Comments

dated and delivered on May 20, 2024 of and by

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provided by HAZEN on Proposed TPIA "Thomas Pond Water Level Management Plan" time stamped 4/14/24 8:02:00 AM bearing footer identifier "Draft 2.8 for Member Review"

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This document sets forth Comments on the Exposure Draft "Thomas Pond Water Level Management Plan" posted on the TPIA website as first seen by HAZEN on May 10, 2024 (the "PLAN").[1] The PLAN was apparently prepared by a subcommittee of the TPIA Board of Directors announced at the 2023 Annual Meeting, membership of with has never been made public. These Comments are submitted as an attachment to an email messaged addressed in the manner specified in that announcement.

In accordance with instructions provided with the Exposure Draft for the PLAN, these Comments are provided in the form of certain introductory notes followed by and a markup of the MS Word format of such documents, using Track Changes to identify specific edits/modifications and additions/deletions submitted by HAZEN in the name and on behalf of the identified owners of riparian property. In addition and following the protocols used by the Board of Directors of the TPIA in publishing draft documents, the following explanatory information is contained in annotations of such edits/modifications and deletions, utilizing the MS Word facility for "comments". Certain defined terms with initial capitalization no otherwise defined herein have the meanings set forth in the PLAN.

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[1] The announcement did not appear on the TPIA website when HAZEN believes was the last time prior to that date could have been as early as May 3, 2024 but more likely to have been May 8 or 9, 2024. Metadata contained in the PDF file for the Exposure Draft indicate that it was last modified at 5:02:44 AM (presumably Eastern Time) on April 14, 2024 by a Quartz PDF printer using macOS Version 14.0 (Build 23A334), PDF Version 1.3 (Acrobat 4.x).

In that context, HAZEN submits the following Comments on the Exposure Draft for the PLAN:

1. At a threshold matter, HAZEN draws attention to the following transmittal text provided with the PLAN:

> In this section you will find the proposed new Management Plan, titled "Thomas Pond Water Level Management Plan" (to match the naming from the Board Order), and supporting materials to the new plan. The new plan is significantly more comprehensive than the original plan as it establishes target water levels and flows under a variety of conditions as well as a separation of duties to ensure that the actions of the dam keeper are monitored regularly.

That is misleading. The PLAN is a "new plan" only in the sense that it was supposed to have been developed when the TPIA took ownership of the Dingley Brook Dam (the "Dam") and responsibility for managing it (1990). The TPIA was supposed to have been regularly updated thereafter, but during the intervening 34 years it never was prior to development of the Exposure Draft and, to the best knowledge of HAZEN, no project for development of such plan was even undertaken.

2. By contrast, the "Thomas Pond Dam Management Plan" (the "DMP") was in existence in 1990 when the Quit-Claim Deed from the DEP was signed and recorded. Indeed, the Board Order dated April 2, 1990 (Cumberland County Registry of Deeds Book 9240 Pages 0024-0032; the "1990 Board Order") granting authority to the DEP to execute and deliver that Quit-Claim Deed included the introductory recital of bases for such transfer, including that the TPIA would "fully comply with" the 1990 Board Order.

   The consent by the TPIA to all of the provisions of the 1990 Board Order (Cumberland County Registry of Deeds Book 9240 Pages 0021-0023) was required for the 1990 Board Order to be valid and thus for the Quit-Claim Deed to be authorized. Such consent by the TPIA was given in writing by its President and included in the 1990 Board Order. Indeed, the Easements allowing the owner of the Dam to pass transit property owned by two abutting riparians in connection with operation and maintenance of the Dam and those rights were transferred to the TPIA with the Quit-Claim Deed included the DMP and referenced in the Easements and attached to them.

3. The TPIA is bound by the 1990 Board Order to comply fully with the DMP, has no authority to revise it without the consent of the owners of abutting parcels over which Easement was granted, AND the DEP. According to officials in the DEP, such consent can only be given by it in any administrative action by the DEP or by the Board of Environmental Protection (the "DEP Board") supervising it as provided by Maine law. In that context, the TPIA and has specifically recognized that the DMP is not the same as the PLAN. Conflation of the two plans by the TPIA is demonstrated with the TPIA website, which includes an active link labeled the "original plan" being updated by the PLAN. When that link is activated, it leads to a PDF file for the DMP included in 1990. That conflation is at the very least misleading and could only escape being an attempted breach of the 1990 Board Order if the TPIA asserts that the mistake was only a matter of negligence on its part.

4. As a matter of precision, the sole role of the PLAN is specified in Condition 5 of the 1990 Board Order: "The [TPIA] shall develop a Water Level Management Plan designating who is responsible for operating the [Dam] and describing how the [Dam] is to be operated under a variety of likely water level/meteorological occurrence." To the

extent that the PLAN goes beyond those procedural topics, there is no authority for provisions in it in conflict with any provision or element of the DMP. To the extent that the PLAN purports to alter the provisions of the DMP, adoption of the PLAN would be in violation of the 1990 Board Order and would be of no validity in either its development or in the TPIA or any party acting in reliance on it.

5. The PLAN is "more comprehensive" than the DMP solely because it sets forth procedures and best practices intended to facilitate achievement by the TPIA of the requirements of the DMP. In no sense whatsoever can the effort to produce a PLAN have the practical effect of diluting, diminishing, modifying or undermining the provisions of the DMP or the obligations of the TPIA to meet the explicit requirements of them. But that is exactly what the TPIA leadership purports to do with its draft of the PLAN (see the final sentence of the text set forth in "2 Setting and Background" of the draft: "This document replaces the original management plan document in place since 1990." Only one plan has been in place since 1990 and that is the DMP).
6. These fundamental defects in the Exposure Draft of the PLAN need to be corrected before a revised version of it is submitted to the Board for approval, much less submitted thereafter by the Board the Members for approval of them.
7. Failure to follows those procedures of corporate governance should result in the Members refusing to give such approval. Even if that approval is provided for a revised draft that FAILS to correct those fundamental defects, the PLAN will be invalid, invalidly adopted, and of no legal force and effect. Directors nonetheless submitting a proposed PLAN failing to include such corrections will risk material breach of their fiduciary duties to the Members of the TPIA.
8. HAZEN notes that the offer made on his behalf at the 2023 Annual meeting to serve on the subcommittee appointed to develop a draft PLAN was not accepted. As a result, he has had only about 1 week to review the Exposure Draft compared to the roughly 1 year taken by the subcommittee in its preparation. As a result, HAZEN must reserve the opportunity to raise other issues with the PLAN at the Annual Meeting on behalf of the TPIA Members from whom he holds a durable power of attorney / proxy.
9. In view of the fact that the draft documents for consideration potential approval by the Members at the 2024 Annual Meeting of Members have been posted to the TPIA website, HAZEN hereby formally requests that the comments set forth in this document (including the markup of the PLAN below) be posted similarly to TPIA website so all Members have potential access to it prior to the 2024 Annual Meeting.
10. In addition to the foregoing and as an integrated part of comments on the draft PLAN, HAZEN highlights the following problems/defects in the draft PLAN as shown in the markup of it:

1 Introduction

This document, the Thomas Pond Water Level Management Plan (~~TPWLMP~~the PLAN), sets forth the operational practices, procedures, and standards of conduct to be used by the Thomas Pond Improvement Association (TPIA) and officers/delegates of it in satisfying the requirements of a "Water Level Management Plan" that is required to be developed by the TPIA in accordance with condition 5 (Condition 5) set forth in the Maine Department of

Environmental Protection (MDEP) Board Order dated July 2, 1990 (1990 Board Order) that transferred ownership of the Dam to TPIA[2] ~~to keep Thomas Pond healthy by managing the Thomas Pond dam to maintain seasonally stable pond elevations as agreed to by a vote of the members of TPIA while maintaining water outflows as needed to comply with the Maine Department of Environmental Protection (MDEP) Board Order[1] that transferred ownership of the Dam to TPIA~~.

Among other things, Condition 5 of the 1990 Board Order includes the following text: *"The [TPIA] shall develop a written Water Level Management Plan designating who is responsible for operating the dam and describing how the dam is to be operated under a variety of likely water level/meteorological occurrences."* The Water Level Management Plan was not ever developed and this PLAN is intended upon due adoption by the Board of Directors of the TPIA to be that document. Upon actual, due ratification by the Members of the TPIA at an Annual Meeting of them to be held on June 22, 2024, the TPIA will have finally taken actions to satisfy the requirements of Condition 5.

2 Setting and Background

Thomas Pond, located in Raymond and Casco Maine, is assigned a Maine Information Display Analysis System (MIDAS) ID number of 3392. The following information about Thomas Pond has been obtained from sources believed by the TPIA Board of Directors to be reliable and is provided here to memorialize the setting and background of the process used by the TPIA to develop the PLAN, but is only descriptive and is not intended to comprise substantive provisions of the PLAN:

(a) Thomas Pond has a drainage area of ~5.5 square miles as measured from the sole outlet into Dingley Brook, where a small privately-owned dam that regulates lake water discharge is operated and maintained by the TPIA.

(b) Thomas Pond has a surface area of 533 acres, a perimeter of 7.4 miles, a mean depth of 22 feet, a maximum depth of 64 feet, with good to excellent water quality and both cold and warm water fisheries.

(c) The Thomas Pond watershed is considered most at risk from new development[2]. According to the requirements stated in Chapter 587[3], Thomas Pond is a Class GPA body of water, while Dingley Brook below the Thomas Pond dam is a Class A body of water.

[2] The MDEP Order is recorded with the Cumberland County Maine Registry of Deeds (Registry of Deeds) in Book 9240 Pages 0024-0034. It is attached as "Exhibit A" to that certain Quit-Claim Deed that appears in Registry of Deeds Book 9240 commencing at Page 0021 of it. Condition 5 referenced above appears at Registry of Deeds Book 9240 Page 0028. Such Quit-Claim Deed also has an "Exhibit B" attached to it that appears after two written easements granted and executed by owners of property abutting the Dam in connection with operation of it by the TPIA (the Abutting Owner Easement Grants). A copy of the Order (but not the Quit-Claim Deed to which it is an attachment or any other documents attached to or incorporated into the Order) is currently available at the TPIA website and will continue to be available there unless and until modified by the MDEP.

(d) On April 25, 1990 MDEP, through Board Order #L-010896-37-A-N, declared the Thomas Pond dam abandoned and transferred its ownership ~~of~~rights in the dam to the TPIA (being the 1990 Board Order).

(e) Each of the Abutting Owner Easement Grants contains a document captioned as the "THOMAS POND DAM MANAGEMENT PLAN" (the "DMP").

~~The Thomas Pond watershed is considered most at risk from new development[2]. According to the requirements stated in Chapter 587[3], Thomas Pond is a Class GPA body of water, while Dingley Brook below the Thomas Pond dam is a Class A body of water~~.

~~As part of this transaction, certain conditions were placed on TPIA including that *"The association shall develop a written Water Level Management Plan designating who is responsible for operating the dam and describing how the dam is to be operated under a variety of likely water level/meteorological occurrences."* This document replaces the original management plan document in place since 1990 and complies with the operational requirements and minimum flows from the Board Order as interpreted by MDEP.~~

~~[1] A copy of the order may be accessed here~~
~~[2] Chapter 502: Direct Watersheds of Lakes Most at Risk from New Development, and Urban Impaired Streams~~
~~[3] Chapter 587: In-Stream Flows and Lake and Pond Water Levels, effective on August 24, 2007.~~

3 Defined Terminology and Values Used in the ~~TPWLMP~~PLAN

Terminology described in this section will be specified in all capital letters (e.g., MIN FLOW) when used in the narrative of this ~~TPWLMP~~PLAN.

SEASONAL PERIODS

SPRING	March 15 – May ~~3~~15
SPRING RAISE PERIOD	Earlier of ice-out or March 16, through ~~April 30~~May 15
IN-SEASON	May 15 through ~~Columbus Day~~September 15
FALL DRAWDOWN PERIOD	The earlier of~~Day after Columbus Day~~ October 15 or the first day of any three-day weekend in the month of October, through November 15
OFF-SEASON	November 16 through ~~earlier of ice-out or March 15~~completion the Spring Raise Period

POND ELEVATION at Dam Crest (inches from top surface of dam)

FALL DRAWDOWN TARGET	-~~27~~32[3]
IN-SEASON RANGE	-~~17~~21 to -~~20~~24[4]
OFF-SEASON RANGE	-2~~4~~8 to -3~~0~~2
FLOOD DANGER LEVEL[5]	-~~13~~20

Control Capabilities

STOP LOG	4x4 Board, 3.5" actual height
HALF STOP LOG	2x4 Board, 1.5" actual height
FLOW CONTROL PRECISION	± 1.5"
MEASUREMENT PRECISION	± ~~1~~0.5"

WATER FLOW

The DMP specifies that a minimum of 2.4 cubic feet per feet per second going over or through the dam must be maintained at all times. In the absence of measuring tools precisely addressing that, the DMP provides a substitute means for ascertaining that the required minimum flow (MIN FLOW) can also be measured in number of inches of water flowing over the dam (3"). This PLAN cannot modify that requirement of the 1990 Board Order and any appearance of implication of doing so must be rejected. The TPIA currently utilizes that method in written reports is maintains in accordance with the requirements o the 1990 Board Order.

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[3] If silt has built up upstream of the stop logs such that it become impossible (or impractical without specialized hydraulic equipment) to remove all of the Stop Logs, the FALL DRAWDOWN TARGET will be removal of all of the stop logs.

[4] These POND LEVELS are intended to be sure that even the highest permissible POND LEVEL will not cause property damage to Members of the TPIA resulting from operation of the Dam in conformity with this PLAN

[5] See footnote 3. The FLOOD DANGER LEVEL is the POND LEVEL shown by evidence provided by riparian owners knowingly to cause property damage. If subsequent data shows a realistic risk of property damage any where along the shoreline of Thomas Pond or Dingley Brook lower than the FLOOD DANGER LEVEL, it will be revised to a lower POND LEVEL needed to be reflect prudent operation of the Dam needed to avoid risk property of damage to any riparian parcel along such shoreline.

Similarly, the 1990 Board Order specifies that no more than 12" inches of water would go over the dam at any particular time (MAX FLOW). Nonetheless the MDEP has in the past permitted the TPIA to allow more than the MAX FLOW for brief periods of time when unusual meteorological events have required that in order to avoid structural damage to the dam.

If at some point in the future a reliable gauge (mechanical or electronic) or similar measuring system becomes available to the TPIA and is acquired/installed by it, WATER FLOW will refer to the information from such gauge and will be reported in that fashion on the records of the TPIA rather than the measurement(s) in inches referenced above.

~~WATER FLOW (Discharge) at Dam Crest~~	~~Cubic feet per second (CF/S)~~	~~Inches of Flow[4]~~	~~Pond Water Inches/Day~~
~~MIN FLOW~~	~~ABF[5] ≅ 1.2~~	~~1.85~~	~~~0.05~~
~~LOW NORMAL FLOW~~	~~2.5~~	~~3~~	~~~0.08~~
~~MID NORMAL FLOW~~	~~8.7~~	~~7~~	~~~0.39~~
~~MAX NORMAL FLOW~~	~~19.3~~	~~12~~	~~~0.86~~
~~MAX PRE-FLOOD FLOW~~	~~34.9~~	~~18~~	~~~1.56~~
~~MAX FLOOD DANGER FLOW~~	~~72.5~~	~~30~~	~~~3.24~~

Precipitation Values and Considerations

FORECAST PERIOD	3 Days
RANGE RECOVERY PERIOD	4 Days
HIGH PROBABILITY	≥ 75%
MAJOR PROBABILITY	≥ 40% but less than 75%
MINOR PROBABILTY	≥ 20% but less than 40%
RAPID WATER LEVEL CHANGE	≥ 2.0" in 24 hours
HEAVY RAINFALL	≥ 1.5" in 24 hours ~~or~~/ ≥ ~~3~~4.~~0~~5" in 3 days
SIGNIFICANT RAINFALL	≥ 1.25" in 24 hours / 3.5" in 3 days
MAJOR RAINFALL	≥ 1.0" in 24 hours / 3.00" in 3 days
~~5-YEAR RAINFALL~~	~~~ 4.1" in 24 hours or ~ 4.7" in 2 days or ~ 5.2" in 3 days~~
~~25-YEAR RAINFALL~~	~~~ 5.8" in 24 hours or ~ 6.9" in 2 days or ~ 7.5" in 3 days~~

The foregoing concepts are embedded in procedural and action requirements set forth in Section 5 of this Plan, particularly in subsections 5.1 – 5.4 and subsections thereof.

~~[4]Inches of Flow is used as a surrogate measurement technique in lieu of directly measuring flow in CF/S. See "Thomas Pond Over-the-Dam Outflow Calculations.xlsx" tool to translate any flow in inches to CF/S and days to release 1" of pond water based on a pond size of 533 acres.~~

~~[5]Using USGS StreamStats, MDEP estimates Aquatic Base Flow (ABF) as just under 1.2 CF/S with an Average Standard Error of Prediction (ASEp) of 66.4 as of 2023.~~

~~[6]Rainfall projections from https://hdsc.nws.noaa.gov/pfds/pfds_map_cont.html?bkmrk=me~~

4 Monitor~~ngs~~ / Keepers

The TPIA has separately prepared a document describing official positions consisting of Dam Monitors and Dam Keepers who will be charged with implementation of this PLAN. That system of monitoring, supervision, and responsibility is an inherent part of this PLAN and to that extent is described here.

TPIA shall maintain gauges, visible from outside the cage, at the dam to measure POND ELEVATION and WATER FLOW at least as precisely as specified by MEASUREMENT PRECISION. Gauges may be read in person or via a photograph available by web access in real time. Dam Monitors shall be responsible for monitoring POND ELEVATION and WATER FLOW. Dam Keepers shall be responsible for actions required to meet the standards set forth in this PLAN as to the former and in the EMP as to the latter. Dam Keepers may solicit volunteers to assist them in any action required to be taken inside the security cage above the dam maintained by TPIA pursuant to the requirements of the 1990 Board Order, but must personally supervise each and any such volunteers and be responsible for actions taken by them inside such security cage.

Log entries shall be maintained by the Dam Monitors in manual format and electronic reports of them shall be made available via online form ~~and made available~~ maintained on the TPIA website, thomaspond.org. Entries for such logs shall include the date/time of observation, observer ID, WATER FLOW, ~~and~~ POND ELEVATION, a link to the photograph~~(s)~~ on which such entry is based or, if unavailable, and explanation of the reason for such unavailability and confirmation of in-person visual observation~~if available~~, STOP LOG changes and identity of the Dam Keepers taking any action inside the security cage over the dam required by the DMP, and notes of actions or observations.

Monitoring and updating log~~ging~~ records shall occur a minimum of once ~~per week,~~each day during the SEASON, twice each day during the FALL DRAWDOWN PERIOD and the SPRING RAISE PERIOD ~~and~~as well as during periods of HEAVY RAINFALL or RAPID WATER LEVEL CHANGE, ~~monitoring shall occur at least once per day.~~and once a week during OFF SEASON. If sufficient Dam Monitor volunteers are available, TPIA will seek to monitor the dam no less frequently than daily year- round ~~and twice daily during period of HEAVY RAINFALL or RAPID WATER LEVEL CHANGE~~.

5 Dam Operational Practices

Individual(s) responsible for the operations of the dam are referred to by TPIA as Dam Keepers. Dam Keepers shall visit the dam on an as-needed basis. Dam Keepers shall manage WATER FLOW~~S~~ and influence POND ELEVATION by adjusting STOP LOGS as needed to maintain WATER FLOW~~S~~ above MIN FLOW and POND ELEVATION within the applicable IN-SEASON RANGE or the OFF-~~-~~SEASON RANGE ~~whenever practical and for as much of the relevant~~ and during all other periods ~~as possible~~will maintain WATER FLOW at no less than MIN FLOW. Notwithstanding the foregoing, Dam Keepers may seek permission from the MDEP to maintain Water Flow at less that MIN FLOW at any time that POND ELEVATION is more than 30" below the top of the dam during periods when the applicable target under this PLAN intended to be

not more than 32" below the top of the Dam. In the event such request is made to the MDEP, the President shall make reports thereof in writing to the Board of Directors and shall disclose to the TPIA Members on the TPIA website information corresponding to that set forth in Section 5.3.4 of this Plan with respect to each and any release of more WATER FLOW than the MAX FLOW.

Changes in POND ELEVATION is expected to change primarily due ~~mostly~~ to conditions beyond TPIA's control, ~~with~~such as natural increases due to snow melt, precipitation, upwelling springs, and inflow from the drainage basin, and to decreases due evaporation, transpiration, absorption into the underlying groundwater aquifer and ~~water discharge~~WATER FLOW into portions of Dingley Brook downstream from the dam ~~into Dingley Brook~~ leading from it into Sebago Lake. TPIA cannot directly control POND ELEVATION~~, r~~. Rather, TPIA's capabilities are limited to influencing POND ELEVATION by adjusting STOP LOGS to control the WATER FLOW~~S~~ over the dam. Do to the non-equivalence of ability to raise and lower POND ELEVATION, with significantly more ability to reduce POND ELEVATION than the power of forces beyond TPIA's control have the ability to increase it, the Dam Keepers must be proactive in removing STOP LOGS before forecasted meteorological events could cause increases in POND ELEVATION to an extent that even increases in WATER FLOW to the MAX FLOW would not be sufficient.

By 9:00 a.m. Eastern Time each day, Dam Keepers shall by check weather reports provided by reliable radio and television stations and by smartphone or similar digital weather report and on that basis must estimate projected POND ELEVATIONs in the FORECAST PERIOD based on ~~their experience, weather~~those forecasts and any similar publicly-available tools whether developed by TPIA or by other parties. ~~Dam Keepers are encouraged to use TPIA tools and assist in their ongoing refinement~~.

Dam discharges are controlled by adding or removing STOP LOGS or HALF STOP LOGS. The ability of Dam Keepers ~~ability~~ to ~~granularly~~ control WATER FLOW~~S~~ is limited by the smallest STOP LOG size. As a result, periodic temporary deviations from the WATER FLOWS specified in this ~~TPWLMP~~PLAN of near to or less than FLOW CONTROL PRECISION may occur but prudent steps should be taken to be sure that such deviations do not continue for more than 24 hours if at all realistically possible.

Dam Keepers must put their safety first. They are prohibited from going to the dam alone during storms with high winds or extreme precipitation intensity, and from crossing over the opening of the dam when the top of the dam is in imminent danger of being~~, or is,~~ submerged or is.

5.1 Normal Conditions

Whenever POND ELEVATION is within the applicable IN-SEASON RANGE or OFF-SEASON RANGE and likely to stay within such RANGE, Dam Keepers should use their judgment, taking into account weather forecasts and general conditions of the drainage basin, in making ~~gradual~~ proactive changes to STOP LOGS (avoiding abrupt changes if possible) in order to attempt to keep POND ELEVATION within the applicable IN-SEASON RANGE or the OFF-SEASON RANGE. Usually this will involve allowing flows over the dam of ≥ ~~LOW NORMAL~~MIN FLOW ~~and ≤ MID NORMAL FLOW SEASON or OFF-SEASON RANGE~~. Usually this will involve allowing ~~flows~~WATER FLOWS over the dam of ≥ ~~LOW NORMAL FLOW and ≤ MID NORMAL FLOW~~MIN FLOW and thus avoid the risk of MAX FLOW. In exercising such judgment, however, Dam Keepers must keep in mind the following (a) the calculation shown in the DMP that it would take 24 hours for the POND ELEVATION to drop 1" if Water Flow is maintained at MAX FLOW (12" over the dam) during that period, and (2) the TPIA's own records show that the POND ELEVATION can rise 3-4" in 24 hours and even 5-6" in 48 hours. As a rule of thumb, the Dam Keeper should start with the assumption that over a normal 3-day period following a rain event POND ELEVATION can easily rise as much as 2 times the amount of rain actually falling in any 24 hour period, as the drain field feeding Thomas Pond has easily two times the area of the surface of Thomas pond and possibly as much as three times.

Whenever POND ELEVATION is likely to reach or exceed~~s,~~ the IN-SEASON or OFF-SEASON RANGE, ~~the~~ Dam Keepers shall increase ~~outf~~Water Flow~~s~~ (by prompt removal of LOGS) to greater than the MIN FLOW but not more than the MAX FLOW~~to ≥ MID NORMAL FLOW and ≤ MAX NORMAL FLOW~~ until POND ELEVATION returns into RANGE within not more than the~~≤~~ RANGE RECOVERY PERIOD ~~when flows allow~~.

5.2 Low Rainfall & Low Water Conditions

When POND ELEVATION is near the lower end of the applicable IN-SEASON RANGE or OFF-SEASON RANGE and dropping, ~~the~~ Dam Keepers should attempt to take proactive steps designed to retain ~~water in the pond~~POND ELEVATION by reducing ~~outflows~~WATER FLOW to ≥ MIN FLOW ~~and ≤ LOW NORMAL FLOW~~. When POND ELEVATION is below or at the bottom of the applicable IN-SEASON RANGE or OFF-SEASON RANGE, ~~the~~ Dam Keepers should reduce ~~outflow~~WATER FLOW to as close to MIN FLOW as possible .

If POND ELEVATION continues to drop, ~~the~~ Dam Keepers must maintain water flow as specified in the DMP unless, during the IN-SEASON period, the POND ELEVATION falls below the OFF-SEASON RANGE. The Dam Keepers may request a temporary waiver from the MDEP for ~~minimum flow~~MIN FLOW when natural conditions alone (and not mere failure of Dam Keepers to be sufficiently proactive in actions that would influence POND ELEVATION or to reasonably anticipate unusual meteorological events) cause those flows to be less. A waiver may be granted by the MDEP Commissioner or MDEP staff authorized by ~~MDEP~~the Commissioner to grant similar waivers to other dam operators for water bodies located in Maine. Waivers are expected to be valid only for ~~the current season~~a short period of time unless specifically provided in writing otherwise ~~specified~~ by the MDEP.

When precipitation begins to raise ~~the~~ POND ELEVATION, ~~the~~ Dam Keepers shall promptly restore ~~outflows~~WATER FLOW to ~~≥~~ MIN FLOW so long as the greater discharge allows ~~the~~ POND ELEVATION to continue to rise to levels within the applicable IN-SEASON RANGE or OFF-SEASON RANGE during those periods.

5.3 *HEAVY RAINFALL & High-Water Conditions*

~~The~~ Dam KeeperS must be prepared to proactively cope with major in~~flows~~creases of ~~water~~WATER FLOW, for example from a HEAVY RAINFALL~~, expected at least once/year~~. To minimize damage to pond-~~-~~side and Dingley Brook property, Dam Keepers ~~should~~must take proactive/precautionary actions when there is a HIGH PROBABILITY of HEAVY RAINFALL in the FORECAST PERIOD, should take such action where there is a MAJOR PROBABILITY of HEAVY RRAINFALL OR a HIGH PROBABILITY of SUBSTANTIAL RAINFALL, and are urged to do so when there is a HIGH PROBABLITY of MINOR RAINFALL. Dam Keepers must also take such action when there is even a MINOR PROBABILITY of RAISED WATER LEVEL CHANGE. POND ELEVATION will typically rise immediately by the amount of rainfall ~~received~~reaching the pond surface, and then may continue to rise over the following ~~3~~2 – ~~7~~3 days up to two times the amount of actual rainfall as a surge of water enters the pond from the drainage basin.

In determining the proactive/precautionary actions to be taken in anticipation of a HEAVY RAINFALL, Dam Keepers need to consider many factors, including starting POND ELEVATION, IN-SEASON RANGE or OFF-SEASON RANGE, how wet or dry the ground ~~is~~ around the pond has become by sustained prevailing temperatures, the accuracy of weather forecasts as to probability, duration, intensity, and amount of precipitation, TPIA forecast tool (if any have been approved by the Board of Directors) projections, and prior experiences. ~~The table provide guidelines for how a Dam Keeper should manage WATER FLOWS when precautionary changes appear appropriate.~~ Dam Keepers should gradually increase outflow over the dam by removing STOP LOGS or HALF STOP LOGS starting up to the FORECAST PERIOD in advance of the forecast of a significant weather event.

~~POND ELEVATION~~	~~Projected POND ELEVATION~~	~~Precautionary WATER FLOWS~~
~~Below or in range~~	~~≤ top of range~~	~~≥ MIN FLOW (below range)~~ ~~≥ LOW NORMAL FLOW (in range)~~ ~~≤ MAX NORMAL FLOW~~
~~Below or in range~~	~~≤ top of range + HALF STOP LOG~~	~~≥ LOW NORMAL FLOW (below)~~ ~~≥ MID NORMAL FLOW (in range)~~ ~~≤ MAX NORMAL FLOW~~
~~Below or in range~~	~~≥ top of range + HALF STOP LOG~~ ~~≤ FLOOD DANGER LEVEL~~	~~≥ MID NORMAL FLOW~~ ~~≤ MAX PRE-FLOOD FLOW~~
~~Below or in range~~	~~≥ FLOOD DANGER LEVEL~~	~~≥ MAX NORMAL FLOW~~ ~~≤ MAX PRE-FLOOD FLOW~~
~~Above range~~	~~≥ top of range + HALF STOP LOG~~ ~~≤ FLOOD DANGER LEVEL~~	~~≥ MAX NORMAL FLOW~~ ~~≤ MAX PRE-FLOOD FLOW~~
~~Above range~~	~~≥ FLOOD DANGER LEVEL~~	~~≥ MAX PRE-FLOOD FLOW~~ ~~≤ MAX FLOOD DANGER FLOW~~

5.3.1 Flood Control for Waterfront Property

In extreme cases, such as may occur ~~in a ≥ 25-YEAR RAINFALL~~ due to a hurricane or tropical storm expected to strike the region within the FORECAST PERIOD, ~~the~~ Dam Keepers may

increase the outflow to the MAX ~~FLOOD DANGER~~ FLOW, and make no further changes until the weather event has passed, prior to the POND ELEVATION reaching FLOOD DANGER LEVEL and regardless of starting level. The Dam Keeper must promptly notify the Board of Directors and the MDEP whenever water release is above MAX ~~PRE-FLOOD~~ FLOW. ~~The~~ Dam Keepers should also move the Dam Cam to prevent it from being submerged if necessary.

*5.4 **Change of SEASON Practices***

5.4.1 Lowering POND ELEVATION in Fall

TPIA will conduct an annual drawdown of POND ELEVATION each year when POND ELEVATION is above the OFF-SEASON RANGE. For the FALL DRAWDOWN PERIOD, the Dam Keeper should adjust STOP LOGS to gradually increase the rate of ~~outflow~~WATER FLOW to allow the POND ELEVATION to drop to the OFF-SEASON RANGE with a goal of reaching the FALL DRAWDOWN TARGET before the end of the FALL DRAWDOWN PERIOD. ~~Barring HEAVY RAINFALL, the~~ Dam Keepers should maintain ~~flows~~WATER FLOW ~~≤~~at or approaching MAX ~~NORMAL~~ FLOW during the drawdown when that will achieve the planned reduction in POND ELEVATION. Once the FALL DRAWDOWN TARGET is reached, ~~the~~ Dam Keepers should reduce ~~the outflow~~WATER FLOW to not less than MIN FLOW as needed~~, typically ≥ LOW NORMAL FLOW and ≤ MID NORMAL FLOW,~~ and then allow POND ELEVATION to fluctuate within the OFF-SEASON RANGE.

5.4.2 Raising POND ELEVATION in SPRING

The SPRING RAISE PERIOD will be conducted in two stages. First, ~~the~~ Dam Keepers should manage the STOP LOGS to attempt to cause the POND ELEVATION to rise ~~(or lower)~~ to no higher than the top of the OFF-SEASON RANGE by ~~mid~~ April 16 but not earlier than ice-out. ~~Then~~Second, ~~the~~ Dam Keepers should thereafter manage the STOP LOGS to gradually increase (or lower) the POND ELEVATION to be at or near the low end of the IN- SEASON RANGE ~~at~~by the start of the SEASON. To ensure compliance with the 1990 Board Order, ~~d~~Dam ~~k~~Keepers must not keep STOP LOGS in when the Water Flow is less than MIN FLOW and must not remove ~~boards~~STOP LOGS to increase ~~outflows~~Water Flow to greater than MAX FLOW~~be ≥ MAX NORMAL FLOW, except in the rare instance when there is a HIGH PROBABILITY of a 5-YEAR RAINFALL or greater within theFORECAST PERIOD, in which case Dam Keepers must notify~~ without receiving approval from the MDEP to do so for a specified short period. If such approval is requested and given, the President of the TPIA shall promptly so inform the Members of the TPIA. Dam ~~k~~Keepers are not required to add additional STOP LOGS to reduce flows to be ≤ MAX ~~NORMAL~~ FLOW when WATER FLOW~~flows ≥ MAX NORMAL FLOW aregreaer~~ than that is caused by natural conditions beyond our control.

6 Routine Dam Maintenance

In addition to managing STOP LOGS to influence WATER FLOW~~S~~ and POND ELEVATION, ~~the~~ Dam Keepers ~~is~~are responsible for performing routine maintenance activities on the Dam as needed and described in the Dam Keeper Position Description. Routine dam maintenance cannot require alteration of WATER FLOW~~S~~ below MIN FLOW.

7 Non-Routine Dam Activities

Any dam repairs, maintenance, modifications, or emergency remedial actions which do not require a federal, state, or local permit, but which constitute a temporary violation of the 1990 Board Order may be performed only with the prior written approval of the MDEP Commissioner.

7.1 *Notification*

If ~~the~~ Dam Keepers determine~~s~~ it is necessary for any reason to vary from WATER FLOW specified in the DMP (whether MIN FLOW or MAX FLOW) or from POND ELEVATION ~~contained~~set forth in the ~~TPWLMP~~PLAN ~~for any reason~~, they shall promptly email TPIA Board Members and if appropriate the MDEP Commissioner or specified agent of the MDEP Commissioner, and post an explanatory announcement on the TPIA website. In recognition that many Members may not become aware of information contained only on the website, the Board of Directors of the TPIA shall promptly initiate a program for assembling email addresses for those Members wishing to be informed in real time that information required by this PLAN to be posted on the website has been. Such program shall be launched by not later than January 1, 2025, with the ability to add email addresses of additional Members so requesting.

8 ~~TPWLMP~~ Administration of the PLAN

This ~~TPWLMP~~PLANPLAN is intended to be maintained and updated ~~as needed~~ by the TPIA Board of Directors as it deems to be needed, with a report provided to Members of the TPIA at least 30 days in advance of the Annual Meeting whether there has been any updating since the preceding Annual Meeting and, if so, a description of such updating. The TPIA Board of Directors may approve most changes to the ~~TPWLMP~~PLAN without separate approval by the Members. Changes of ≥ 2 inches in decreases of POND ELEVATION (≥ 1 inches of increases) to minimum or maximum values for IN-SEASON RANGE or OFFSEASON RANGE or any application to the MDEP to change WATER FLOWS shall be voted on by the Membership and effective only if approved by at least 60% of the Members present and voting at an Annual Meeting or represented in person at such Annual Meeting by a holder of a power of attorney or proxy from a Member, provided that a quorum required by law or

by the TPIA By-Laws is satisfied[6] ~~7~~. The ~~TPWLMP~~PLAN and supporting materials shall be posted to the TPIA ~~W~~website.

Position descriptions for the operational roles for dam management may be updated by the Board as needed. Dam Keepers must review the ~~TPWLM~~PLAN and Position Description and sign an acknowledgement that he or she has done so, which the TPIA Secretary shall keep in the organization's records and shall provide copies thereof to any Member upon written request.

The TPIA Board shall ensure there is adequate supervision and separation of duties between dam keeping and monitoring, and ensuring timely comprehensive logging. The TPIA president shall supervise dam operations, monitoring, and maintaining log records~~ging~~. In the event that the TPIA president is also responsible for operations, monitoring or logging, then the TPIA Vice President, or other individual appointed by the Board as a Dam Compliance Officer, shall be responsible for ensuring that operations, monitoring, and logging meet or exceed the requirements set forth in the ~~TPWLM~~PLAN.

ANNOTATIONS FOR MARKUP ITEMS

(purpose/intent of the Comments and rationale for them[7])

1	Use of the "TPWLMP" acronym contributes to confusion between the "plan" specified in Condition 5 of the 1990 DEP Order and the "TPIA Dam Management Plan" that is integrated into the 1990 DEP Order. The DMP is thus not modifiable by any signatory to the 1990 Board Order (the DEP, the TPIA, and both of the Easement grantors) acting along and not even by the DEP other than through authorized administrative action by the Board of Environmental Protection (e.g. in response to a Petition to modify levels of water bodies regulated by the DEP due to the role of a man-made dam in its creation and/or maintenance). The Exposure Draft of the PLAN purports to modify the DMP and that counsels use of a short title rather than an acronym. The change shown in the first line and later throughout the document in use of the title "PLAN". The text in the remainder of Section 1 shown as being deleted merely compounds the confusion, which is why such deletion is recommended. Similarly, the text shown as being added provides actual context that illustrates the need to avoid such confusion similarly, which is why such addition is recommended. The added footnote provides all information necessary for a reader to conclude that

[6] Aquatic Base Flow is subject to change without TPIA membership approval but if such change has an impact on permissible WATER FLOW only pursuant to a Water Level Petition and Hearing on it by the Board of Environmental Protection or by the MDEP Commissioner if no changes are made to the 1990 Board Order).

[7] Per instructions shown on the TPIA website identifying topics to be covered in comments.

2	The Exposure Draft provides no basis for presenting the technical data and risks misleading the Members into believing that the TPIA is competent to make the calculations set fort in this section 2 or at lease is the source of them. Reformatting the data contained in this section as bullet points avoids any implication that the document is argumentative or the basis for any reader to draw that inference. The resulting bullet point now identified as "d" corrects the misleading impression that could be drawn by failing to note that what the DEP gave (and recorded with the Registry of Deeds) was merely a Quit-Claim Deed: it transferred to the TPIA only water rights the DEP held in the Dam. Were that legal distinction unnecessary, the DEP could actually have given a Warranty Deed. It did not. The final bullet point (e) is added both to give the Thomas Pond Dam Management Plan a clearly distinguishable short title and to make it clear that the role of the PLAN is to establish logistics/procedures that will facilitate the ability of the TPIA to fulfill its requirements under the 1990 DEP Order. The text shown below the next bullet point list is flat out wrong. The PLAN cannot "replace" the DMP and the Exposure Draft of it does not "comply" with the 1990 DEP Order; it breaches it.
3	The changes to the dates of the "seasonal periods" is not consistent with those set forth in the DMP and thus appear on the face of the Exposure Draft to constitute violation of it. The changes in the Pond Elevations are recommended to be sure that operation of the Dam does not cause property damage that the TPIA well aware is occurring. Unless the DEP provided indemnification to the TPIA for such property damage (nothing in the 1990 DEP Order gives even of thread of support to any such claim by the TPIA), operating the Dam in a way that the TPIA had every reason to know could cause property damage and actually was would change the standard for resolving a claim against the TPIA from mere negligence to reckless disregard of risk, the later essentially turning the claim into an Intentional Tort ... for which a damaged party could claim punitive damages and assert personal liability of TPIA officers and directors such that the TPIA D&O Policy would not have to be honored by the insurance carrier having sold/issued that policy. The Flow Control Precision figure merely describes the depth off the smallest Half Stop Log, meaning that it might be necessary to maintain a lower-than Pond Elevation with a spillway capable of regulated gradually to all possible levels. I do not propose any change to that as the only to do so with analytical integrity would be to recommend that the TPIA make the very considerable investment required to purchase and install a hydraulic gate capable of variable height of unlimited precision. The Measurement Precision is a much different matter. If the measurement was made in-person using a fully mobile metal gauge such as an industrial-grade tape measure, the precision would be limited only by the precision of that gauge and that could be as little as 1/32nd (0.03125) inch: 32x that shown in the Exposure Draft. Having participated in such in-person/manual measurement when my father was the Dam Keeper, I am thus aware that the much easier system of visual observation through web-accessible still photographs provides enormous latitude and thus less precision. While that may be an acceptable trade-off (particularly from the view

	point reduce requirements of the Dam Manager), the TPIA could not reasonably be given a margin of error in this measurement of 1/3rd, as this entry in the Exposure Draft would permit. I propose a margin of error no greater than 16.67%, although there is nothing in the 1990 DEP Order that can be cited in justification of that. The new subsection labeled "WATER FLOW" is the <u>only</u> information that can be included on that topic in the PLAN and relied upon by the Members, the Dam Keepers and the Dam Monitors. The table in the disclosure draft on this topic has been deleted as without any authority whatsoever, irrelevant, and misleading. The footnotes are self-explanatory and include the purpose/ reason and rational within the text of each. The Probability component shown in the exposure daft under "Precipitation" heading includes only a "cliff" triggering mechanism. I have added both more thresholds and subsequent provisions applying how to use "probability" in a meaningful way when deciding whether adjustments to the stack of Stop Logs might prudently be considered. As to Rainfall, two categories not included in the Exposure Draft are provided to improve the functional utility of the PLAN. Both the 5-year and 25-year historic categories do not provide any meaningful assistance in real-time decisions required to be made by Dam Keepers and in any event are irrelevant.
4	The changes proposed here reflect the fact the text in the Exposure Draft is not at all as informative to the Dam Keepers and Dam Monitors as persons in each role would find useful. Adding such detail is particularly important where persons filling such roles are all volunteers.
5	The introductory text has been expanded both for clarity and for utility to the Dam, but also for accuracy. The revisions shown it this part of the Exposure Draft are also designed to enhance the potential for the TPIA to achieve full compliance with the DMP and thus greater compliance with the 1990 DEP Order that is currently being maintained.
5.1	Deletions and additions recommended for this subsection of the Exposure Draft make it much less generic and vague than is prudent in assuring that the PLAN actually is an improvement in the attempts by the TPIA to satisfy its obligations under the 1990 DEP Order.
5.2	This subsection highlights that the superficial attempt to characterize the TPIA as having only two group has induced unnecessary stresses and discord within the TPIA: Members favoring "high water" and those favoring "low water." In reality, there seem to be three groups: (a) Members who favor "high water," (b) Members who favor prudent and proactive management of the DAM such that rapid fluctuations in WATER LEVEL are unnecessary, and (c) Members who really do not care. I put myself (and the two Members for whom I serve as attorney-in-fact (not attorney-at-law) in category (b) and reject any justification (other perhaps that a self-benefiting one, which is only "justification" for persons not accepting an obligation to the community, including a fiduciary duty) of category (a) or category (c). This section as it would read with my proposed changes would enhance through

	clarity both the goal of complying with the requirements applicable to the Members of the TPEW and of the DMP and the jobs of Dam Keepers and Dam Monitors.
5.3	There is only one prudent way to deal with actual Heavy Rainfall and High-Water conditions and what appear to be increasing frequency of those conditions: very proactive efforts in actually managing the Dam. Anything less than that is indistinguishable from a roll of the dice. The changes to the Exposure Draft set forth in this mark-up are intended to maximize the benefits of the former and minimize the inadvertent resort to the latter. The table shown in the Exposure Draft at the end of this section has neither utility nor relevance. Perhaps Members would not come to that conclusion had the subcommittee been held to the same standard of involvement as those providing Comments on it are: clear description of the purpose and intent of the table, of how it would be used, and of the rationale both for including it in the Exposure Draft and for the TPIA to accept that rationale and approve implementation of it.
5.3.1	The changes proposed for this section of the Exposure Draft are intended to be merely clarifying but I include them here as I believe the improvements are material.
5.4.1	The changes proposed for this section of the Exposure Draft are intended to be merely clarifying but I include them here as I believe the improvements are material.
5.4.2	The changes proposed for this section of the Exposure Draft are intended to be merely clarifying but I include them here as I believe the improvements are material.
6	The changes proposed for this section of the Exposure Draft are intended to be merely clarifying but I include them here as I believe the improvements are material.
7	[no changes to the Exposure Draft identified for this section, to date]
7.1	The process of identifying both a fair and cost-effective means for providing notification is complicated. The Exposure Draft provides no evidence that it has been given sufficient attention and consideration. The changes proposed for this section are intended to tee that up.
8	The changes proposed for this section of the Exposure Draft are intended to be clarifying but in this case there is much greater need for that in the Exposure Draft case than items 5.3.1, 5.3.2, 5.3.3 and 6. I believe the improvements are bother material and critical.

For Comments set forth in the part preceding a markup of the Exposure Draft (numbered Comments 1-9 above), the purpose/intent and rationale are set forth within the text. The foregoing Annotation is set forth for Comment 10, a markup of the PLAN.