

Lake Hopatcong Water Level Management



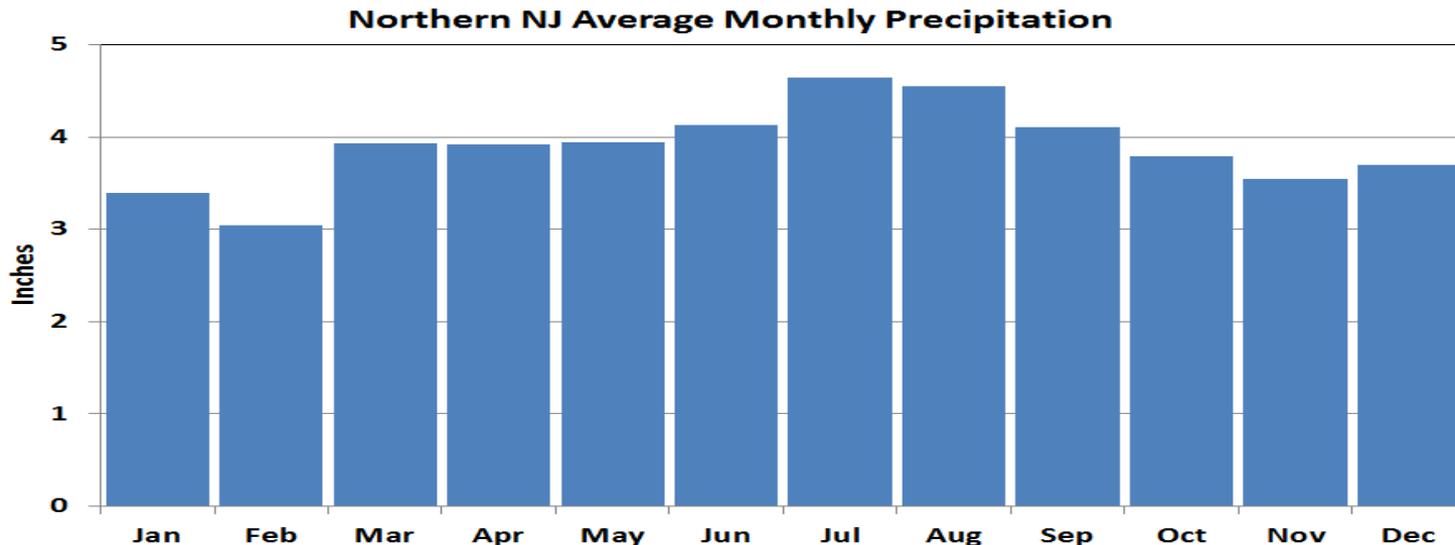
Current Water Level Management Plan

- Annual drawdown of **26 inches to reduce/prevent ice damage to docks** (November-March)
- 5 ft drawdown every 5 years to allow for major dock repairs
- Refill begins once ice has softened (grey ice) around perimeter of lake (March/April)
- Target refill to full pool by June 1
- 12 CFS required outflow

Lake Level Facts

Lake Hopatcong's water level is almost entirely dependent on direct precipitation. (Large lake small watershed)

- Winter 1" rain → ~4" lake rise
- Summer 1" rain → ~2" lake rise



- Summer evaporation → ~6"/month lake decline
- 12 cfs release → 3.6 inches/month lake decline
- 8 cfs release → 2.4 inches/month lake decline
- Late ice greatly affects refill

Lowering Schedule

*Full pool elevation 9 feet

YEAR	MAXIMUM DRAWDOWN	ELEVATION
2010	26"	6.83 ft.
2011	26"	6.83 ft.
2012	26"	6.83 ft.
2013	60"	4.00 ft.
2014	26"	6.83 ft.
2015	26"	6.83 ft.
2016	26"	6.83 ft.
2017	26"	6.83 ft.
2018	60"	4.00 ft.

Annual 26" drawdown to protect docks from ice damage

5 ft. drawdown every five years to allow for more significant dock repair

Lake Refill History

Year	Date Full Pool Reached (9ft)	Extent of Drawdown
2011	June 1	26"
2012	June 4	26"
2013	May 23	60"
2014	April 26	26"
2015*		26"
2016**		26"

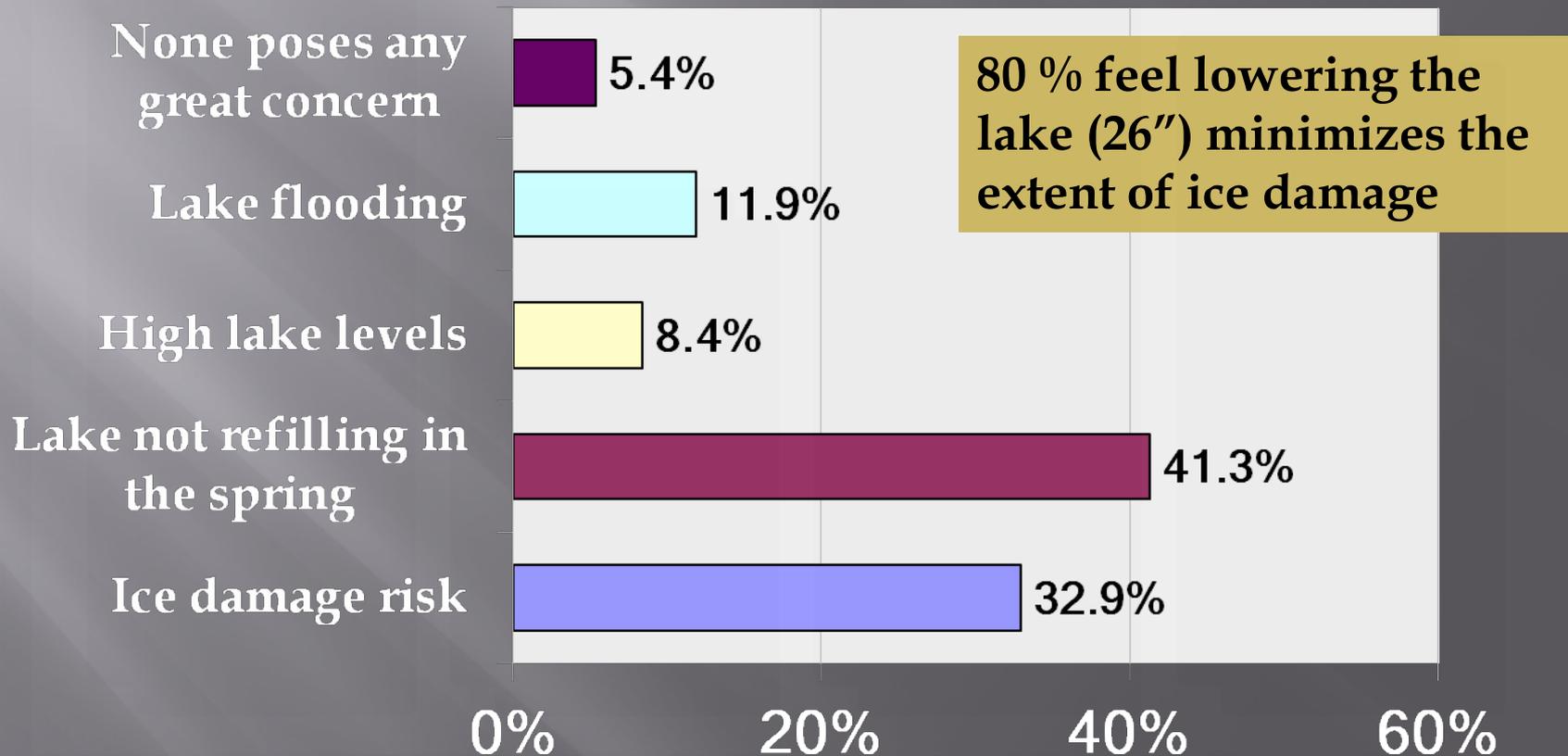
* 2015 – Highest lake level 8.67 on July 16, 2015

**2016 – Highest lake level 8.78 (June 8, 2016)

Current lake level 7.89

2013 Property Owners Survey

As a lake front property owner, what poses the greatest concern?



Plan Modification Recommendation 1

Reduce annual winter drawdown for ice protection from 26" to 22"

- As the lake is refilled by direct precipitation reducing the extent of the annual drawdown is the most effective way of improving lake refill
- The need, and the extent of the annual lowering was extensively discussed during the development of the 2011 plan so the existing 26" lowering was readopted into current plan.

Simulated effect on Lake Level



Spring Refill



- Refill begins once ice has softened (grey ice) around perimeter of lake (March/April)
- Target refill to full pool by June 1
- 12 cfs required outflow
 - Protect downstream resources
 - Trout Maintenance (Temperature Criteria)
 - Not exceed 25°C (77°F) Daily Maximum
 - Not exceed 23°C (73°F) seven day rolling average

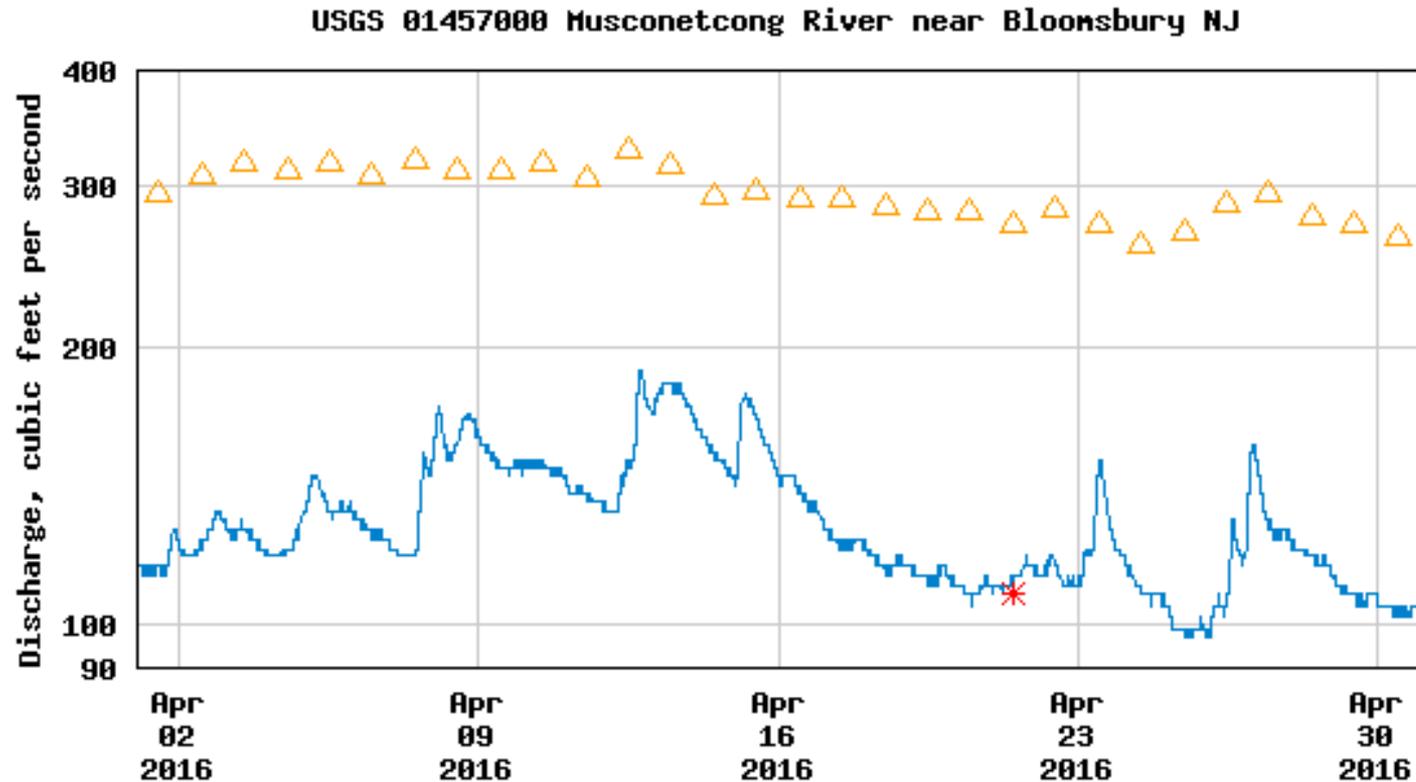
Current Water Level Management Plan

Deviation from 12 cfs outflow may only be considered when:

- Local conditions pose imminent danger to life and property
- A drought warning is declared by NJDEP Commissioner
- **90-day spring precipitation total is less than 7”**
- Summer lake level drops below 8 ft.

**Provided there are minimal impacts to
downstream resources**

90-day spring precipitation is less than 7"



----- Provisional Data Subject to Revision -----

- △ Median daily statistic (96 years)
- * Measured discharge
- Discharge

Deviation from 12 cfs outflow (8 cfs):

- When 90-day precipitation is below 7 inches stream flows are low and often no adjustment can be made without jeopardizing downstream resources.
- NO OPTION in the current plan to reduce outflow when spring stream flows are at or above median levels
- 90-day precipitation totals shift considerable from one day to the next.

Plan Modification Recommendation 2

- Replace current outflow reduction threshold “90-day spring precipitation below 7 inches” with **“from ice out until April 30, provided stream flows are at or above median levels. Provided there are minimal impacts to downstream resources.”**

Important to Remember:

- Reduction to outflow provides minimal benefit in lake level
 - 30 days of a reduced outflow **only** gains 1.2” in lake level

Recommendations for Plan Modifications

1. Reduce annual winter drawdown for ice protection from 26” to 22”
2. Replace current outflow reduction threshold “90-day spring precipitation below 7 inches” with **“from ice out until April 30, provided stream flows are at or above median levels. Provided there are minimal impacts to downstream resources.”**

Results in 4 inch to possible 6 inch increase, depending on rainfall, in lake level each spring

Public Notification:

- Mayors, Lake Hopatcong Commission members and CAC members informed of the proposal
- LK Hopatcong Commission Meeting (July 18)
- Citizens Advisory Committee Meeting (August 5)
- Certified mailing to lakefront property owners
- Websites/Newspapers

Public Comment:

- Public Hearing September 19 (Jefferson)
- Written Comment:
- Email: HWLMPproposalcomment@dep.nj.gov
- Letters: 401 East State Street, Box 402,
Trenton, NJ 08625 Att: Kerry Pflugh

**Public comment open
until October 19, 2016**

Recommendations for Plan Modifications

1. Reduce winter drawdown from 26” to 22”
2. Replace current outflow reduction threshold “90-day spring precipitation below 7 inches” with **“from ice out until April 30, provided stream flows are at or above median levels. Provided there are minimal impacts to downstream resources.”**

**Please keep comments specific
to the two proposed changes**