

**TOWN OF WINDHAM
WATERSHED PROTECTION FUND
2017 GRANT APPLICATION**

Eligible Projects: Grant funds can only be used for the protection or restoration of water bodies located in whole, or in part, within the Town of Windham. Preference will be shown toward non-profit organizations that are based in Windham. Preference will also be shown toward projects that will promote the sharing of equipment, knowledge, and other resources with other non-profit groups in the Town of Windham.

Application Deadline: The grant application deadline is February 10, 2017. All applications must be delivered to the Windham Town Manager's Office by that date. Incomplete applications will not be accepted. Applicants will be notified of incomplete applications within five days of their receipt at the Town Manager's Office.

Grant Award and Disbursement: The Windham Town Council will complete their review of the applications and select grant recipients by March 14, 2017. All applicants will be notified by mail of the Council's decision. Projects that have been awarded a grant will receive the funds by April 11, 2017. The Town reserves the right to grant all, or any part, of the total amount requested.

Deliverables: Grant recipients will be required to submit a Final Report upon completion of all project activities. The Final Report shall include an accounting of all income and expenses presented in the same format as the original budget spreadsheet, a list of accomplishments, digital photographs, and the name of the organization responsible for maintaining any equipment or infrastructure associated with the project.

Applicant Contact Information:

Applicant Name HIGHLAND LAKE ASSOCIATION
Contact Person TOM BANNEN - PRESIDENT
Address PO BOX 1684 WINDHAM 04062
City WINDHAM State MAINE Zip Code 04062
Phone 207-878-3962 Fax 207-556-4370
E-mail TBANNEN@MYFAIRPOINT.NET

NON-TEXT

Qualifications and Experience:

In 500 words, or less, present a brief summary of applicant qualifications to carry out the project. Summarize relevant experience and financial, administrative, and technical qualifications of the organization. Summarize relevant experience of the person that will manage the project. (Attach more pages, if necessary.)

SEE ATTACHED.

Project Schedule and Cost:

Planned Duration: Start Date: APRIL 21, 2017 End Date: NOVEMBER 15, 2017

Total Cost of the Project \$ \$7,000 TO \$70,000 DEPENDING ON RESOURCES AVAILABLE

Amount Requested from the Windham Watershed Protection Fund \$ 7,000

Matching Funds: Cash: \$ 2,000 Services: \$ 2,500

Who will provide the matching funds/services? HIGHLAND LAKE ASSOCIATION
WILL PROVIDE THE FUNDS AND VOLUNTEER HOURS.

APPLICATION TO: TOWN OF WINDHAM

FROM: HIGHLAND LAKE ASSOCIATION

RE: TOWN OF WINDHAM WATERSHED PROTECTION FUND 2017

The Highland Lake Association (HLA) based in Windham, is offering the following proposal for participation in the Town of Windham Watershed Protection Fund 2017.

Highland Lake has seen a significant and recurring lake-wide green algae bloom for the past three years, occurring at the same time of year, all over the Lake at all depths. "Picoplankton" has finally been named the culprit — thanks to extensive water testing and study by our own water quality committee, Maine Department of Environmental Protection (MDEP), various scientists (and their students) associated with five different universities, the Lakes Environmental Association (LEA). However, its source and any mitigation remains a mystery.

At this time, Highland Lake is the only lake in the State of Maine known to have this unique — and detrimental — phenomenon. Our lakes present not only amazing recreation to our residents and our visitors and wildlife habitat, they also offer great economic benefit to their respective communities. Because HLA has named finding answers to this strange algae bloom as a number one priority, we are seeking additional funding sources to expand our water testing perimeters.

Since the HLA has limited funds to combat this Picoplankton bloom, we are asking for **\$7,000** to be directed towards water testing, lab analyses, watershed reconnaissance, nutrient source investigation, increased public awareness of best land use practices, and enhanced communication that is all specific to this unique and mysterious algae bloom. We offer **\$2,000** in direct matching funds and a minimum of 100 hours of volunteer time in 2017. We will also continue to partner with the MDEP, CCSWD, and LEA to obtain their technical expertise and assistance.

One significant benefit of this work would be to understand the steps that enhance the management and mitigation of such an unusual algae bloom, providing an easily-shared template to Windham's watershed community.

If we had nearly unlimited resources, we could spend more than **\$70,000** on this effort *this year* on modern sampling equipment, university grad student services, chemistry/microbiological professional lab experiments and travel expenses to bring in limnology experts from outside our area. To remedy this algae problem could cost upwards of **\$500,000** depending on root cause and discoveries of affecting inputs.

QUALIFICATIONS

HLA is fortunate to have five DEP-certified water quality monitors on its team, including two with hydrology-related Ph.D's. We have more than 60 years of combined sampling and testing experience, and actively share our lake's data and analysis with a wide range of interested entities and academic groups.

For many years HLA has processed more water samples each season than any other lake in Maine, that isn't a drinking water supply. Our team is engaged and well-connected to the limnologists in New England, as well as local groups whose goals are to protect and enhance water supplies and watersheds in Maine. We manage to do this on a limited budget through careful prioritization and strong volunteer efforts.

In the late 1990s and the 2000s, the HLA partnered with the Cumberland County Soil and Water Conservation District (CCSWCD) to utilize a Clean Water/MDEP 3-year grant to successfully reverse a declining water quality trend. Several of our current board members were significant leaders and contributors to that effort. The Town of Windham, in fact, played a key role in managing payment for — and providing equipment — to the first-ever Youth Conservation Corp. The activities within this grant period, have served as a model for CCSWCD as they worked with other lakes and towns. We have maintained the knowledge and expertise to manage another grant such as this.

We expect to have no difficulty meeting deliverables, and look forward to working with town officials to exact them in detail. As a trained project manager, Tom Bannen, president, HLA, will manage the project; the HLA board, consisting of 14 other members, will oversee as well.

I am happy to answer any questions on this matter.

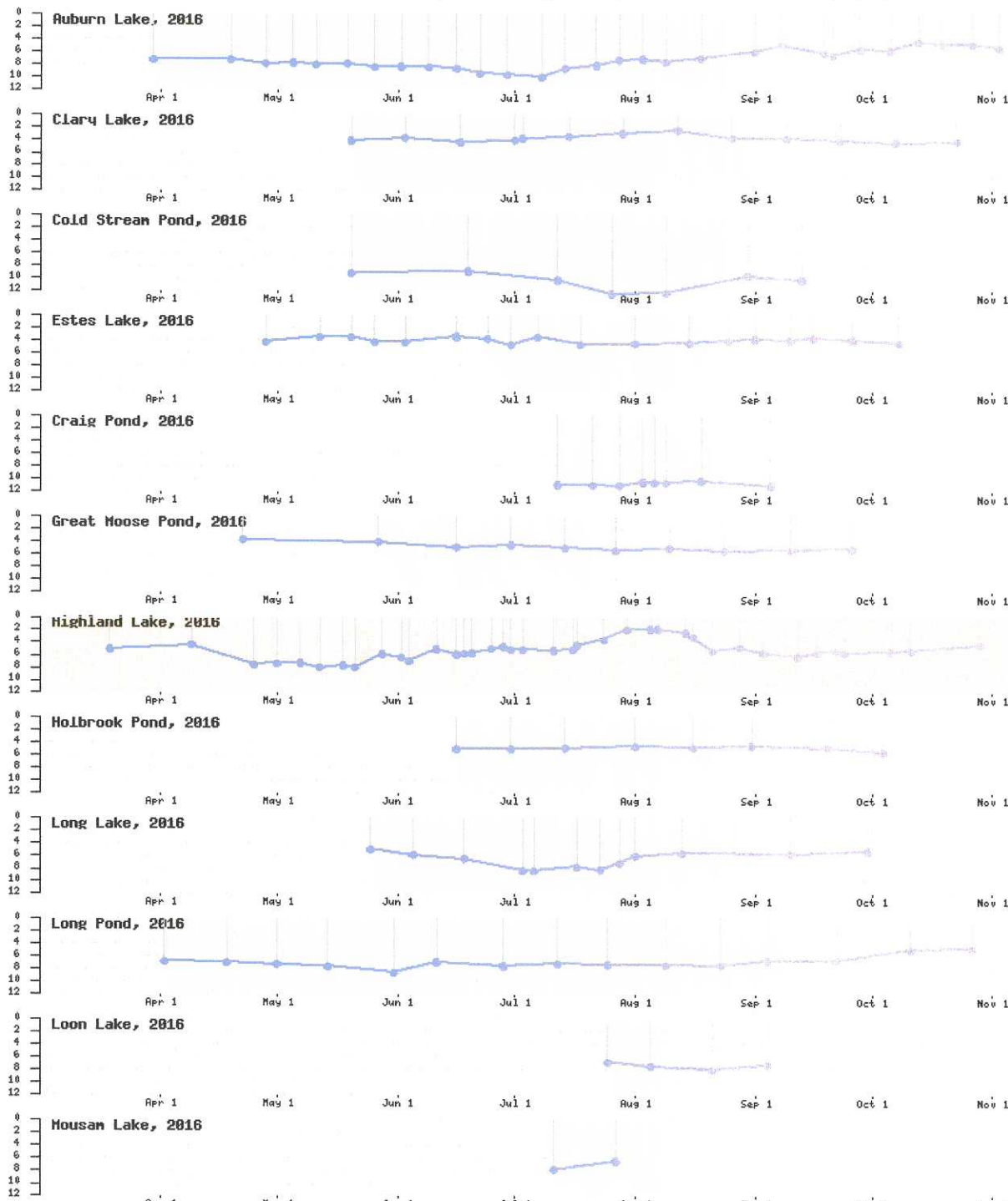
Tom Bannen, president

Highland Lake Association Windham, Maine

2016

ALGAE BLOOM IN HIGHLAND LAKE

WATER CLARITY EXPRESSED IN METERS OF DEPTH A SECCHI DISK CAN BE SEEN.



NOTE THE MID-SUMMER SHIFT IN CLARITY

ALL DATA COLLECTED BY DEP-TRAINED CERTIFIED SAMPLERS.

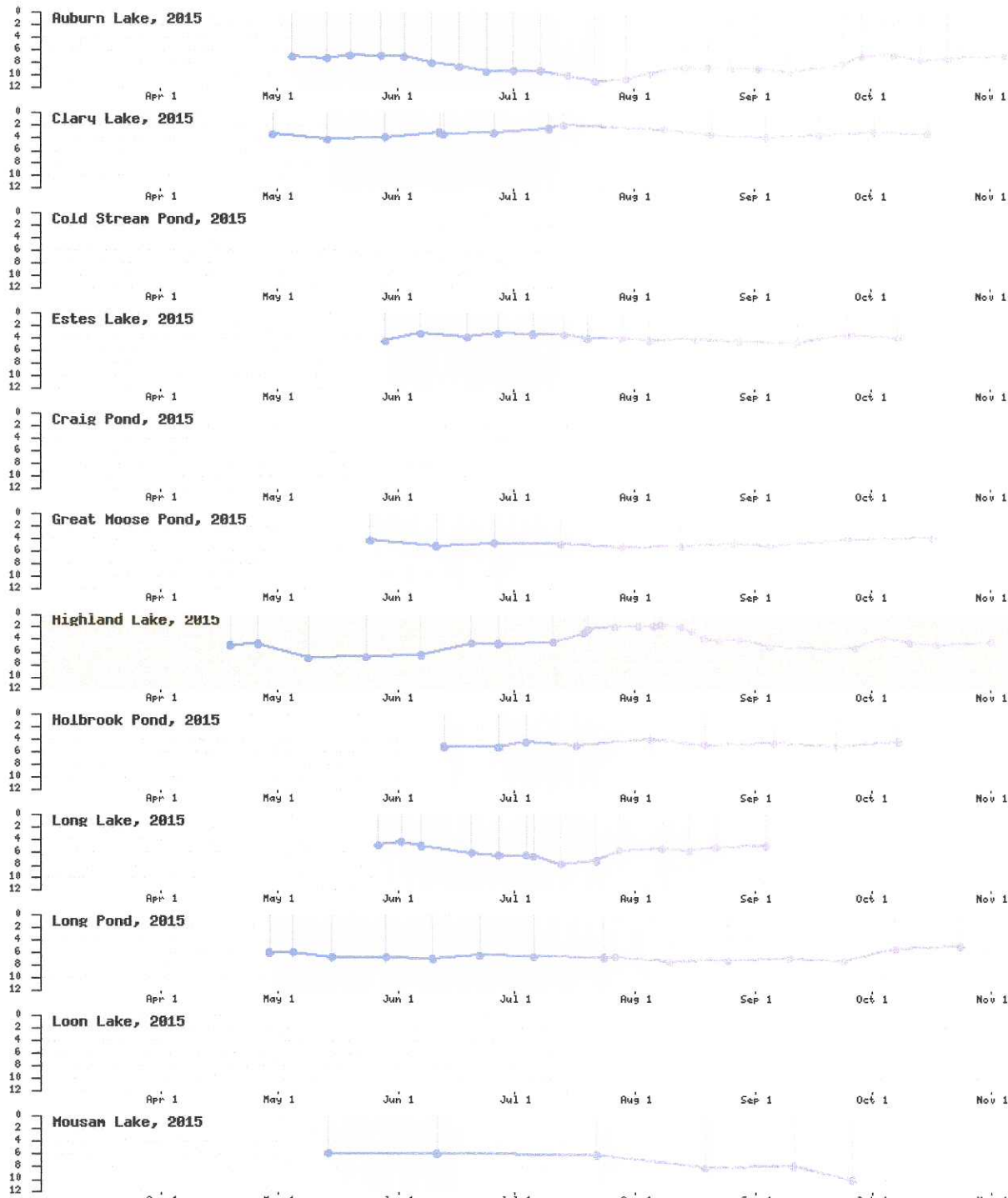
2015

WATER CLARITY
EXPRESSED IN
METERS OF
DEPTH A
SECCHI DISK
CAN BE SEEN.

ALGAE BLOOM IN HIGHLAND LAKE



Secchi depth (m)



NOTE THE
MID-SUMMER
SHIFT IN
CLARITY

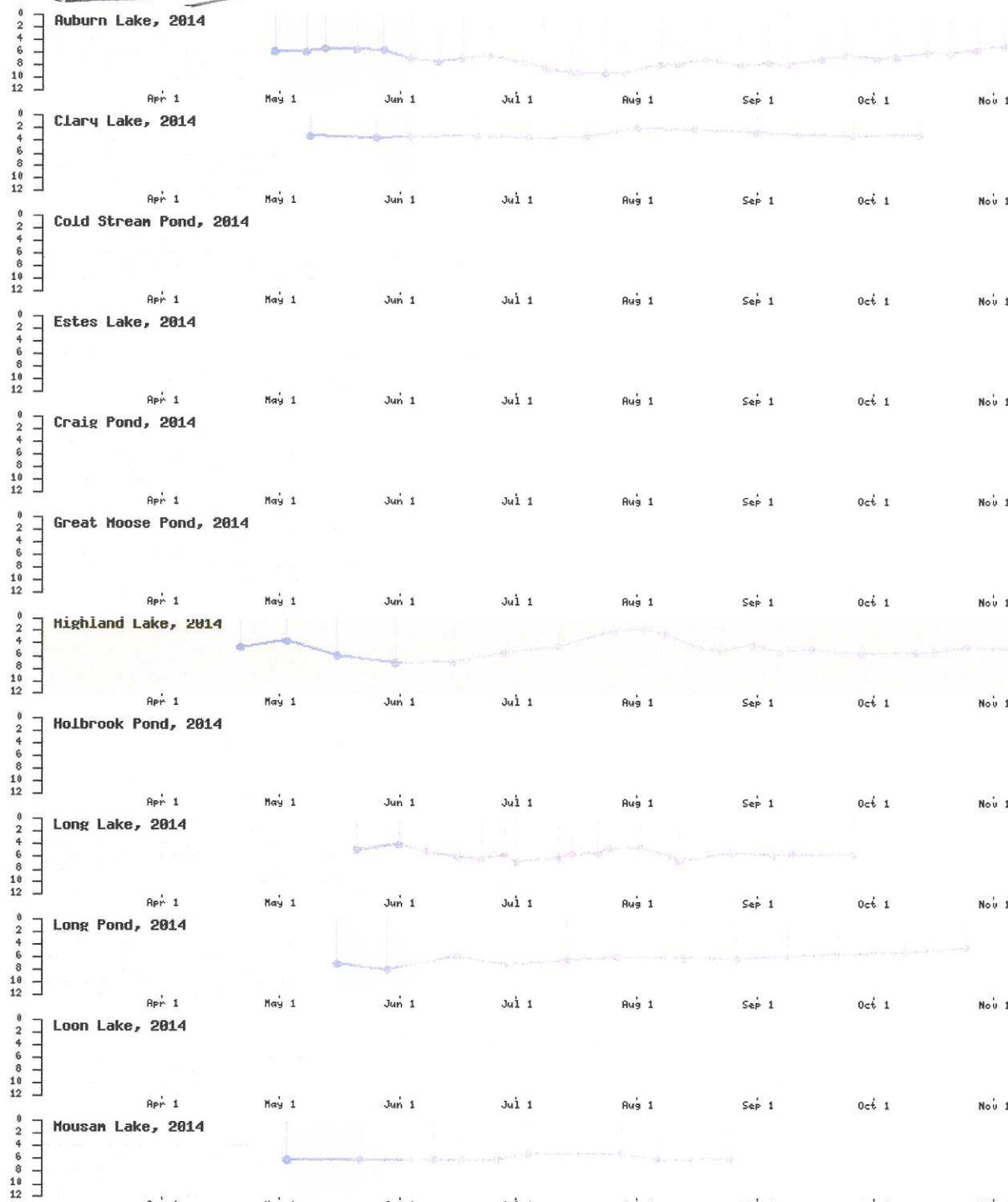
2014

FIRST YEAR OF ALGAE BLOOM IN HIGHLAND LAKE

WATER CLARITY
EXPRESSED IN
METERS OF
DEPTH A
SECCHI DISK
CAN BE SEEN.



Secchi depth (m)



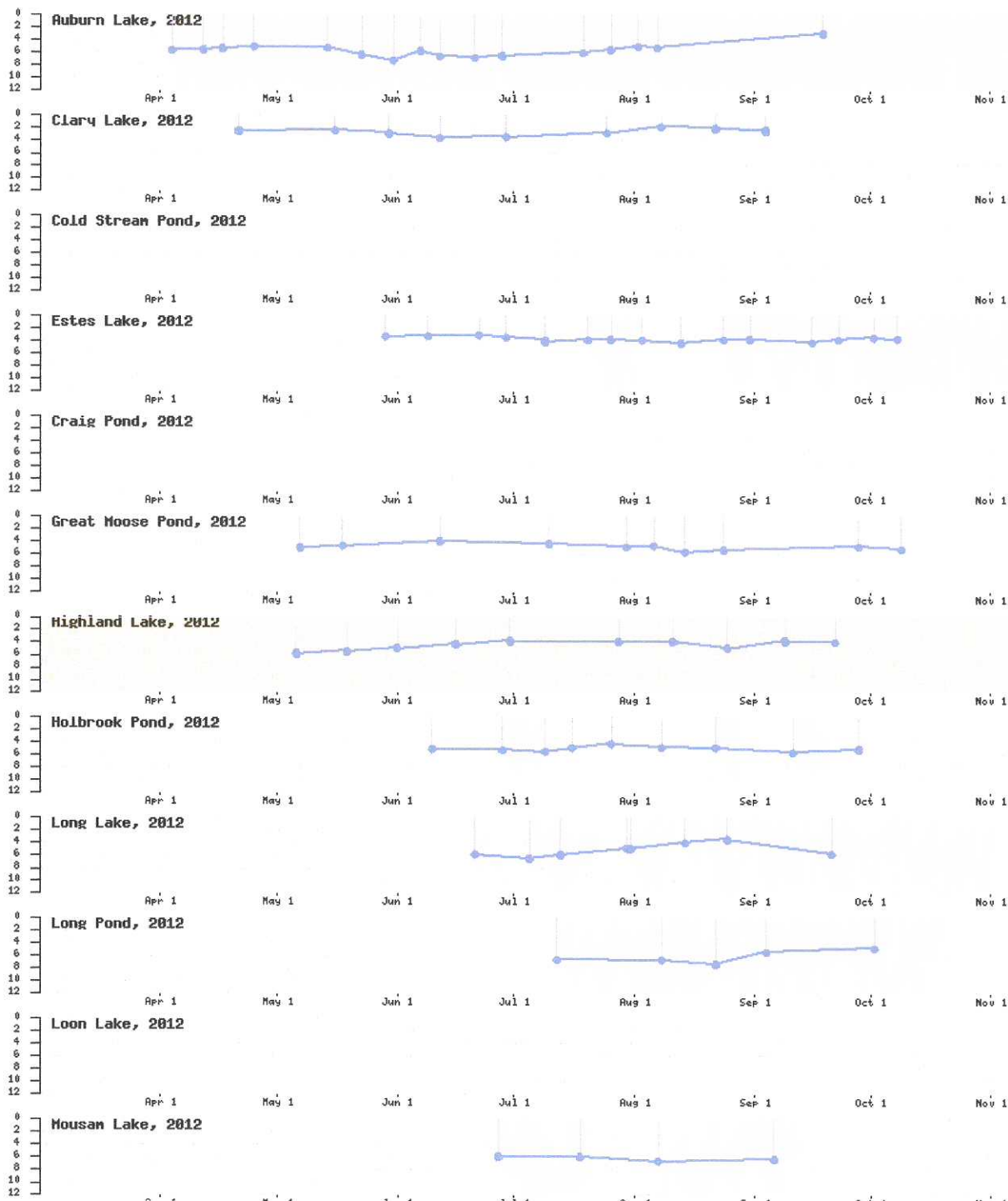
NOTE THE
MID-SUMMER
DROP IN
CLARITY

2012

WATER
CLARITY
EXPRESSED IN
METERS OF
DEPTH A
SECCHI DISK
CAN BE
OBSERVED.

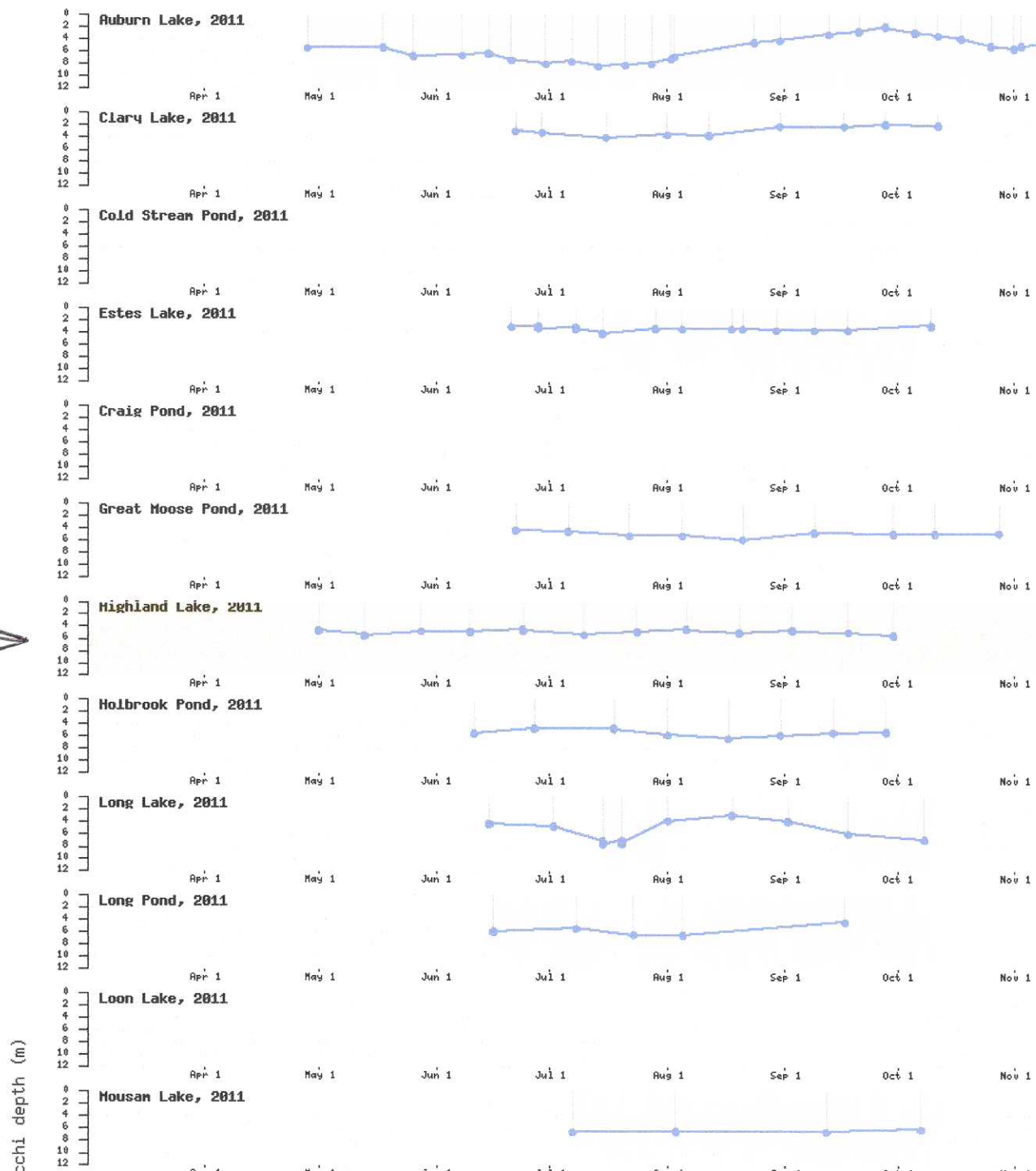


Secchi depth (m)



NOTE THE
NORMAL CLARITY
THROUGHOUT
THE
SUMMER.

2011

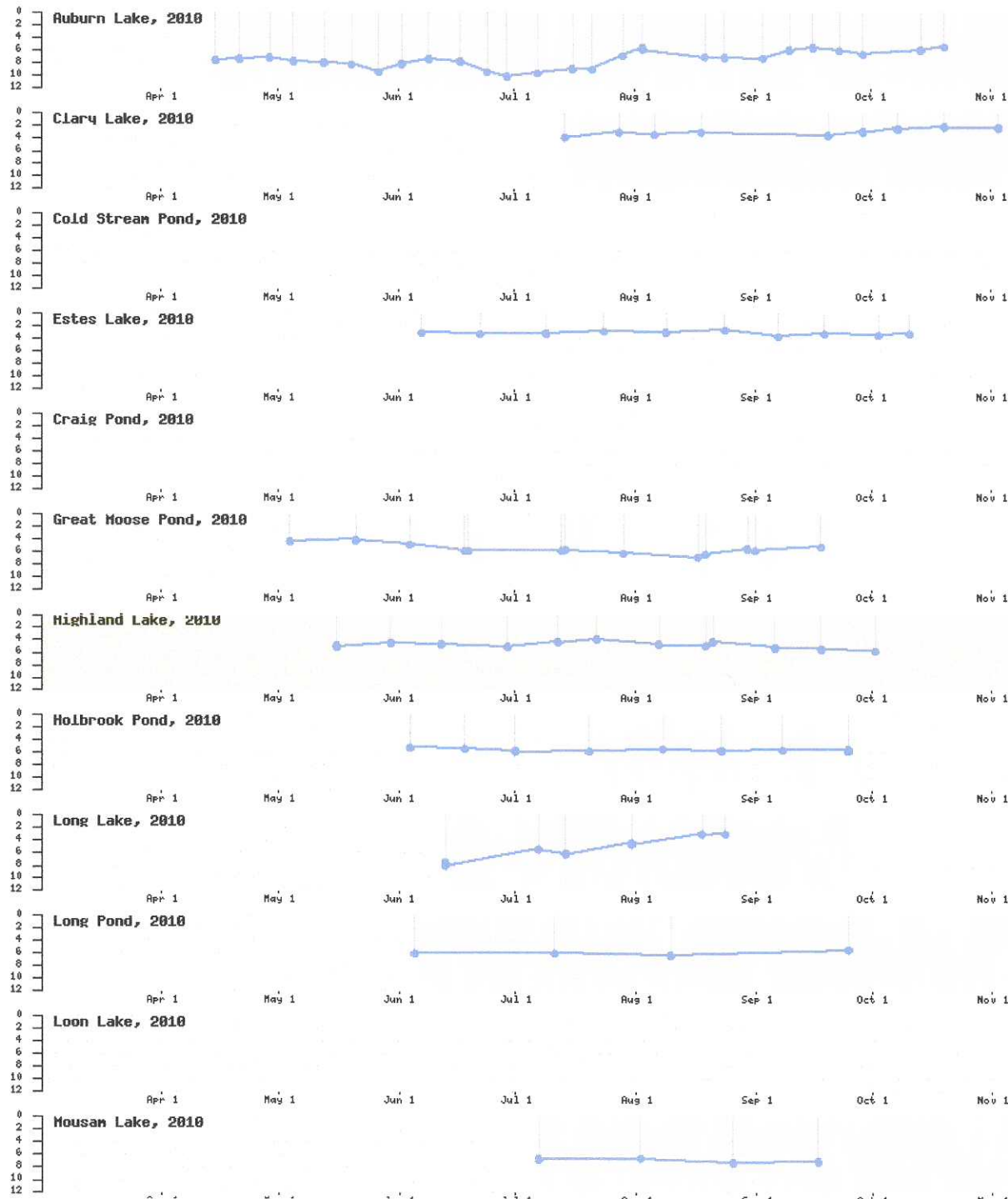


NOTE AN EVEN
AMOUNT OF CLARITY
ALL SEASON
LONG

2010



chi depth (m)

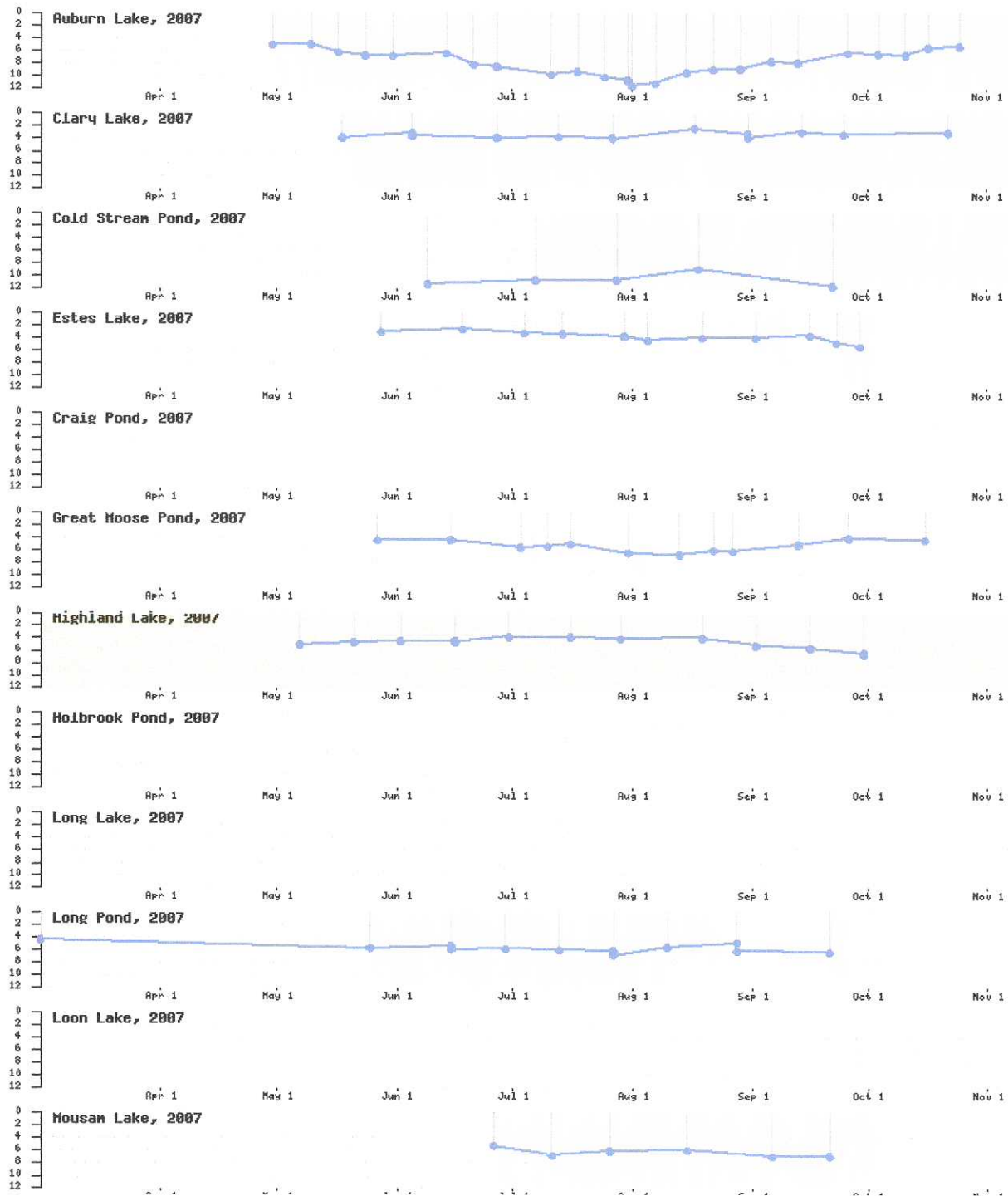


NOTE THE
EVEN AMOUNT
OF CLARITY
ALL SEASON.

2007



chi depth (m)



NORMAL
CLARITY
ALL
SEASON.