleep; we watch a variety of other birds, including eagles, pileated woodpeckers, and great blue herons; and we love to get up in the morning and slip our kayaks in the water to explore the lake. We also enjoy the fact that half of Pawtuckaway's shoreline and most of the islands are part of a state park that's visited by thousands of families every year. The state also owns a public boat launch on the north end of the lake. On an average weekend day, even as early as May, hundreds of people are out enjoying the lake... paddling canoes, fishing for bass, swimming, jumping into the water from boulders, laughing as they're pulled behind motor boats, camping on the shore, and just plain relaxing.

Pawtuckaway Lake exists as it is today because of the creation of the state park. It is not a drinking water reservoir, although its level is controlled by a dam that was once used to power industries downstream. Sometime around 1955, hydropower was abandoned on the lake and the New Hampshire Electric Company approached the NH Water Resources Board to see if the Board would accept the lake and 800 acres of adjacent land. The Board agreed and also accepted responsibility for its dams for the benefit of present and future users of the lake shores. In 1957 the Legislature directed the State Planning and Development Commission to study how the property could be turned into a state park that would protect the lake and forest resources, benefit the public for recreation, and enhance the local economy.

From that point forward, a plan was set in motion that included acquiring more land, constructing recreational facilities, enhancing scenic beauty, promoting home development on part of the lake to generate tax revenue for the Town of Nottingham, developing a public boat launch, and creating of a town beach at the northern end of the lake for the residents of Nottingham.

When Governor King dedicated Pawtuckaway Lake State Park in 1966, he said in his speech, "We set aside natural resources like these and keep them as nature created them for our rest and relaxation.... Let all of you who have worked so hard to make today a reality take satisfaction not in anything I might say but rather in the solid knowledge that what you have done here will serve generations yet unborn.... that what you have done here will last forever."

The State of New Hampshire considers Pawtuckaway Lake State Park to be one of its flagship parks. It brings in an enormous number of visitors and significant revenue, some of which has been reinvested in its campground, beach and boating facilities, picnic area, new cabins, and educational programs. Although the park now includes 5500 acres and attracts hikers, mountain bikers, snowmobilers, and climbers, the lake is still the magnet that draws people to Pawtuckaway State Park. For that reason and because the lake is so important to the regional and local economy, the current and future use of Pawtuckaway Lake must be an important consideration in any water management or instream flow plan for the Lamprey River.

Pawtuckaway Lake is located in the middle of the 214-square-mile Lamprey River Watershed. As of June 7, 2011, when Governor John Lynch signed HB 149, most of the Lamprey River Watershed is now designated for river protection under the NH Rivers Management and Protection Program. The addition of 87.7 river miles to the original 12 miles in Lee and Durham extends the designated river out to Great Bay and protects the five main tributaries. This expansion means that watershed planning -- including instream flow planning -- must be handled in a new and much more comprehensive way.

The current draft Lamprey River Water Management Plan Report (NH DES-R-WD-11-9) is incapable of protecting the river resources of the Lamprey Watershed because it was always designed to manage instream flows for the narrow 12-mile corridor in Lee and Durham that was designated in 1990. Now, more than ever, the report should be shelved so that a more realistic, durable, and comprehensive instream flow plan can be developed that takes into consideration land management actions in addition to dam management, water use, and water conservation. It also need to consider all of the inputs and withdrawals to the river, with an eye toward not only protecting instream flow and water quality in the Lee-Durham stretch but all the way to Great Bay.

To rush this plan through with only part of the information necessary to put a meaningful plan in place would be very unfortunate. This is exactly the kind of decision making that William Odum described in his 1982 article titled "Environmental Degradation and the Tyranny of Small Decisions" in *BioScience* (vol. 32, no 9) in which he talked about the cumulative impacts of many individual decisions that affect the environment. He describes how the ecological integrity of the Florida Everglades was compromised in this way, as well as the destruction of the coastal marshland in Connecticut and Massachusetts between 1950 and 1970. Great Bay provides a more local example of how no one intended to cause such damage to the estuaries but it happened because of a lack of holistic planning. We have an opportunity to do better with the Lamprey now that the watershed has been designated.

It's understandable that with all the effort that has gone into the current water management plan, the authors would want to see it go forward. The plan is not adequate, however, even for the 12-mile stretch that it was intended to cover. Outside of the need for a better, more comprehensive plan that looks at all the water resources in the Lamprey, there are a number of reasons why this plan misses the mark. Some of those reasons are because of flaws in the design of the instream flow program more than 10 years ago. Others are because of budget constraints.

The bottom line, however, is that this plan serves the needs of the University/Durham Water System (UDWS) more than it does the river or its resources. No one on Pawtuckaway Lake or Mendums Pond even realized until last month that this effort to protect instream flows in the Lamprey was going to result in releases from their lakes for downstream uses. Even the final public hearing notice never mentioned its impact on lakes, which kept the level of comment down while the planning process proceeded quietly.

Deficiencies in the plan:

1. The scope is too narrow: It focuses on registered (large quantity permitted water users) and dam owners with little or no information about small water withdrawals on the river or information about wetlands retention. It also looks only at recreation, habitat, water quality and resources on the designated river, ignoring the lakes and tributaries. It never mentions the existence of Pawtuckaway State Park. It also never even mentions Great Bay, although protecting the bay was a major reason for the designation in the first place.
2. The water conservation plans and water use plans are too similar and redundant. They are also vague and unenforceable. The draft 2008 water conservation plan submitted by the UDWS when it submitted its preliminary permit for a second groundwater source is much more detailed.

3. The report is out of date and incomplete. It doesn't mention the expected expansion of the designated river to include almost 90 more miles of corridor. It doesn't mention the removal of Bunker Pond Dam in West Epping (which has already begun and will affect flow in the river downstream). It contains no information on impervious cover for seacoast communities, projected population growth by town, university expansion plans, stormwater management, or best management plans for recharge of aquifers and streams, It doesn't describe the ongoing anadromous fish restoration programs or the planned fish ladder for Wiswall Dam.

It also doesn't mention Durham's well-documented plans to withdraw ever-increasing amounts of water from the Lamprey River, including a recent 401 Water Quality Certification amendment that will allow Durham to draw down the Wiswall Reservoir by a total of 18" (from a previous 6" max) and allow the maximum daily drawdown to be increased from 0.5" to 1". Public documents also say that " The amendment allows for more than 35 to 40 days of continuous use of the reservoir during extreme low flow conditions." How does this fit in with the Lamprey instream flow plan? And how does the UDWS proposal to withdraw water from the Lamprey to artificially recharge a proposed groundwater source in the Spruce Hole Aquifer fit in with the instream flow plan. It's hard to understand why these issues were left out because they are all relevant and will affect the amount of water needed to maintain instream flow in the future. The shortcoming here is that the plan included information selectively and looks backward far more than it looks ahead.

4. The report appears to have been prepared in a vacuum. The composition of the advisory committee leans toward water suppliers and Durham town officials. Also, the report doesn't reference or attempt to integrate with other research and plans being developed by seacoast regional environmental groups, such as the Southeast Watershed Alliance, the Piscataqua Region Estuaries Partnership or UNH's excellent Water Resource Research Center, which includes scientists and grad students who are studying the Lamprey Watershed as part of its Lamprey Hydrology Observatory, which organizes an annual Lamprey River Symposium.

5. The report is poorly organized and incomprehensible to most readers. It bogs down in technical jargon and details about clupeid bioperiods. It includes scores of acronyms and doesn't include a glossary. It's hard to imagine how this will be received by the NH Legislature, which is composed of everyday citizens serving the state.

In the end, I see this as a report that provides some good information but needs much more content and true planning to be of value to the Lamprey River. I urge the Commissioner to reread his own 2010 - 2015 Strategic Plan and realize that the Lamprey River Water Management Plan is not consistent with his vision. DES needs to consider the big picture for the river, the lakes, and the watershed communities.



Members dedicated to protecting lakes

June 20, 2011

Wayne Ives, Instream Flow Specialist
Watershed Management Bureau
NH Department of Environmental Services
PO Box 95
Concord, NH 03301

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Katie Seraikas (Concord)
Lake Host Assistant
Patricia Tarpey (Gilford)
Watershed Outreach Coordinator

Dear Mr. Ives:

Please accept these comments on the Lamprey River Management Plan. The mission of the New Hampshire Lakes Association, a 501c(3) member supported organization representing approximately 1,4000 individuals and 150 lake association (and their combined approximately 26,000 members), is to protect New Hampshire's lakes and their watersheds.

We support studies and policies rooted in sound-science while working with stakeholder groups implementing protection projects and developing management plans that improve the quality and enjoyment of New Hampshire's lakes, while also balancing drinking water supply needs and requirements for native organisms and habitat. We appreciate the efforts that the New Hampshire Department of Environmental Services has gone through to develop the Lamprey River Watershed Management Plan.

We recommend that additional study be conducted to assess the impact that drawdown during the summer and higher water levels during the winter would have on the quality, enjoyment, and economic value of Pawtuckaway Lake and Mendums Pond. For example, could drawdown during the summer cause boat ramps on these waterbodies to become unusable? Could higher water levels during the winter cause property damage to shoreline structures? What would the effect of lower water level during the summer have on water quality, benthic organisms, and boating safety? Could lower summer water levels contribute to increased cyanobacteria blooms or reduced dissolved oxygen concentrations in Pawtuckaway Lake?

Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in black ink that reads "Andrea LaMoreaux".

Andrea LaMoreaux
Vice President, Education & Communication

cc: Jacquie Colburn, Lake Management Advisory Committee
Susan Goodwin, NH LAKES Association
Peter Goodwin, NH LAKES Association
Liz Kotowski, Pawtuckaway Lake Improvement Association

Andrea Lawson
45 Horizon Dr.
Bedford, NH 03110
and
39 Sach's Road
Nottingham, NH
603-236-1669
May 20, 2011

Dear Wayne Ives,

As a summer resident of Pawtuckaway Lake, I agree with the problems listed below concerning changing the water levels to help the downstream issues. I would no longer be able to "beach " my pontoon boat on the sand for the winter as I have done for the last 12 years if the lake level is left two feet higher in the winter. Also my dock would be ruined by ice damage.

1. Although I applaud the intent of creating a plan that takes into account water management, conservation, and dam management, I find the plan lacking in the very essence of its stated purpose, which is to protect the integrity of surface waters and in-stream flows in the Lamprey watershed area. No study or impact of the entire watershed area, more specifically Pawtuckaway Lake, has been done. The single minded focus on the lower lamprey area in my estimation makes this entire report invalid as a guideline for all three stated goals.
2. It seems remarkably evident that the study and those involved have little or no local knowledge of the Pawtuckaway Lake. During a drought, the lake levels are in as much stress as the lower Lamprey River. The water levels are usually 6 to 8 inches lower than full pond. If DES is going to drain another 3 inches of water, this would further exasperate the situation. There is no inflow to replenish the water levels. The lake loses up to one quarter of an inch of water daily due to evaporation. By releasing more water, this would impact the shallows and make it virtually impassable for boating.
3. I own Property on Pawtuckaway, Lake and have never been notified of any surveys in the year 2000 or even notified that this committee was being formed to address any proposals related to the lake level -- summer or winter.
4. I am against changing the drawdown in the winter months. It will affect the ability of residents to repair docks. It will affect the quality of the water; weeds will not be killed off as in the past. It will increase property damage that the state is so concerned about during the spring floods while there is ice on Lake. That would be in direct contradiction to previously stated policy.
5. The evidence in this report does not support keeping additional water in this lake during the winter.
6. The entire report fails to consider the same stress related to the Pawtuckaway Lake that the plan is proposing to draw water from. Has there been a study to the impact of a drought to the Pawtuckaway Lake area, tributaries and upper watershed? It's quite possible that these areas would have a greater requirement for water than the lower Lamprey area.
7. Why does the lower Lamprey River area take precedence to the Pawtuckaway Lake area?

8. If water is added to the lower Lamprey area during stressful times, is there any data to suggest that the marine life and other bio-features will be impacted? What kind of damage to the lake biology would occur at the lake areas where the water is taken from? No study addresses this.
9. Conservation and water management plans are a positive step for entities that take water from the watershed area, but the idea of trying to adjust bio habitats by controlled dam releases might have a temporary positive impact on one area, but adversely affect another. Leave Mother Nature to resolve these issues by herself. She usually does a great job.
10. You stated that there is no study to the impact on the lake biology. This needs to be addressed to have a comprehensive plan in place. The premise of having a water management, conservation, dam management plan in place without taking into consideration the impact of the entire watershed would be grossly irresponsible at best.
11. The entire report characterizes the lake areas as storage impoundments. These are not just water storage areas that can be used at your leisure. Every lakefront property will be affected and they need to be notified in writing just as any abutter is notified when a building permit or septic permit is requested for an adjacent property that would affect their property value and border. This lake is my adjacent property.
12. It is my understanding that the water management plan has passed its legislative statute and was not approved or adopted by the 30 Sept 10 required date. I think this entire plan needs to go back to the drawing board or be scrapped.
13. There are large numbers of No Wake areas on the lake due to shallow water. The intent of a no wake area is to protect the shoreline as well as protect the bottom from being turned up by boat propellers. Turning up the bottom releases phosphorous and other sediments that were deemed harmful to plant and fish life. These are state mandated areas and enforced by Fish& Game and Marine Patrol. By lowering the water level, these areas should be banned from boating altogether. This would mean closing the public boat ramp in the Fundy Area and canceling all scheduled fishing tournaments. All this to protect the bio-areas which is the plans stated goals.
14. My confidence and the ability to have the State to be in charge of controlled water releases during the summer is suspect at best. I have been living on this lake for over 20 years and have seen the State: A. forget that there are 2 dams on Pawtuckaway and miss the spring rains leaving the lake 1-1/2 feet below full pond for the summer and: B. Put the boards in the dam upside down leaving tremendous leakage and again leaving the lake below full pond for the summer. There should be more local contact / input for any dam issued whether it might be a drawdown or fill in the spring.

-----Original Message-----

From: Victor Maslov [mailto:victm@earthlink.net]

Sent: Monday, June 20, 2011 12:05 PM

To: Ives, Wayne

Cc: Duffy, Tom

Subject: Comment on Lamprey River Plan

Mr. Wayne:

I am opposed to allowing any additional bureaucratic tampering with the level of Pawtuckaway Lake in order to meet the perceived needs of the Lamprey River.

The Water Management Plan Report states that "...several meetings were held with the Lamprey River Water Management Planning Area Advisory Committee (LR WMPAAC) to solicit comments from stakeholders regarding the development of the Water Management Plan."

If the potential beneficiaries of the Plan help to design the Plan, it is obvious who will gain and who will lose.

The Plan Report further states that the protected entities in the Lamprey River watershed include: "boating; recreation (fishing, swimming); hydropower; public water supply; archeological resources; the natural riparian corridor ecosystem; rare, threatened, and endangered species; and aquatic flora and fauna."

The same can be said of the protected entities of Pawtuckaway Lake. It is not clear why the river should take priority over the lake

The Plan further states that "Low flows and floods are expected to occur as natural conditions and occur within the range of natural flows. Typical human influences tend to reduce flow variability by removing floods and droughts. This may make the availability of stream flow more reliable for human use, but is detrimental to biological integrity."

Exactly so. If your purpose is to allow flows to vary in accordance with the Natural Flow Paradigm, the Paradigm should not *exclude* "low flows and floods", which the Plan seems to do in an effort to minimize their effects.

Finally, it is in the nature of bureaucracies to start with modest goals to gain the approval of the citizenry, but I fear that there is a danger that today's modest drawdown goals will inevitably grow with time.

I oppose this Plan.

Thank you,

Victor Maslov
87 Shore Drive
Nottingham, NH

June 17, 2011

C. Wayne Ives
Instream Flow Specialist
Watershed Management Bureau
NH Department of Environmental Services
PO Box 95 - 29 Hazen Drive
Concord, NH 03302-0095

Re: Lamprey Designated River Proposed Water Management Plan

Dear Mr. Ives:

Thank you for this opportunity to provide NH Fish and Game Department's (NHFGD) comments on the Proposed Water Management Plan for the Lamprey River. NHFGD has been very fortunate to be a long-term (>10 years) active partner in the Instream Flow Program, and that is certainly due to NHDES' efforts to make sure that NHDES and NHFGD have a strong, working relationship.

NHFGD's understanding is:

- 1) The objective is to potentially provide instream flow by the release of water from Pawtuckaway Lake and Mendum's Pond to meet water quality standards during extreme low water conditions (e.g. drought) in the Lamprey River.
- 2) NHDES has completed a great deal of analyses on this new procedure to determine when and why water should be released, how much water would be released, over what period of time, and what that would do to water surface elevations in Pawtuckaway Lake and Mendum's Pond, and
- 3) To accommodate a possible winter instream flow recharge event, Pawtuckaway Lake is proposed to be lowered 5.5 feet instead of the current 7 feet during the normal winter drawdown.

NHFGD has identified several topics relative to this proposal and offers the general comments below. At this time, because the Department plans to continue our discussions with NHDES on the details of the proposal, we are not able to provide specific comments for some topics.

Summer release of water (potential issues):

- a. **Loons:** there is one loon nest in the northern part and one in the southern part of Pawtuckaway Lake. Lowering of water levels during the nesting period could prevent the loons from being able to return to their nests as they can only slide their bodies across the ground. Therefore significantly lowered water levels should not happen between May 15 and July 15. Any lowering of water levels deemed necessary during this timeframe should be communicated and reviewed with NHFGD staff in advance, in order to evaluate whether there would be impacts to loons. Winter drawdowns should not commence until after October 15 to allow chicks to fledge. Drawdowns to offset low water conditions before May 15 and after July 15 should have no impact on the loons. NHFGD wants DES and others to understand that the comments we offer here are for this specific proposal and at Pawtuckaway Lake only. These comments do not apply to any other waterbody.
- b. **Diadromous fish:** to conduct the proposed release at Pawtuckaway Lake approximately two, 8-inch boards would be pulled from the dam for about two days. This has the potential to provide attraction flow to juvenile alewife at a time (summer) when inhospitable conditions would exist in the Lamprey River. NHFGD would not want the alewife to swim downstream into the Lamprey River until they are either mature enough or conditions are optimal for them to migrate directly to the ocean. The management objective is to keep them in Pawtuckaway Lake and grow till October at which time they migrate downstream into the Gulf of Maine. NHFGD and NHDES discussed the potential to use metal screens to ensure that juvenile alewives do not leave Pawtuckaway Lake during a release of water in the summer.
- c. **Water temperatures:** there is the concern that the release of surface water from Pawtuckaway Lake in the summer could increase the water temperatures downstream and cause impacts to aquatic fauna. NHFGD requests that continuous (hourly) water temperature data be collected in summer 2011 in order to make informed decisions on this topic. There are 2006 data for several places in the Lamprey River watershed, but not from at the Pawtuckaway Lake dams. NHFGD is pleased to assist in this, and may be able to allocate water temperature loggers to this effort.
- d. **Cumulative lowering of Pawtuckaway Lake water levels:** at this time, NHDES has not analyzed under what conditions there exists the potential for multiple releases that could lead to impacts to fish and wildlife from the lowering of water levels. NHFGD plans to continue to work cooperatively with NHDES on this topic.
- e. **Fundy Cove area:** being a shallow cove the lowering of water levels could be an issue to fish and wildlife residing there; as well as, limiting the utilization of the Department's existing public boat launch. This also applies to other shallow areas around the lake or pond that would be more dramatically affected on a horizontal level by a proposed vertical drop in water elevation. NHFGD plans to continue to work cooperatively with NHDES on this topic.

Please feel free to contact Mr. John Magee, Fish Habitat Biologist, at 603-271-2744 or john.a.magee@wildlife.nh.gov with questions or concerns. We look forward to our continued progress on meeting water quality standards and the conservation of fish and wildlife resources in New Hampshire.

Sincerely,

Glenn Normandeau
Executive Director

cc: Cheri Patterson
Emily Brunkhurst
Mike Marchand
Kim Tuttle
John Magee
Carol Henderson

Town of Nottingham
P.O. Box 114
Nottingham NH 03290



Office 603-679-5022
Fax 603-679-1013

June 9, 2011

Mr. C. Wayne Ives
NH Department of Environmental Services
PO Box 95 - 29 Hazen Drive
Concord, NH 03302-0095

Subject: Comments from the Nottingham Board of Selectmen on the Draft Lamprey River Water Management Plan Report (NHDES-R-WD-11-9)

Dear Mr. Ives,

The Town of Nottingham may face the largest impact from DES's instream flow management plan of any municipality in the headwaters of the Lamprey River. Specifically:

- The North River begins at the north end of town and flows through Nottingham for approximately 12 miles.
- More than half of the Little River is located in Nottingham.
- The Pawtuckaway River originates in Nottingham and passes through town wetlands.
- The entirety of Pawtuckaway Lake is within our town borders. This heavily used recreational and residential lake would be DES's primary source of relief flows under the proposed plan for managing instream flow in the lower Lamprey River.
- The Nottingham Town Beach, located at the north end of Pawtuckaway Lake, was deeded to the Town by the State when Pawtuckaway State Park was created in the 1960s. Lower lake levels and degraded water quality in the summer could make the Town Beach unsafe and unusable.

- There are 394 taxable waterfront and water access parcels around Pawtuckaway Lake (16% of the total for Nottingham). Of that number, 357 have year-round or seasonal homes on them (17.7% of the total for Nottingham). A reduction in the water quality and water quantity of Pawtuckaway Lake could affect real estate tax assessments and significantly erode the local tax base. In addition, these homes rely on private wells that could be affected by lower lake levels during periods of drought.
- For several years, the Town has allocated thousands of dollars for the Lake Host Program to prevent exotic weeds from entering the lake at the public boat launches.
- The Town was awarded a 319 Watershed Improvement Grant from DES in 2006 to evaluate phosphorus and sediment loading and apply best management practices at 12 sites to improve water quality on Pawtuckaway Lake.

The Town of Nottingham's water resources are highly valued by residents and visitors alike. They define our town in terms of its rural character, environmental quality, economic stability, and regional identity. Therefore, Nottingham's concerns must be thoroughly considered and clearly addressed by DES prior to making any determinations or changes that would affect our environment.

Unfortunately, it is clear from a review of the report and from comments presented at the public hearing and submitted in writing that the draft Lamprey River Water Management Plan Report is deficient in many ways. It is also clear that the report reaches its conclusions to reallocate water resources from Nottingham without adequately studying the environmental and economic consequences to the town, the region, or the watershed as a whole.

Comments made before this Board at our past two meetings indicate that lowering the water levels in Pawtuckaway Lake could be damaging to water quality and to the creatures that inhabit the lake, including loons, turtles, frogs, and fish. With respect to human impacts, the increased

over winter levels behind Dolloff Dam would diminish the value of lakefront property by preventing winter maintenance and causing ice damage in the spring to docks and other structures that rely on the long-standing 7-foot drawdown in the fall. Those impacts must be considered and avoided to the greatest extent possible.

As guardians of our Town's water resources and the rights of our residents, we have to ask: What will happen to water quality and the volume of Pawtuckaway Lake if DES orders a series of 48-hour water releases from Dolloff Dam through the spring and summer, especially in years of drought? How will DES respond to water quality degradation in the lake if it occurs as a result of the draw downs? How will DES address riparian rights for property owners on the lake and tributaries? These questions can't simply be ignored or pushed aside to be addressed after a couple of years of "adaptive management" of the dam. We all have a right to know that this plan is grounded in reality, both scientifically and politically.

We are also concerned because the Town of Durham has been allowed to take increasingly large water withdrawals from the Lamprey River despite DES's stated need to maintain minimum flows for aquatic habitat. The Lamprey River was originally used by the University of NH/Durham Water System (UDWS) as a reserve supply for drinking water. By 2009 the Lamprey had become the primary drinking water source for the growing university and town. Public documents show that in September 2010, the UDWS was given the right by DES to drawdown the water level behind Wiswall Dam much further than in the past to meet its needs (from 6" to 18"). In addition, the UDWS is proposing to withdraw water from the Lamprey River during high flows to artificially recharge the Spruce Hole Aquifer, a groundwater source that is being developed as a second well. Information about potential transfers of water from the Lamprey to Spruce Hole must be included in this plan.

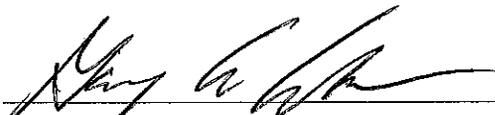
We believe that by continuing to expand its use of the Lamprey River for drinking water supply, Durham may be taking an unreasonable share from the river, thereby diminishing water resources for all other municipalities above and below their withdrawal point. We cannot

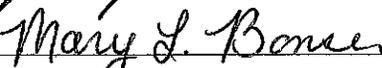
support drawing down Pawtuckaway Lake to meet growing drinking water demand in Durham at the same time DES's water management plan does not address the well-known effects of impervious cover on base flow, flooding, stream quality, aquatic habitat, and groundwater recharge. The UNH Lamprey River Hydrologic Observatory, the UNH Stormwater Center, and the Piscataqua Estuaries Regional Partnership could all assist in expanding the instream flow strategies to include best management practices at key watershed locations that would enhance groundwater recharge and augment stream flow.

With respect to all of these concerns, the Nottingham Board of Selectmen respectfully requests that there be no changes in the management of water levels in Pawtuckaway Lake and no reallocation of water resources done before a complete and adequate environmental impact study of the Lamprey River Watershed is completed. That study should also consider economic impacts of the plan, including the potential effects on visitation to Pawtuckaway State Park and the likely real estate impacts from diminished property value. All of this is especially important in light of the passage of HB149 which will expand the Designated Lamprey River to include the North River, Little River, and Pawtuckaway River in Nottingham.

Thank you for the opportunity to comment.

Sincerely,

Gary A. Anderson 

Mary L. Bonser 

Hal W. Rafter 

Selectmen, Town of Nottingham

Cc: Nottingham Conservation Commission
Nottingham Planning Board
Pawtuckaway Lake Improvement Association (via email)

-----Original Message-----

From: jmrohrer@comcast.net [mailto:jmrohrer@comcast.net]

Sent: Monday, June 20, 2011 4:05 PM

To: Ives, Wayne

Subject: Pawtuckaway Lake

Hi,

My name is Jim Rohrer. I live at 133 Deerfield Rd., Nottingham, NH 03290.

I am not in favor of the proposed plan to lower the water level in Pawtuckaway Lake. I do not live on the lake.

I use the boat ramp at Fundy Cove and it is already too shallow during the drier summer months.

Propellers cost a lot of money and I don't think it is fair to subject the public to increased hazards caused by shallow water levels.

Please consider other options and leave Pawtuckaway as is.

Thank You,

Jim Rohrer

603-734-2389

There are 3 main issues with the plan:

1. There is no limit on how much water can be drawn from Pawtuckaway Lake.
 2. There is no benchmark on when Pawtuckaway Lake is too low to draw water from it.
 3. There is no reason in the report to change the winter drawn down levels, and the reports assumption that lakefront property owners do not object to changing the winter draw down is incorrect.
-
1. I attended the meeting in Epping. It was brought up in that meeting that using the numbers in the report, more than 1 foot of water could be drawn at any one time. The 1 foot number wasn't disputed by the DES but it was suggested that it would not happen. If that's the case, then why isn't a maximum water draw explicitly stated along with the method that will be used to assure the maximum water draw isn't exceeded?
 2. Pawtuckaway Lake loses about 8 inches of water by evaporation during a normal summer season. Why is that significant? It means that the rivers and streams supplying the lake are not able to maintain (never mind replenish) the lake during a normal summer season. More significantly, the lake will not likely be able to recover any of the water that is released during a summer containing a cataclysmic event.
In addition, Pawtuckaway Lake has a history of cyanobacteria blooms, the most recent in 2010. Water temperature plays a role in cyanobacteria blooms. The lower the lake level, the warmer the lake will become and the more likely a cyanobacteria bloom will occur. Lowering the lake even a few inches will raise its temperature and very possibly cause and/or aggravate a cyanobacterial bloom. The DES website recommends people not wade, swim, or drink the water if a cyanobacterial bloom is present, which clearly affects all users and property owners abutting the lake.
If a cataclysmic event is threatening the Lamprey River, it is most likely affecting Pawtuckaway Lake as well. There needs to be a determination made about when the water level in Pawtuckaway Lake is too low to allow draw downs to prevent a cataclysmic Lamprey River event.
 3. The survey done with property owners in 2000 is invalid. More than half of the property owners back then failed to respond to the survey. According to the MLS realty website, approximately one quarter of the Pawtuckaway lakefront properties have been sold since 2000. Your assumption that current lakefront owners do not object to changing the winter draw down is simply incorrect. I know I and my neighbors are very much against changing the drawdown, and I have owned lakefront property since 2004.

It's clear from attending the meeting and from reading the comments that little thought has gone into how Pawtuckaway Lake and the surrounding area will be affected by the proposed lake draw downs. That itself should raise a red flag that more work needs to be done before any water management plan is implemented.

I respectfully request, as a New Hampshire tax payer and Pawtuckaway lakefront property owner, that this plan not be implemented. Pawtuckaway Lake is a state of New Hampshire resource to be enjoyed and protected, not a reservoir of water that the DES has the right to use for any reason.

Respectfully submitted, James Rosborough

Comments Received From:

Mr. Thad Russell
ESC/HBGB MP-RTIP
Radar Development & Integration
781-377-6796 DSN 478 FAX 1172
Nova Technology Solutions - ETASS
Thad.Russell.ctr@hanscom.af.mil
Thaddeus.Russell@hanscom.af.smil.mil

Source: email dated May 13, 2011

I am a home owner on Pawtuckaway Lake so I am definitely affected by the NHDES-R WD-11-9 plan.

Comment RUS-1:

I do not agree with not having a 7 foot drawdown in the winter. Per page 61 of your report it is rare that flow rates will be needed in the winter months so why do it.

Response:

Comment RUS-2:

The 7 foot drawdown accomplishes the following: Keeps the invasive weeds from growing as it kills them each year, Allows for shore and dock maintenance, Keeps the ice from destroying the docks on the east and south shore due to ice pile up from the north wind, If you don't use 7 foot many of the weeds would be covered in water and stay alive and active, It allows for water turn over in the spring, It provides room for runoff in the wet/high snow springs. A few years ago the water was 3 feet over the summer level in the spring and resulted in lots of property damage. It ruined my dock but some folks lost their houses!

Response:

Comment RUS-3:

Changing from 7 feet to 5 feet is drastic and not warranted by the data in the draft plan. I can't see that holding it just in case for a winter release is needed at all.

Response:

Comment RUS-4:

The water management plan has passed its legislative statute and was not approved or adopted by the 30 Sept 10 required date therefore should be null and void.

Response:

House Bill 63, an act extending the instream pilot program for one year (from September 1, 2010 to September 1, 2011) was passed by the House and Senate and then signed by the Governor (Chapter 0034) on May 9, 2011. The Final Lamprey River Water Management Plan will be submitted to the DES Commissioner prior to September 1, 2011 for his consideration and adoption.

Comment RUS-5:

There is a problem with loons in the spring/summer which you have not addressed. Loons use the same nests year after year. Both higher water and draw downs will cause them to abandon the nests or be vulnerable to predators. Loons are threatened species in Michigan and New Hampshire and endangered in Vermont so we must be careful.

Response:

Comment RUS-6:

Did you consider the effect on Bass and pan fish by spring draw downs. Their nests are in shallow water and we can't even fish for smallmouth from 15 May to 15 June so they can spawn. It seems you are considering the fish in the Lamprey but not the lake.

Response:

Comment RUS-7

If you draw down the lake too much in the summer many of the hundreds of rocks will be closer to the surface and be a danger to boating. I could not tell from the chart on page 28 or the report how many draw downs are expected or what depth would be included. This will also affect use of the state boat ramp and churn up plants in the now wake area where the loons live. It is only 3 feet deep up there in the summer now past twin islands to the Bay of Fundy area.

Response:

Comment RUS-8

There should be some kind of feedback from the residents not just the Campground which is essentially closed in the winter or the dam owners, who are the state and have other agendas.

Response:

Comment:

This lake is one of the gems of New Hampshire and not just a storage impoundment for water so we need to be careful. There should be rules for how many or how much is drawn down besides what the downstream rules in your plan say.

Response:

Comment:

I don't think the evidence in the plan supports keeping an extra two feet of water in the winter. 12. The lake owners were not polled in 2000 as the plan states that 55% agreed with the lesser drawdown. This has been discussed at our annual meeting with the state and the overwhelming majority (almost everyone attending) always want to keep 7 feet. If you change it to 5.5 feet many docks will be crushed by the ice.

From: Collins, Luke
To: rydeen@comcast.net
Cc: alarson@normandeau.com; Ives, Wayne; tom.ballestero@unh.edu; Couture, Steve
Subject: RE: Lamprey Designated River Water Management Plan
Date: Monday, May 16, 2011 3:14:34 PM

Dear Mr. Deen,

Thank you for your comments. They have been received.

Luke Collins

Luke Collins, Intern
Watershed Management Bureau

-----Original Message-----

From: rydeen@comcast.net [mailto:rydeen@comcast.net]
Sent: Thursday, May 12, 2011 8:36 PM
To: Ives, Wayne
Subject: Your plans for our lake

How often is "infrequently" (for water releases during critical dry periods)?

Damage to docks and other problems from a smaller fall draw down

Effect of winter releases

Danger to loon habitat and nesting areas

Health of lake wildlife

Water quality

Boating dangers and safety concerns in low level water

What about notice to property owners before any water release (only the dam "owners" are to be notified, in our case the State--Ha!)

What about a monitoring program that assesses the overall impact of releases beyond measuring how much the lake level has dropped

Shouldn't there be a mechanism for feedback from lake residents and users after these programs are implemented, **because nothing is actually known about what the impact on the Pawtuckaway ecosystem will be**

Comments on Lamprey River Water Management Plan Report

By Stephen Soreff, MD

I live on Lake Pawtuckaway

Sunday, June 12, 2011

First four thanks. 1. For a start a developing a comprehensive plan; 2. For Wayne Ives presentation at the PLIA 6-11-11, -very informative; 3. For extending the comment period and 4. For being open to comments.

My concern: As I understand it, once a Plan has been adopted, it would mean an automatic initiation of a series of steps for certain set-written levels of water conditions. This situation reminds me an analogy. In healthcare there was a living will whereby an individual would detail in that person's will certain conditions that would result in specific responses. For example, if you have irreversible head trauma or cancer, than you might say if you were on a respirator 'do not resuscitate. This proved unworkable since it was clear one could never cover all possible contingencies. Medical advances kept changing as well as your own health status since the will was drafted and signed. The future is nor will it be really possible to predict in all situations.

Hence, my concern with a Lamprey River Water Management Plan which calls for future initiation based on current known projections. I would like to see a human being control at the point of action. This would guard against changes in the world/area not anticipated in 2011.

Stephen Soreff, MD

32 Dolloff Dam Road



September 20, 2011

Northwood
Barrington
Deerfield
Candia
Raymond
Freemont
Epping
Brentwood
Exeter
Nottingham
Lee
Newfields
Durham
Newmarket

C. Wayne Ives
NH Department of Environmental Services
PO Box 95
29 Hazen Drive
Concord, NH 03302-0095

Dear Mr. Ives:

The Lamprey River Watershed Association is honored to have the Lamprey River be one of two rivers selected to study the management of flow in the river to prevent catastrophic situations occurring during times of low flow. We have reviewed the proposed Lamprey River Water Management Plan dated April 11, 2011 and are providing the following comments so that the final report will be more widely understood and accepted.

Pertaining To The Release Of This Proposed Plan And The Review Process

While the Lamprey River “designated” in only the towns of Lee and Durham at the time of the in-stream flow study, affected water users and the lakes to implement the water management plan are in other towns of the watershed. This plan should have been widely distributed within all of the Lamprey River watershed towns. In addition, although the RSA required only one public hearing, additional hearings and/or listening sessions, or other means of public outreach would have been valuable to the residents of all of the towns. For example, Nottingham selectmen thought it only pertained to downstream and just recently realized that this included levels on Pawtuckaway Lake, a valuable water resource to the town. Mendums Pond is one of the two lakes proposed to be used for augmenting flow yet the lake association and also the University of New Hampshire were not notified for comment on the plan.

Other general comments are that the entire watershed’s ecosystem does not appear to have been addressed as the management plan becomes implemented. What connection is there to the lake shore protection act? Was the effect on lakes and lake edges taken into consideration as the management plan was developed?

Was there an internal review within the Department of Environmental Services and the other state agencies outside the Department that have roles in natural resources?

Executive Summary

Please revise this to reach a lay audience and set the context for which this management plan is written. Those not familiar with the entire project may not know that this is being developed as a result of an RSA or that phase 1 has already been completed. The RSA should be referenced and quoted from such as the definition of protected instream flow in 483.4.16 "Protected instream flow" means a constant minimum stream flow level established to maintain water for present and future instream public uses. That definition, simplistic as it

43 North River Road • Lee, NH 03861 • (603)659-9363
www.lrwa-nh.org • volunteer@lrwa-nh.org

is in view of all the years this study has been in process, is critical.

Who is plan intended for? The Executive Summary should also spell out that this is a DES plan intended for the *state* to use as a management tool to protect the “designated” section of the river, assist with water quality standards, and to maintain the biological and physical integrity of the river.

An effective executive summary can make or break acceptance of a study. We recommend that you also draw from the plan's summary (page 58) and expand the executive summary. Include that this plan is subject to change after review and testing in situ.

A glossary with this term and all the other terms and abbreviations used in this report is an absolute necessity and should be included.

Introduction

Be consistent when referring to the three subparts of this plan by listing in order each time: Conservation Plans, Water Use Plans and Dam Management Plan.

In part A of the Introduction, do not depend upon readers to reference RSA 483; give them some specific language and expand the first paragraph on page 2.

Paragraph 5 (page 2) sounds like Public water supplies have been dismissed entirely and the two sentences appear to contradict; this is not your intention. It is important to be aware that concern over public water supplies and how they will be affected is primary in the mind of most readers. Expand this paragraph with more information from the body of the plan. (See page 4 where Public water Supply is last; consider moving up to come first.)

The final paragraph in part A (top of page 3) needs reorganization for clarity.

B Natural Flow Paradigm (page3): This is really quite a simple concept but the opening paragraph meanders! If you can make this section clearer, you will help the integrity of the science. Some will find Poff, et al ,easy to understand, and you might want to draw a little more from that rather than assuming that readers are familiar with the article and the concept of "natural flow regime" (*natural flow* makes sense; *regime* will muddy the water for most readers.) (For more experienced readers, you might want to include the Poff article in the appendix in its entirety if you can get permission, or at least give the www. location.)

Also with regard to the integrity of the science, the first mention of the 30-year stream flow record occurs on page 27. Something about this should go into the executive summary and introduction.

Please define *de minimis flow* the first time you mention it (as you do on page 30) and place this term in the yet to be developed glossary. Also, *7Q10* is not clearly defined (and redefined) and the reader will have to hunt to figure out that line, so get it up front and include with the explanation of the 90% issue. As was mentioned at the meeting, if you have a chart, define the abbreviations; even though everyone knows GRAF, it does not hurt to bow to the lay reader and define it in the footnotes of the chart more than once.

One possible error is on page 59: The sense of the sentence in the last paragraph would be: The state regulations do NOT clearly delineate what data set is used to define the 7Q10, not how and when the value is updated.

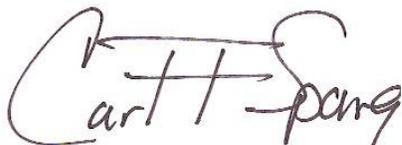
Misspelled words, typos and grammatical corrections were overlooked in order to comment on the more important substance issues. We recommend using a good editor before the final report is issued.

General Issues

What is the process for implementing the plan, conservation plans and initiating the release of pulses? While the document includes each affected water user's Conservation Plan and Dam Management Plans, either in the body of the report or as an appendix the steps involved by DES in order to release water to mitigate low flow should be widely known (who, what, when, where) in order to have confidence that the process is working. Postings to a DES website on the status of flow and actions taken would ease concerns during drought conditions.

We continue to be concerned that when low flow is occurring in the river and water conservation plans must be underway that the UNH/Durham system is allowed an additional 10 days before implementing a Stage 4 Alert. Just as the water levels are most dire, UNH/Durham is allowed to continue on as if there is not a serious problem. Each affected water user should be held to the same standard throughout the watershed. Further, there appears to be no difference in action between the UNH/Durham Stage 3 Alert and the Stage 4 Alert. Is something missing?

Thank you for your effort to be available and provide answers to our questions throughout this process. We understand that this is a pilot and has yet to be tested in the field. The Lamprey River Watershed Association is fully supportive of a proactive approach to maintaining the integrity of the river and we look forward to working with the Department of Environmental Services as this pilot goes forward to ensure that the plan is effective.

A handwritten signature in black ink that reads "Carl F. Spang". The signature is written in a cursive style with a large, looping 'C' at the beginning and a long, sweeping tail for the 'g'.

Carl F. Spang
President

From: [Collins, Luke](#)
Cc: alarson@normandeau.com; [Ives, Wayne](#); tom.ballestero@unh.edu; [Couture, Steve](#)
Subject: RE: Pawtuckaway Lake & Lamprey River Water Mgmt Report
Date: Monday, May 16, 2011 3:03:58 PM

Dear Mr. Stephens,

Thank you for your comments. They have been received.

Luke Collins

Luke Collins, Intern
Watershed Management Bureau

-----Original Message-----

From: Dennis Stephens [mailto:Dennis@stephensmarquis.com]
Sent: Sunday, May 15, 2011 3:24 PM
To: Ives, Wayne
Subject: Pawtuckaway Lake & Lamprey River Water Mgmt Report

Mr C. Wayne Ives
NH Dept. of Environmental Services

Dear Mr. Ives,

I am writing to express my concern in using Pawtuckaway Lake resources in the water management of the Lamprey River. I respect the need to manage the Lamprey River resources, but I feel the impact to other resources in the water shed area has not been fully considered. I would like to comment on a few things:

- The 7' draw down of Pawtuckaway Lake is essential to protect lake front property. Annual repairs from winter ice damage are standard practice, and a lower draw down would cause extensive destruction.
- Draw down of Pawtuckaway Lake during the summer concerns me even more. I would like to know the impact to the Pawtuckaway wildlife, water quality, property, and recreation. Pawtuckaway supports a large ecosystem, that is not always in the best condition. Water level is always a major concern in our constant management of the water quality, temperature, algae plumes, Loon habitat, boating danger (rocks), and other issues. Endangering one resource to help another may not seem as practical when looked at from other perspectives.
- It would seem a thorough study has been performed on the Lamprey River ecosystem, but not on the areas where proposed water management changes may have a detrimental impact. Please correct this before considering implementing components of the Lamprey water management plan.

I am a member of the Pawtuckaway Lake Improvement Association. The PLIA is active in all activities around the lake to preserve its natural resources. I urge you to keep the PLIA informed on activities that affect Pawtuckaway and to seek feedback from its members. The PLIA consists of some of the most experienced conservationists in the area, and are very knowledgeable on the Pawtuckaway ecosystem.

Respectfully,

Dennis Stephens, PE

36 Whites Grove Rd.
Nottingham, NH
603-759-3602 (cell)

-----Original Message-----

From: Ives, Wayne

Sent: Tuesday, May 17, 2011 2:31 PM

To: Collins, Luke

Subject: FW: Request for Comment Period Extension for Lamprey River Water Management Plan

C. Wayne Ives, P.G., Hydrogeologist

Instream Flow Specialist

<http://des.nh.gov/organization/divisions/water/wmb/rivers/instream/index.htm>

-----Original Message-----

From: therese.thompson1@comcast.net [mailto:therese.thompson1@comcast.net]

Sent: Tuesday, May 17, 2011 2:26 PM

To: Ives, Wayne

Subject: Re: Request for Comment Period Extension for Lamprey River Water Management Plan

Wayne,

The emails have been insane, I try to explain to them, this includes a release from Mendums Pond, it is very little water level change and will ONLY occur, if reallllllllly needed.

Please bring my attached letter of concerns to our May 20th meeting, I can not attend, and if you want to post these comments on your website too.

thanks again,

Therese Thompson

><{{"> =^..^=

May 17, 2011

Dear Wayne and Lamprey River WMPAAC,

I am sorry I cannot attend our May 20th meeting, I have to be at work for graduation.

I wanted to give you some of my comments on the *Water Mgmt Plan for the Lamprey River*:

At our July 7, 2010 meeting, pg. 3 Al Larsen stated "They draw it down 7 feet every year in the fall and there was a proposal to limit the draw-down to 3 feet. There were surveys done and the consensus was that most people wanted it left at 7 feet [Of the 141 surveys returned, 63 preferred the existing 7 ft drawdown; 78 preferred a drawdown of 6 ft or less (8 for 6ft, 45 for 5 ft, 24 for 0-4 ft or no preference).]" the lake front owners of Pawtuckaway Lake were surveyed in the year 2000 about the yearly drawdown and the Commissioner decided to leave the draw down at 7 feet for the winter. After this meeting I asked the officers of the Pawtuckaway Lake Improvement Association, if they were aware of this survey, and I received no response. Yet at the **public hearing** on May 11th, I believe, it was presented that lowering the lake less than 7 ft **was preferred** by this survey in 2000. (If you add up the returns of this survey, they do not add up to 141) ?

As stated on pg. 2 of the July 7, 2010 meeting minutes, I am pleased that **USA Springs** will have to provide a **conservation plan** during an extended drought period.

At our **Feb. 11, 2011** meeting the chart for **Change in Water Level** read

Overwintering Dec. 9-Feb 28 = **0.33 feet**

Salmon spawning Oct. 7- Dec. 8 = **0.09 feet**

At the **public hearing** meeting of May 11, 2011

Overwintering Dec. 9-Feb 28 = **1.53 feet** retained in storage

Salmon spawning Oct. 7- Dec. 8 = **1.53 feet** retained in storage

These amounts are not the same.

Pawtuckaway Lake is listed as having 900 acres in the **July 7, 2010 & Feb. 11, 2011** meeting presentations. In Table 2 Flow Releases of the **public hearing** presentation it states 783 acres (I pointed this out in our meeting minutes for Feb. 11, 2011 pg. 8). I was glad to see the correct acres listed at the public hearing.

As I pointed out in meeting minutes of July 7, 2010 pg 2, **my concern was of upstream the lake** ie: streams, ponds, etc., having a negative effect on these creatures in these wetlands with a proposed drawdown during the summer, during a drought.

My new concerns are:

Can the Dam Bureau actually release only ~ 2.5 inches and prevent the flow of more water from Pawtuckaway Lake when needed during the summer during an extended drought? (the proposed 2.5 inches includes Mendums Pond)

Because Doloff Dam and Drowns Dam on Pawtuckaway Lake do not directly flow into the Lamprey River, Drowns Dam flows into the North River and Doloff Dam flows into the Pawtuckaway River. During an extended drought, will this ~2.5 inches of **water released from the lake actually reach the Lamprey River** or will it be used by the wetlands and rivers prior to the Lamprey River? Because during a drought all wetlands will be low.

Was anyone from **Mendums Pond** at the public hearing?

Thank you.

Sincerely,

Therese Thompson, Nottingham and lake front owner on Pawtuckaway Lake

tathompson@mountida.edu

C. Wayne Ives
NH Department of Environmental Services
PO Box 95 - 29 Hazen Drive
Concord, NH 03302-0095
Email wayne.ives@des.nh.gov

Additional Comments, Therese Thompson, June 20, 2011

Lamprey River Water Mgmt Plan

I am a member of:

Lamprey River Water Management Planning Area Advisory Committee

Representing Lake Associations

and a member of

Southeast Watershed Alliance

Representing Nottingham <http://www.southeastwatershedalliance.org/members>

I live in Nottingham, my concerns are the following:

- 1.) Health of Pawtuckaway Lake
- 2.) Health of the Aquatic Life and Habitat of streams, ponds, & marshes that enter the lake (Instream flows = RSA 483)
- 3.) Less Winter Drawdown, how will this affect our native mussels and protection against invasive aquatic plants getting established

With the expansion of the designated Lamprey River to include the major tributaries and the Lamprey below Durham to Great Bay, signed by the Governor on June 7, 2011, More studies need to be done prior to adopting or implementing this Water Mgmt. Plan.

I own property on Pawtuckaway Lake, with the introduction of **alewives** (anadromous fish), into our lake every Spring by NH Marine Fish & Game and the increase in **toxic algal (cyanobacteria) blooms** during the Summer and with the proposed release of water during an extended drought could make these problems worse. As recent as this May 27, 2011, Pawtuckaway State Park beach was closed due to cyanobacteria.

Background information:

Alewives

<http://www.flyfishinginnh.com/vforum/showthread.php?t=3476>

On the Lamprey River, a fish ladder was constructed at Macallen Dam in Newmarket, currently, some of these fish are trapped at the fish ladder, and transported to Pawtuckaway Lake. Alewives nursery habitat upstream from Wiswall Dam is inaccessible to these fish due to the lack of a fish passage at Wiswall Dam.

Cheri Patterson, NH Coastal Fish & Game, presentation 2nd slide, quoted WWF: ***Fragmentation of river systems due to dams is the single greatest threat to the maintenance of ecosystem integrity.***

http://www.wildlife.state.nh.us/marine/marine_PDFs/Winnicut_R_diadromous_pres_1108.pdf

Dams

The number of dams in our state is very high, see the presentation from our June 13, 2005 meeting , slide # 24:

http://www.des.state.nh.us/organization/divisions/water/wmb/rivers/instream/lamprey/documents/20050613ipuocr_entities.pdf

Dams are being removed throughout the country, here are a few in NH:

Removal of Winnicut River Dam in Greenland 2009

<http://des.nh.gov/organization/divisions/water/wmb/coastal/restoration/projects/winnicut.htm>

Removal of Merrimack Village Dam 2008

<http://www.habitat.noaa.gov/media/videos.html>

Gonic Sawmill Dam & Removal of the Gonic Dam on the Cocheco River

<http://des.nh.gov/organization/divisions/water/wmb/coastal/restoration/projects/documents/gonic-dams-feasibility-rpt.pdf>

Swanzey, NH: Homestead Woolen Mills dam removal on the Ashuelot River 2008

http://www.fws.gov/r5crc/habitat/fish_passage.htm

Now, Newmarket is discussing the removal of the Macallen Dam

The Bunker Pond Dam in West Epping, was removed this month, I have already seen the effects of this removal, one day a pond in that area was dry, then after a rain, the pond gained water. Therefore, recalculating how much water may need to be removed from Pawtuckaway Lake during an extended May - Oct. drought, will have to be done.

-----Original Message-----

From: mountainpoetnh@aol.com [mailto:mountainpoetnh@aol.com]

Sent: Monday, June 13, 2011 12:39 AM

To: Ives, Wayne

Subject: RE Lamprey Water Management Plan

Thank you for the opportunity to comment on the Lamprey Water Management Plan and for extending the comment period so that other concerned persons will be able to post their comments.

As a resident of Pawtuckaway lake, I enjoy the many benefits - year round recreation opportunities ,wildlife observation, community service through weed watching and lake hosting, spiritual renewal (this really our "little bit of paradise") and a host of other things to numerous to mention. The health of the Lake is very important to me for these reasons. In addition, anything that affects the quality of the water or the ecosystems it supports has the potential of lowering property values on the lake.

I am concerned about the adoption of this plan ,especially in light of the fact that the impact on Pawtuckaway Lake has not been thouroughly studied.

Marguerite Tucker
32 Dolloff Dam Road
Nottingham, NH 03290

From: [Collins, Luke](#)
To: [Pamela S. Walker](#)
Cc: alarson@normandeau.com; [Ives, Wayne](#); tom.ballestero@unh.edu; [Couture, Steve](#)
Subject: RE: Pawtuckaway Lake
Date: Monday, May 16, 2011 1:32:09 PM
Attachments: [image001.gif](#)
[image002.gif](#)

Dear Ms. Walker,

Thank you for your comments. They have been received.

Luke Collins

Luke Collins, Intern
Watershed Management Bureau

-----Original Message-----

From: Pamela S. Walker [mailto:sledder@comcast.net]
Sent: Sunday, May 15, 2011 11:57 AM
To: Ives, Wayne
Subject: Pawtuckaway Lake

My husband and I have lived on this lake for 24 years and it was a camp prior to that owned by his Dad so we are very familiar with the issue of not drawing the lake down by 7 feet and not having enough water to put our boat in etc. We disagree with taking the water level down in lesser amounts as it does do damage to our docks in the winter and also does not allow maintenance in and around the water. We have the feeling that other smaller interest parties have a play in this and parties who do not care what our concerns are and none of us here on the lake have been asked how we feel about this project. We pay the HIGHEST taxes in Nottingham and the major reason for that is the lake. Now others get to play around with the lake and if the lake get dangerously low and we have to remove our watercraft which may happen if the people tracking these periodic draw down we will be the ones to "suffer". We understand your intent is NOT to cause us and animals in this area, such as loon nests any issue but this plan will cause more harm to us as well. We also understand the Lamprey gets low during the summer, but so does our lake.

Some areas of concern might be:

- How often is "infrequently" (for water releases during critical dry periods)?
- Damage to docks and other problems from a smaller fall draw down
- Effect of winter releases
- Danger to loon habitat and nesting areas
- Health of lake wildlife
- Water quality
- Boating dangers and safety concerns in low level water

What about notice to property owners before any water release
What about a monitoring program that assesses the overall
impact of releases beyond measuring how
much the lake level has dropped
Shouldn't there be a mechanism for feedback from lake residents and users after
these programs
are implemented, **because nothing is actually known the impact this will have on the
Pawtuckaway ecosystem**

Thank you for taking time to hear our concerns.

Sincerely,

Duane & Pam Walker