SECTION 1

SPECIFIC RESPONSE TO EEL WEIR 401 WATER QUALITY ASSESSMENT

SEBAGO LAKE 410 WATER QUALITY ASSESSMENT
RESPONSE FROM SEBAGO LAKE MARINA
AUGUST 14, 2011

BOLD TYPE IS RESPONSE TO THE NON-BOLD SECTION QUOTE OF THE EEL WEIR SEBAGO LAKE 401 WATER QUALITY ASSESSMENT

Sebago Lake is a natural glacial lake with a maximum depth of over 300 feet. Prior to the construction of any dams at the outlet of the lake, lake levels varied between a minimum of about 256 feet msl and a maximum of about 258 feet msl,[15], and outflows from the lake varied between a drought flow of about 40 cfs and a flood flow of about 29,000 cfs.[16]

For anyone who has been on all of Sebago Lake, the lake levels could never have been this low naturally. There are no flowage rights below 267.16 msl. This was the established natural high water mark for the lake, before Warren re-built the dam. In fact, in a pamphlet published for the legislature in the early 1900's, by the Inns, Lodges and paddle wheel boats of Sebago and Naples, they sought to set a reference low water mark for the lake (Maine historical society Portland). They made claims that the lake was taken by Warren, "lower than it had ever been before" and this was also supported by the Portland Water District who stated that the water in their pipes was the "lowest ever".

The tree stumps and well defined river channel above the dam to the basin clearly indicate that the dam was created down river from the natural outlet of the lake, and the water flowed back to the lake. When Warren took control of the dam, either by channeling or the canal, the riverbed was dug deeper allowing Warren to use storage for the full height of the dam and lower the lake "lower than it had ever been before". In fact the river not getting enough water to support the industrial revolution during low flow events, is why Warren needed control of the lake. Lowering the lake below its natural low water mark solved its water problems but allowed the natural shallow aquatic beds and areas of the lake to be dewatered on an annual basis.

The fact that the lake aquatic beds in all areas of the lake become dewatered at 263.5 msl is a solid indicator that the natural lake level did not reach or rarely reached this level. All of the wetland areas of the lake have a definitive elevated shoreline even in the protected areas behind Harmon's Beach which suggest that these areas were

once shallow lake habitat, not flowed areas created by the lake going from 256 msl to 267 msl.

40 cfs equates to 2,400 cubic feet per minute. The minimum flow in the Warren Flow Plan in the summer is 24,500 cfm or over ten times the natural min. flow. How can Warren or the DEP suggest that this plan more closely mimics natural conditions of the lake or river?

Since the lake level management plan was approved in April of 1997, flow releases from the lake have varied between a high of 3,500 cfs (210,000 cfm) and a low of 133 cfs (8,000 cfm).30

The new Flow Plan at any time of the year is over three times more than 8000 cfm. Were there dead or dying fish in the river at the 8000 cfm? Were there hundreds of acres of dewatered aquatic habitat? Was there the loss of possibly millions in recreational dollars and activity? Because when a drought hits Sebago Lake there is. Where is the environmental impact statement or studies to allow the lake to go to these minimum (24,500 cfm) flows and 262 msl at any time during the year? Just because Dana Murch says that there will be no significant impacts? Because Dana Murch has cherry picked and displayed his own "evidence of record". This is the third largest lake in New England, not a ten-acre pond. The lake deserves better. This increased minimum flow ensures that the lake will be lower under the current proposal. And in fact the lake does not even have to go to minimum flow until the lake is already so low that all shallow water habitat is gone, and all boating and navigation is stopped! The flow plan is a huge change from the current LLMP and it is appalling that Sappi and DEP can rubberstamp it without further study or public input.

□ Between November 16 and the following March 31, flows will be maintained in a range from 500 cfs (30,000 cfm) to 1,167 cfs (70,000 cfm), except that flows will be increased if the lake level is at or above 266.65 feet msl (spillway crest elevation), and flows will be reduced if the lake level is at or below 262.0 feet (4.65 feet below spillway crest elevation).

The current rate of flow is 16,800 and at this rate we are dropping at almost a foot in a month. During a prolonged drought of little fall rain and snow pack the lake at 30,000 will drop even faster.

If the lake is near 262 msl and drops at an increased rate of minimum flow, it will, as Warren has stated in the 1997 EA, not be able to make full pond. In fact the lake in 1995 got only to 264.5 msl. With the tripled minimum flows this will ensure that the lake will go to 262 msl in the middle of the open water season.

Whenever lake levels are at or below 262.0 feet msl (4.65 feet below spillway crest elevation), flows will be reduced to 408 cfs (24,500 cfm) and will be maintained at this reduced rate as needed until the lake level rises above 262.0 feet msl;33

When the lake is in a drought situation the lake will not rise at 24,500 cfm. This statement misleads the reader to believe that it will. The lake is dropping now at 16,800 cfm. This is not a reduced rate as Mr. Murch implies. It is an increased rate. Prior to 1986 the lake went to 10,000 cfm for much of the summer of 1985 and the lake continued to drop. It implies that there is drought protection but the action does just the opposite, it lowers the lake at an increased rate. I believe that while Mr. Murch knows this, as well as Warren, that they do not believe that decision makers will see that it is not true. It suggests that they have no interests in protecting the lake from drought.

□ Warren may temporarily adjust flows to rates above or below those specified in the plan in the event of equipment failure, approved maintenance activities or construction of fish passage facilities at any of Warren's downstream hydro facilities, power supply emergencies, downstream flooding, public safety considerations, existing or predicted extreme meteorological events (including abnormal storm events and drought), or by order of local, State or Federal authorities.

Where is the missing pea from this shell game? It is the navigational interest of the lake. WHY? The Flow plan will significantly impact boating and recreation on Sebago lake. It is easier to ignore that boating, and fishing from boats, is the recreational economic engine of the lake, than to come up with a plan that protects it. Despite its greatest contribution to the economy it gets the least attention from the 401.

Class GPA, Class A, Class B, and Class C waters must be of such quality that they are suitable for the designated uses of drinking water after disinfection; recreation in and on the water; fishing; industrial process and cooling water supply; hydroelectric power generation; navigation; and as habitat for fish and other aquatic life.

Class GPA is not being met at levels below 263.5 msl. "recreation in and on the water" "navigation" "and as habitat for fish and other

aquatic life" are not only issues of quality. Where there is no water there is no quality, no recreation on, or navigation, no habitat. The intent is not just to provide quality but ensure that the quantity is sufficient to support fishing, recreation and aquatic life. This is why Warren and the State want to increase the quantity (minimum flow and low lake level) of water out of Sebago to better the water behind Warren dams that retain and slow the water, increasing the temperature and decreasing the DO. Thus GPA and Class B standards are not met by water quantity under the flow plan. Decreasing and negatively impacting the entire lake ecosystem of a thirty thousand acre lake is not required to allow the river to be class B. Release of water thru each problem impoundment on the river to mitigate low DO is the appropriate action to truly satisfy the GPA standard for the lake. The true reason for such high minimum flows out of the lake is to maximize generation of a small amount of power.

The river does not currently support self-sustaining populations of coldwater fish.

Sebago Lake does. All species of fish use shallow areas of the lake at some point during its life's stages. Because of the impoundments in the river it is not quality lake habitat or quality river habitat. The fish listed as self-sustaining do not require class B water. Because Sebago drops two feet at August and four by November it's wetlands and aquatic habitat are not the quality it should be. That can change now. Take less out of the lake and dump more out of the dams in the river that have low DO. The only important fishery is the bypass, and it is a put and take "fantasy" fisheries. Instead of fly fishing only (FFO), it should be pellet fishing only (PPO) as these fish have only a short residency time after leaving the hatchery. The bypass does not represent a true Maine fisheries. Sebago Lake has for over one hundred years.

Under the Draft Plan, management goals include: providing migratory routes and habitat for catadromous American eel.

When electro fishing in the Crooked River to check the numbers of salmon smolt and parr in the river they always list eels as present. Eels are predators. When smolt and parr numbers are low and because of dependence on the native fish to sustain the fisheries, causing more eels to come into the lake and crooked river does not make sense.

By Order dated April 30, 2003,[37] the DEP issued water quality certification, with conditions, for the continued operation of Warren's Presumpscot River Hydro Projects (Saccarappa, Mallison Falls, Little Falls, Gambo, and Dundee) under new FERC licenses.

Did they require that the areas behind the dams have 7.0 DO at this time. If not, what have been the significant negative impacts from 2003 until now? Have there been any reports of negative significant impacts. If these areas have been acceptable in the past at as low as 8000 cfm then using the same logic that it is ok to continue to lower Sebago Lake as it has been in the past should mean it is ok to let the DO behind the dams be ok.

There must be both sufficient quality and quantity of habitat for aquatic organisms to meet aquatic life standards.

This must also be true for the miles of the Songo River and Crooked River that are controlled by the lake level. This must also be true for our shallow water aquatic habitat. Mr. Murch thinks that the last 100+ years of water overuse out of the lake and its negative affects is acceptable, but not for the small areas behind the dams in the river at historical lower minimum flows. There were no GPA standards when the lake control was given to Warren in 1878. Under this 401 they must meet the new standards and that requires the DEP to make sure that the water quantity and quality is sufficient to ensure recreation and BMP's for the fish and wildlife of Sebago that are consistent with other large Maine Lakes.

From the December 3, 1993 401 water quality assessment for Moosehead Lake

"Since 1972, the average ice-out date for the impoundment has been May 10. The mean water level at that time has been 6 inches below full pond, at elevation 1028.5 ft. with the lake typically reaching full pond by May 21. Lake water levels begin dropping slowly after July 2. The annual average impoundment drawdown has been 2.9 feet, while the average summer drawdown has been less than or equal to a foot.

"Water level increases of 6 inches or more commonly flood nests, while decreases of greater than 1 foot may strand loons from their nests and increases opportunity for nest predation."

"Brood rearing habitat may also be adversely affected by fluctuations." "Weight loss, lower reproductive rates, and possible death of beavers due to exposure may result from excessive drawdowns. Muskrats are also sensitive to drawdowns which restrict access to marsh food resources."

"Otter den sites along the lakeshore and inlet streams become vulnerable to predation if exposed during lake drawdowns."

"Delayed filling of the impoundment during a dry year creates the risk of not reaching full pond during the summer, thus adversely affecting existing wetlands and creating unstable water levels; and unstable or decreasing water levels would potentially harm nesting waterfowl and other wildlife, as well negatively impacting recreational use of the lake. As the current lake level management regime was shown to benefit impoundment wetlands, the applicant proposes no additional wetlands enhancement measures."

Sebago Lake has the same fish and wildlife that Moosehead Lake does. Winnipasaukee does to, and it only drops a foot all summer. 2.9 feet on average all year!

How can Mr. Murch suggest that the New Flow Plan for Sebago Lake is a better plan if it allows five feet below legal limit in the summer? This does not even pass the giggle test. The 401 as written by Mr. Murch, is an insult to the lake and environmental community of the State.

Comments, letter to FERC Maine IF&W dated July 28, 2003 "Furthermore, for reasons unrelated to the above study request the MDIFW recently sampled considerable littoral habitat using an electro fishing boat. Areas sampled included the Songo River, Muddy River, mouth of the Song River, and Kettle Cove. Under the water levels that existed at the time of sampling the seasonal habitat for warm water species of fish was considered very good to excellent, yet low numbers of most species were observed. A lack of suitable year-round habitat, resulting from winter drawdown is likely responsible for lower than expected populations of warm water fish species.

Available information on record, as well as recent electrofishing surveys indicates warmwater fisheries have been negatively impacted by the current lake water operations and the need for mitigation should be given careful consideration."

It is clear that Dana Murch gave no consideration to this "evidence in the record". I believe that IF&W was mislead to believe that Warren is to manage to the "actual" level portrayed on the Flow Plan graph. The actual level is the median of the actual levels of the last few years. Warren plans to manage to the median flow which for most times of the year is one foot lower than the current plan and compared to Moosehead 401 a Sebago Lake Disaster.

This non-attainment of dissolved oxygen standards is the result of (1) the existence of multiple impoundments in close proximity to one another, (2) the lack of natural reaeration below the existing dams on the river, (3) the overnight respiration of bottom attached algae, and (4) the impact of non-point sources of pollution (e.g., agricultural runoff and sedimentation from land use activities).

The water out of the lake exceeds the quality of water needed below the dam. It is "polluted" by the impoundments on the river. The dams on the river are the problem not Sebago Lake. Increasing the minimum flow and increasing the negative impacts to our beavers, muskrats, loons, fish, and wildlife by wild fluctuations and excessive (below one foot summer draw downs) is not a legal 401. A legal 401 would force Warren to run more over the site specific dams to mitigate those site specific problems.

In addition, the DEP established a flow cap and corresponding reductions in pollutant loading from the Westbrook mill under emergency low lake level conditions.60

Why was this eliminated from the New Flow Plan. It is "evidence in the record" that clearly indicates that the low lake levels have been an issue with respect to navigation and ecology of the lake. By the DEP.

Implementation of Spillage Requirements.

In order to meet Class B standards in the Presumpscot River above Westbrook, the DEP required in its April 30, 2003 water quality certification for the Presumpscot River Hydro Projects that Warren spill specified amounts of water, or take other equivalent measures, at the Dundee and Gambo Dams.61 The DEP also required that Warren conduct a study to determine the effectiveness of the measures taken in meeting Class B dissolved oxygen standards.62

In response to the requirements of the April 30, 2003 water quality certification, Warren elected to institute the spillage of 50 cfs at the Dundee Dam and 100 cfs at the Gambo Dam.[63]

I cannot find where the spilling of water was quantified to show its ability to mitigate the DO behind the impoundments.
The only solution was to generate more power and waste more water out of Sebago Lake. Once the water is taken from Sebago it is gone. During the summer months a 1975 USGS study said that with the current dam, leakage and evaporation was more than comes into the lake during an average water year for July, August, and September. Spilling water from the dams on the river can be filled again from Sebago. It is much easier to fill the small dam again than a 30,000 acre lake. Common sense is not what has created the Flow Plan or the 401 as written. If Warren and DEP know how much flow needs to be increased at the problem dams then they should have told us and it should have been in the 401. It is not. The 401 hides the "evidence in record" to allow Warren to continue to use Sebago as a "toilet tank".

THIS LAKE DESERVES BETTER TREATMENT. IT HAS GIVEN ENOUGH TO WARREN FOR A HUNDRED YEARS. NOW THEY WANT MORE, WITH INCREASED MINIMUM FLOWS AND LAKE LEVELS NOT SEEN SINCE 1965, BEFORE THEY EVEN HAVE TO GO TO MINIMUM FLOW. AND DANA MURCH HAS AGREED.

i. Discussion.
With respect to resident fish species, and especially landlocked salmon, the evidence in the record indicates that seasonal lake level fluctuations between full pond and elevation 261 feet msl (current 2 in 9 year minimum lake level target elevation) do not have any significant adverse impact on existing resident fish populations.

United States Department of Interior
Fish and Wildlife Service
Letter dated November 25, 2002

"The applicant is proposing an annual fluctuation of 4.15 to 6.15 feet in accord with the LLMP. The Sebago Lake Assessment study was conducted to assess the effects of lake level fluctuations on fish and wildlife resources using the Sebago Lake shoreline. Results indicate that water level fluctuations impact those species/life stages using the

shallow (0to 6 feet of depth littoral zone). Effects on individual fish species/life stages may be direct (physical action occurring to individual fish, such as stranding) or indirect (disturbance or limitation of preferred habitat, and reduction of available prey species, both invertebrate and fish). Spawning (egg) and fry stages are the most vulnerable to direct affects, due to limited mobility and their requirement for cover by aquatic vegetation."
"Lowered water levels in the fall can dewater aquatic beds and render them unsuitable as cover and foraging areas for wildlife. Sustained low water levels through the winter may make aquatic beds unsuitable for wildlife that overwinter in mud, or under the cover of water and ice. Continued lowering of levels can kill hibernating wildlife exposed in the drawdown zone. Forested wetlands are impacted when lake level fluctuation dewater the soils and allow the frost line to penetrate deeper into the ground, thereby diminishing their value to hibernating amphibians and reptiles."

"Lower water levels in the fall and winter also affect the distribution and species composition of vegetated wetlands, especially aquatic beds and emergent wetlands, by exposing the plants to freezing and desiccation. Plant species that are intolerant to winter exposure often are absent or severely restricted."

The Service recommends that the Commission consider the impacts of lake level manipulation on the flora and fauna that inhabit the drawdown zone. We note that current operations will continue to impact fish and wildlife resources that utilize the littoral zone. We recommend that any license for the project contain terms and conditions that will eliminate or minimize these impacts. Such measures should include limits on the degree and the seasonal occurrence of drawdowns."

Once again Mr. Murch ignores the "evidence in the record" as he calls it. Did not the above sound like the Moosehead 401. Did not the above sound like the Maine IF&W electro fishing. I could also quote the copy of the report by Maine biologist that suggest the lake not go below 264 msl to minimize impacts to Sebago wetlands and shallow aquatic areas. Mr. Murch suggests that the two men in Washington D.C. doing a paper analysis know more than Maine Fish and Wildlife biologist and US Fish and Wildlife Biologist and Moosehead Fish and Wildlife biologist and Winnepasaukee fish and wildlife biologist. Why?

To lower the lake and expose lake bottom at the State Beaches. Not because he cares about the other 100 miles of the shoreline or its fish or wildlife, or the environment he/ the state, is legally held to protect. And Warren will support him all the way!

"Equal consideration of recreational values and needs is a specific requirment of the FPA. We recommend that the Commission require the licensee to play a more active role in assuring that the project purposes related to recreation are met through development of a final recreation plan."

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"Interior recommends that the lake not be fluctuated more that 2 feet (to 264.65 feet) from April to December 15 and not more than 3 feet (to 263.65 feet) from December 16 through March 31. "

Why can't Sebago Lake. The Second largest and Second most important lake in Maine. The third largest in New England and third most important lake in New England. Be managed the same as the two other large and important lakes in Maine and New England. The Maine DEP, the STATE of Maine, THE PEOPLE Of Maine and New England, must decide on what is the priority. A healthy lake ecology and economy, or a few thousand dollars of lost generated electricity and a little more water released from a hundred acre impoundment, instead of millions of gallons from thirty thousand acre Sebago Lake?

Someone would have to be ignorant, arrogant, or incompetent to impact the whole of Sebago lake for such small perceived benefits of the river. The river has always been the "tail that wagged the dog". The "evidence in the record" says that the lake and its tens of millions dollar economy, and thousands of acre ecology are more important than the loss of a few thousand dollars of electricity at lower minimum flows or released flows behind DO lowering impoundments to mitigate the affects on the river. The lake has already given more than it should.

STATE OF MAINE, STOP IT NOW!

Analysis of the assessment results indicates that there are about 3,200 acres of lake bottom in the zone between elevation 266.65 feet msl (spillway crest elevation) and elevation 261.0 feet msl (current 2 in 9 year minimum lake level

target elevation), and that the effects of lake level fluctuations are limited to those fish species/life stages that use shallow, vegetated littoral zone habitat within this zone. For four of the five representative fish species, spawning occurs in the spring during the period of rising and/or maximum water levels, and thus will not be affected by changes in water levels. For the fifth representative species, lake trout, spawning occurs during October when lake levels are generally falling, and thus may be adversely affected.
However, DIFW's fisheries management objectives include reducing the lake trout population, which is in competition with the lake's landlocked salmon population. Other life stages of the representative fish species are more mobile and use both shallow and deep water habitats, and as a result are not significantly affected by seasonal changes in lake levels.

This is in direct opposition when compared to the "evidence in the record" see page 6 above.

John Boland of IF&W wrote on letter January 18, 1995. "Turtle Cove is a very popular fishing area on Sebago Lake during both summer and winter seasons. Recent data indicates that winter water levels below 262 msl seriously affect water quality at Turtle Cove, probably leading to winter kill situations. Our data shows that the water quality in Turtle Cove was exceptionally poor during the winters of 1987 and 1993. As a result the fishery there has suffered. Your data also shows lower lake levels (below 262 msl) during those years. Turtle Cove becomes sealed off from the main lake at approximately 262 msl and oxygen levels in the cove deteriorate rapidly. I would recommend a wintertime minimum lake level of 263 msl until March and the thoroughfare is beginning to open up at that time."

How can Mr. Murch be so concerned with a ½ point loss of DO in small areas behind the dams on the river, from 7.0 to 6.5 for less than two weeks, and not even mention or consider Turtle Cove? Is this 401 really of the quality that NEPA demands. Warren is applying for a NEW LICENSE. They must meet the NEW STANDARDS. Mr. Murch justifys continued environmental harm to our fish, wildlife, wetlands, and economy, by comparing degraded wetlands and management results we have, to degraded wetlands and management that will continue, and because there is not "significant" change to these areas or project operations (even though the paper mill is gone), it is OK for Sebago Lake. Dana Paul Murch consistently ignores actual field observations and fact, in favor of a Washington D.C. 42 page cover to cover paper assessment on the impacts of dewatering 3200 acres of the fifth purest water supply in the world, the third largest, fresh water lake

ecosystem in New England. Were Sappi applying for a permit for a deck that paper analysis would not satisfy most DEP requirements. Clearly Dana Murch and the 42 page report authors did not review the "Evidence in the record". It should be noted that the current state supported Flow Plan does not require Warren to go to minimum flow until the lake is at 262 msl. During the winter and dry summers the lake will continue to drop, especially at the NEW INCREASED MINIMUM FLOWS.

However, DIFW reports that significant smelt spawning is now occurring along the lakeshore and that less spawning is occurring in tributaries.

I have not in 26 years seen any shoreline smelt spawning survey or study. It could be that the Wardens during spawning time have monitored the shoreline spawning. Chris Burnell who was instrumental in the Sebago Lake Anglers Association smelt stocking program observed millions and millions of dead, dewatered smelt eggs on the shoreline at Batchelders and Nason's brooks. These eggs were dewatered when the lake receded rapidly by almost a foot during the 14 day hatching period. There are 105 miles of Sebago Lake shore. Although smelts do not spawn on the entire shoreline, it is safe to say that the loss of smelt eggs of the entire lake was "Significant". This is why the Moosehead 401 and USF&W are so against rapid or severe drawdowns, at anytime during the year.

i. Discussion.
With respect to resident fish species, and especially landlocked salmon, the evidence in the record indicates that seasonal lake level fluctuations between full pond and elevation 261 feet msl (current 2 in 9 year minimum lake level target elevation) do not have any significant adverse impact on existing resident fish populations.

NOT TRUE

However, the shoreline of the lake is still in the process of coming into equilibrium with the higher water levels created by the construction of the outlet dam to its current elevation.

Once again Mr. Murch wants the reader to put more emphasis on conclusions made from his desk, instead of the shores of Sebago Lake. One only has to come to the lake and look at all areas of the lake to know that its "large beaches" were exposed lake bottom by Warren lowering the lake below its natural levels and fluctuations.

Erosion at the toe of a slope erodes the entire slope. Erosion at the top of the slope erodes the top of the slope and deposits its material to the bottom and creates protective berms that dampen storm wave energy. Warrens unregulated use of water for the last 100+ years has aggravated erosion of the lake not lessened it.

To date, there is no clear evidence that past lake level management practices have contributed to the growth or spread of variable milfoil in Sebago Lake.

In 1985, 26 years ago, two men were wading in the lily pads and weeds of the North West river across from the Marina. After being there for over an hour, I went out in the canoe to ask what they were doing. They were from the University of Vermont and were plotting the spread of Eurasion Milfoil in New England. They explained that it was not here but that we did have variable leaf milfoil. They also said it was likely to have been here since the fifties.
Long Lake, Brandy Pond and upper Songo above the locks are, and always have been, almost free of milfoil, while the lower river has always been full. Consider that with close to an average of 8,000 boat trips a year and the Songo River Queen paddle wheel boat making trips back and forth thru the locks, one would think that in the last fifty years Long Lake and Brandy Pond and the Upper Songo would also be full of milfoil. THEY ARE NOT.
With the same longitude, latitude, sun, water, and soils, what is the difference? LONG LAKE AND BRANDY POND ONLY DROP 8 INCHES DURING THE SUMMER! SEBAGO AND THE LOWER SONGO DROPS TWO FEET BY AUGUST 1 FROM LEGAL LIMIT AND FOUR FEET BY NOV. 1. After observing the small amount of milfoil in the river for a quarter of a century I can tell you that during the low water of 2001 and 2002 the milfoil in the marina was the worst EVER. I had John McPhederon come to the marina to see the density of it. I had costumers who had been here for over thirty years ask to have their boats moved. In my mind and from, again, actual observations for long periods of time, the "evidence" suggests that if Sebago Lake were managed as Long Lake, Brandy Pond, Moosehead Lake, and Winnipasaukee, we would greatly lessen the mifoil.

Therefore, the need for changes in the approved lake level management plan may have to be evaluated in the future if the DEP determines that the water quality of the lake is declining.

One manager at the Portland Water District told me that the "solution to pollution was dilution". Mr. Murch applies this principal to the river but not the lake. Why? It is impossible to not believe that billions of gallons of water dumped out of the lake does not have an affect on that lake.

c. Discussion.

There must be both sufficient quality and quantity of habitat for aquatic organisms to meet aquatic life standards. The Department has found that, generally, water levels providing wetted conditions for 3/4ths of the littoral zone of a lake or pond, as measured from full pond conditions, are sufficient to meet aquatic life and habitat standards. The Department defines the littoral zone as twice the average summer water clarity (i.e., secchi disk transparency) reading, or the depth at which 1% of incident light remains. Based on an average secchi disk transparency of 9-10 meters (29.5-32.8 feet), the littoral zone of Sebago Lake extends to a depth of approximately 60 feet. The maximum historic drawdown of the lake (9.4 feet below spillway crest) will maintain significantly more than 75% of the littoral zone habitat of the lake.

Letter February 13, 1995, Dana Paul Murch to S.D. Warren.

"In the DEP's 1992 Report on Sebago Lake Water Levels, we recommend that Warren, in conjunction with the Department of Inland Fisheries & Wildlife and local landowners, investigate the feasibility of installing water control structures in selected wetlands. In making this recommendation, we noted that several wetlands are affected by declining water levels during the summer and fall months, and that installation of water control structures could serve to limit dewatering of wetland areas during normal lake drawdowns and could thereby reduce impacts on fish and wildlife resources that use these wetlands."

Does anyone believe that Sebago Lake can be lowered 15 feet without impacts to the aquatic resources of the lake? For a 105 mile shoreline that's a lot of clams. The lake dewaters 3000 plus acres at 261 msl and kills the fish in Turtle Cove. Just a little impact. Not significant. Is it? Mr. Murch implies that what is good for a ten acre great pond is acceptable and high order enough science to allow Warren to institute a Flow Plan that is the opposite of BEST MANAGEMENT PRACTICES FOR MAINE OR NEW ENGLAND LAKES.

This appears to be a calculated misleading of State and FERC decision makers that should require accountability by the Department, in light of known "evidence in the record".

A 1998 wetland inventory survey conducted by the applicant delineated 540 acres of terrestrial habitat wetlands and 377 acres of aquatic habitat wetlands in and around the lake. Approximately 730 acres of these wetlands are located in the drawdown zone between 266.65 feet msl (spillway crest elevation) and 261.0 feet msl (periodic low water target level under current lake level management plan).

This only includes areas 250 feet from the lake. This "survey" left out Sticky River and Muddy River and the Songo River wetlands some of the largest on the lake. You can easily double the acerage sited in the survey (which again was a paper analysis)

d. Discussion. The existing wetlands in and around Sebago Lake appear to be stable and are largely the product of past lake level management practices.

The wetlands are already of lower quality because of use of water out of the lake to make paper, without regard for any coming in, for 100+ years.

To the extent that these management practices generally continue in the future, and tend to mimic natural fluctuations in water levels during the growing season, there should be no significant impact on these wetlands.

We know that to not be true. In the opening of the 401 Mr. Murch states that in a natural state the lake level only varied two feet. The Flow Plan can lower the lake five feet without going to minimum flow. The "natural" minimum flow in the river was 2400cfm and Mr. Murch wants us to believe that 24,500cfm is Natural Management of the lake and river. What do we believe?

b. Beach Profiling, 1991-1993—MGS.

This should be lake bottom profiling. There are no beaches at Tassle Top or the Day Use Area of Sebago Lake State Park at full pond. The Day Use Area gets 80,000 user days in about three months. This foot traffic and use of Worst Management Practices of unrestricted access to the beach over the tree roots and small vegetation, as well as putting the picnic tables and fire grates at the vegetative shoreline, have caused severe and long term erosion at the State Park.

It continues today at the State Park and Tassle Top. To mitigate this problem by lowering the lake further to expose lake bottom as beach only passes the problem on to future managers who will also want to lower the lake. Institute best management practices for shorefront property at the State Parks to stop the recession of the vegetated shoreline.

d. Discussion.

High lake levels during the open-water recreation season, especially during the summer months, can adversely affect recreational use of the lake by putting beaches under water.

No beaches are put under water. The Legal Limit of the lake has not changed for over 100 years. Beaches are not being put under water, lake bottom is being exposed to mimic beaches. In fact casual review of the beach profiles shows more erosion at the low water levels of the lake than at the upper levels. Although easily quantifiable, the State has never done so. It would not favor their lake levels to expose lake bottom scheme. The new Flow Plan does.

Conversely, low lake levels during the open-water recreation season can adversely affect recreational use of the lake by inhibiting boat access and by increasing navigational hazards around the lake. The evidence in the record indicates that water levels between 266.65 feet msl and 262 feet msl during the open water season do not result in any significant adverse impact on existing recreational uses of the lake.

One has to go back to 1965 to find a year where the lake was that low during the summer months. In fact there are only 16 years where the lake never exceeded 264.5 msl. It would be simple for the state to measure the water depth at the Raymond beach ramp and the State Park ramp and the Standish ramp. But they have not. I have measured the mouth of the North West River and the mouth of the Songo River entrances. They are both at 259.5 msl. As I understand it the State is not supposed to Mark channels that do not have four feet of water. That means that at 263.5 msl, the entrance to the Songo River is deemed un-navigable. In fact, FERC documents and State documents mention 263.5 msl as a critical, do not go below summer water level. It is also the elevation that our wetlands become dewatered.

In fact the DEP (Dana Murch) has consulted with Sappi in several years to send letters to Marinas and put adds in papers telling boaters to get out of the lake early because of low water (below 263.5 msl).

Lack of access for fuel and service, affects the entire boating and fishing community.
Not everyone loses access at low lake levels but drops of two or more feet to get into a boat from a dock can be dangerous and the elderly will not use the boat. When a single customer can spend $3000 in an already short season, made even shorter by low water during the summer and fall, this can lead to more golfers and fewer boaters and fisherman. The property tax in Sebago is $3,750 per foot for the first fifty feet and $2,750 for the rest of frontage. The cost to enjoy fishing and boating on Sebago is expensive, but worth it. The opportunity to keep the season as long as possible, protect the fish, wildlife, and wetlands is being missed by Dana Murch, and paid for by us. I know that Mr. Murch has been to many public hearings and he knows that below 263.5 msl there is greatly reduced boating activity.
Here is a clue. Boats will not be smaller on Sebago in thirty years. Boats are larger than 1965 the last time the lake was near 262 msl during the boating season. In 1965 Jeff Richardson learned how to drive a tractor around the OUTSIDE of the docks. The demand for water will increase from Sebago. Not only is the Sebago Economy affected by the lake level, but that of Naples and Long Lake as well. With the mouth of the Songo at 259.5 msl and waves on Sebago lake that are three feet in height the inlet is not safe. At 262 msl it is not passable. Most boats on Sebago and Long Lake are over 20 feet in length and at rest draft three and a half feet of water with the drive down (264 msl).
In a letter of January 30, 1995 to Warren, Vic Richards wrote: "As we have stated since the water level debate began several years ago, heavy vehicles are prohibited access to the ferry when the lake reaches a level of 263 feet (msl). The Island has made every effort to adjust the operating range of the ferry gantry system to meet this lake level." "The island continues to advocate a lake level of 263 feet msl on November 1."

As you may have noticed I have directly and purposely used the name of the dams hydropower supervisor. Dana Murch. As the author of this 401 and after having dealt with him on this issue for 20 years, I cannot believe the statements he has made, especially with respect that 262

msl does not impact the boating community, which can only be made by someone who has an agenda. That agenda and the Flow Plan will cost the State of Maine Millions. The agenda. Make beach for the State Park and at the same time allow Warren to generate to the max, to hell with the rest of the lake, is not what the law calls for. There is a balance. There is the ability to appease Warren and the State Beaches, without continuing to do harm to the environment or the lake economy. Mr. Murch ignores it with this 401. Let Warren lower the lake below 263.5 msl for the boating season and this issue will once again be of National attention as it was in 1995. Mr. Murch knows that the State has the opportunity to resolve this issue by reducing minimum flows and adopting the last State Plan presented to FERC without the 2 in 9 provision. Why he chooses to advocate for a plan that will fail and causes more ecological damage should be unacceptable to THE STATE OF MAINE.

The modified lake level management plan proposed by Warren is expected to increase average annual generation at the Eel Weir Project and at all six downstream generating projects, as compared to average annual generation at these projects under the current lake level management plan. The amount of this increase will vary from year to year and has not been quantified.

It is no surprise the increase has not been quantified. This is an important key for decision makers to know before it destroys the lake economy. In fact how could a reasonable person make a decision to accept the Flow Plan without knowing this figure? What is the sum? A few thousand dollars, or a few hundred thousand dollars? What is lost when the boat ramps cannot be used on Sebago and the fish die in Turtle Cove and 2,000 acres of aquatic habitat are dry? Clearly Dana Murch does not know. Somehow he believes his agenda without the "evidence in the record" to support one bit of it.

Arrogance is knowing the facts, but making a decision and ignoring them, because it does not support your agenda. Ignorance is not knowing all the facts and making a decision. Incompetence is not doing the job you are hired to, at the level or standards that are required. Most people have not been involved with the lake level for a quarter century. I will tell you that as someone who has, this 401 is a result of Dana Murch being all three. The State needs to find someone who is not arrogant, ignorant or incompetent to write the 401 for Eel

Weir and Sebago Lake. "Even a dog knows the difference between being stumbled over or being kicked." Mr. Murch kicked the boating community, our aquatic life, Sebago Lake and the people of Maine and New England, for five more feet of beach on July 1 and more water for South African Pulp and Paper.

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State of Maine

Maine's recommended changes to the LLMP are not significantly different from the existing LLMP, but would have some benefits to the fishery resources. The current spring maximum lake level would be maintained from May 1 through the third week in June, and would be allowed to exceed the spillway crest elevation (266.65 feet), if at all possible. This would benefit spring spawning species, particularly warmwater species that utilize the shoreline littoral zone, by maintaining maximum habitat area in the littoral zone by two months. This would likely cover the spawning and egg incubation periods for game species such as smallmouth bass and other centrarchids, as well as many of the forage species (golden shiner and other minnows).

Through the summer, lake levels would be similar to the current LLMP, but slightly higher levels would be allowed, particularly for the August 1 target level, which could range up to 0.5 foot higher. This could benefit warmwater species (both juveniles and adults) that use the littoral zone for summer rearing, if the lake is higher and more littoral zone is wetted.

I agree with this and support most of the 2005 State of Maine plan without the 2 in 9 provision. After review of the "evidence in the record" I believe that a target of 263 msl with a one foot range above or below for Nov. 1 will benefit the lake ecology. To truly enhance the lake ecology I would recommend 263.5 msl with a one foot above and below range. I know FOSL would disagree. Once the lake becomes ice covered the lake should not go below 263 msl as recommended by John Boland and others to protect Turtle Cove and aquatic life.

Minimum flows should be reduced to 15,000 cfm and DO issues in the river would be mitigated by releasing water thru those impoundments, not Sebago Lake.

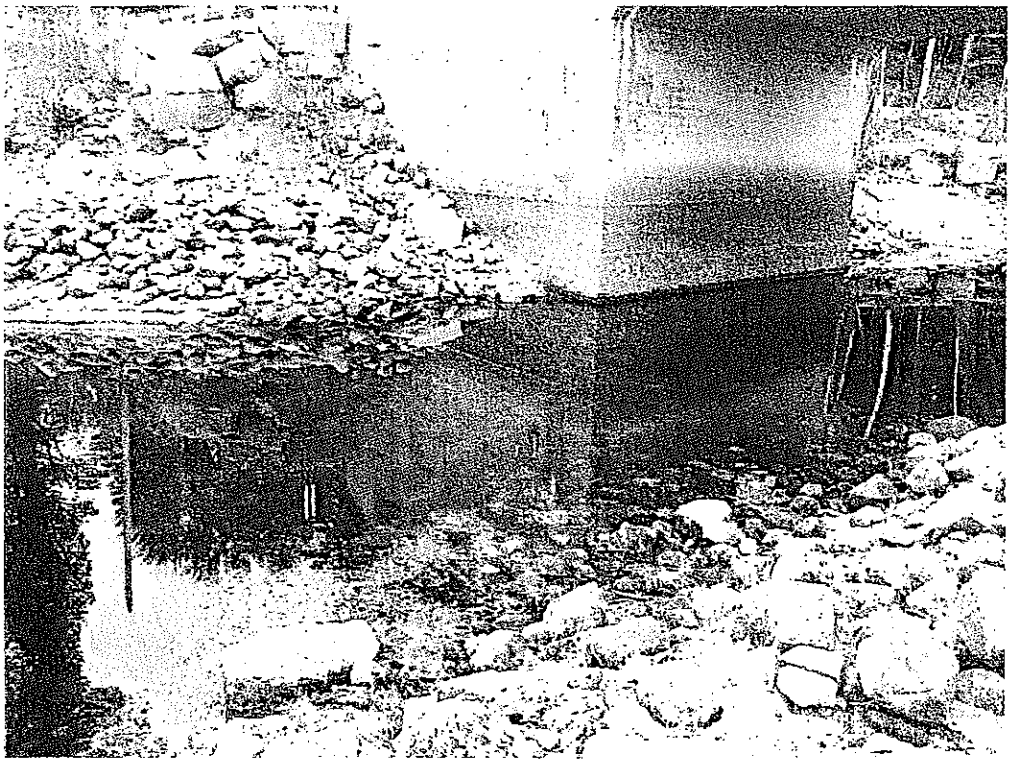
Most of this proposal has been already discussed and is supported by "evidence in the record".

Sincerely,
Charles M. Frechette

270

Muddy River 261 MSL
April 2002
From Boat dock
Note: No tree stumps @ 261 MSL

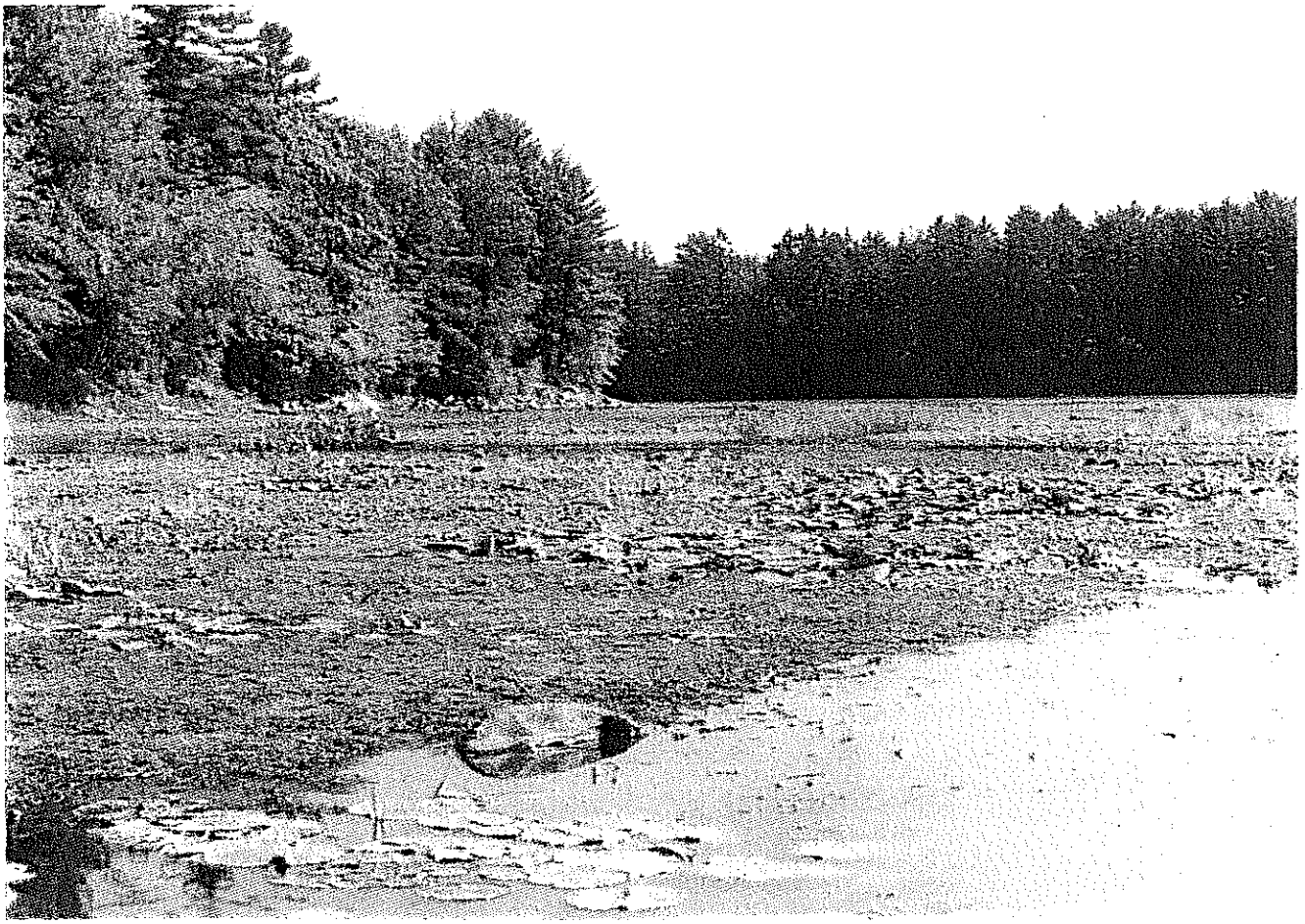
MUDDY RIVER BRIDGE AT 261 MSL OVER 300 BOATERS USE THIS BRIDGE FOR ACCESS TO SEBAGO LAKE. NOTE LOST SHALLOW WATER HABITAT AND FISH WINTERING AREAS.



9-21-1995

Sticky River

262.2 MSL



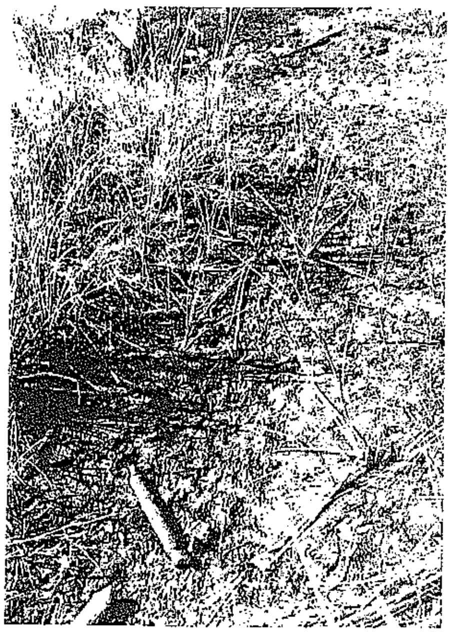
o 3 To 1985
MGD Min Flow
Presumpscott

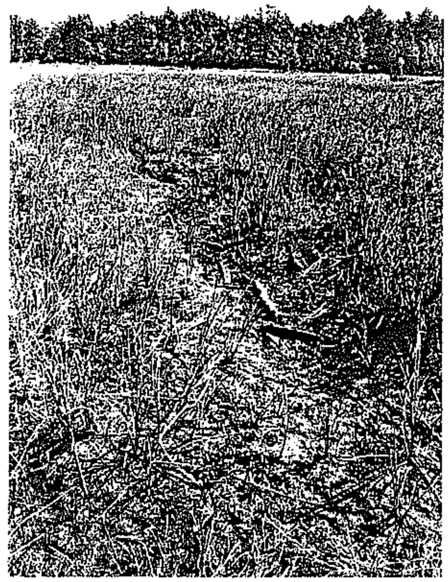
T To 1995
MGD Min Flow
Presumpscott -

These areas Need Lake water Too!

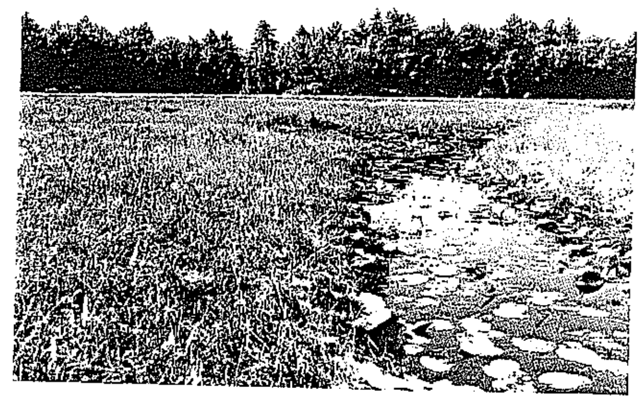
WeT Lands behind Harmons Beach - 262.2 MSL 9/21/95

Minimum Flow Doubled in 1986 by DEP -
Lake Levels in Drought NOT Considered !!!





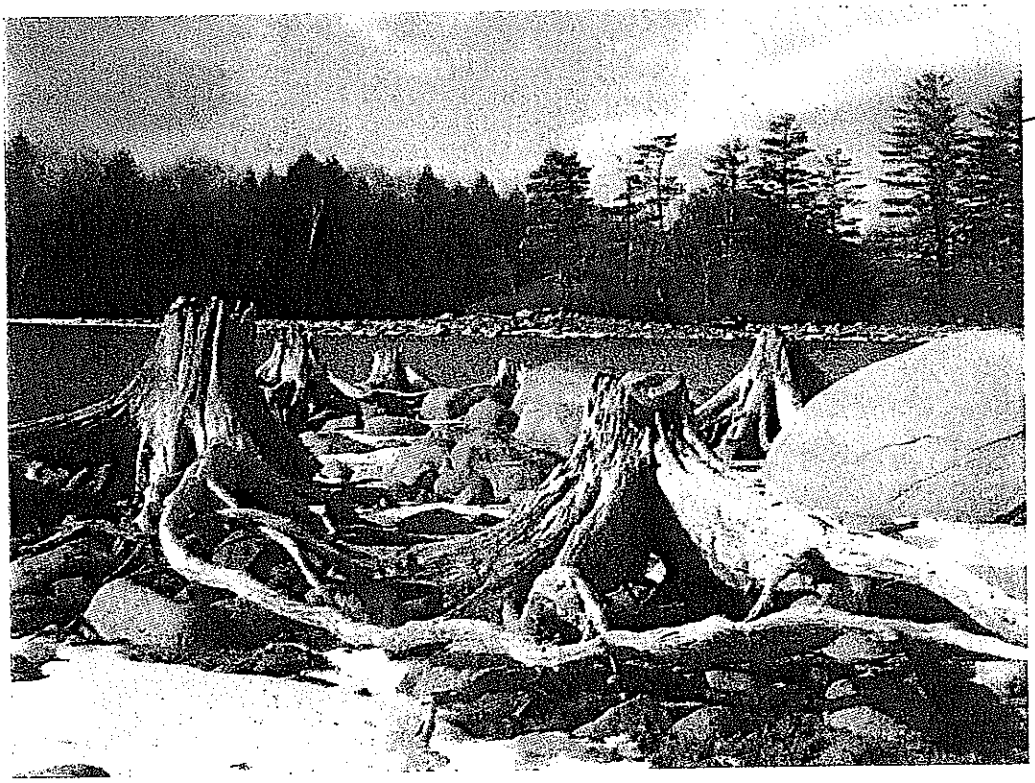
- Wild Life Trails at Head of weT lands -



ONLY water found - no fish or Frogs

Note: NO TREE STUMPS

Sticky River
263 MSL



Tree stumps at 261+ above Dam

Lake could not have been at 256 MSL naturally or 261 MSL naturally.

Area flowed from down river location of Dam back up to 263.5 MSL / 264 MSL

Natural low water mark