

Investigating changes in water quality in Jordan Pond, Mount Desert Island, Maine

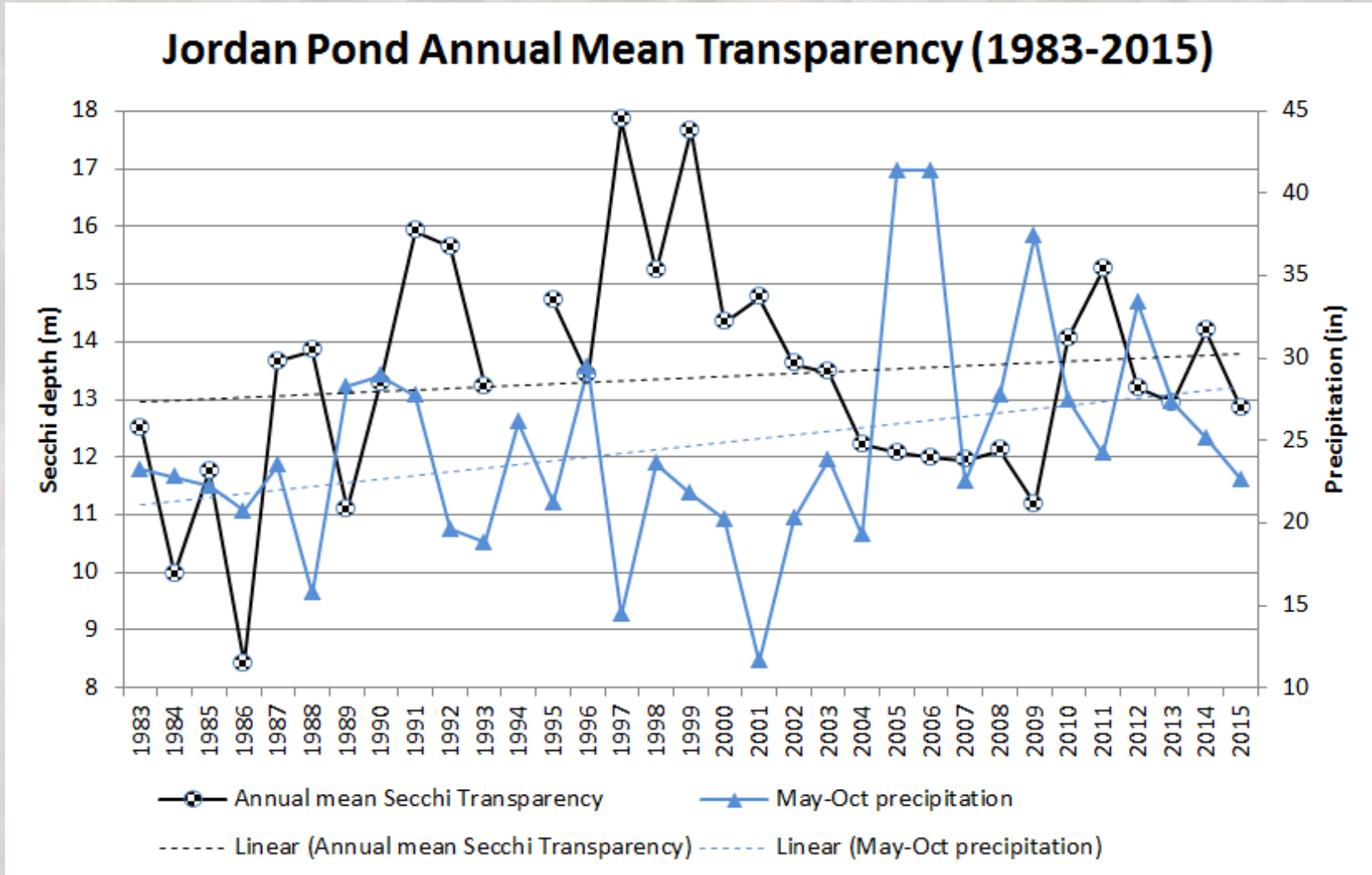
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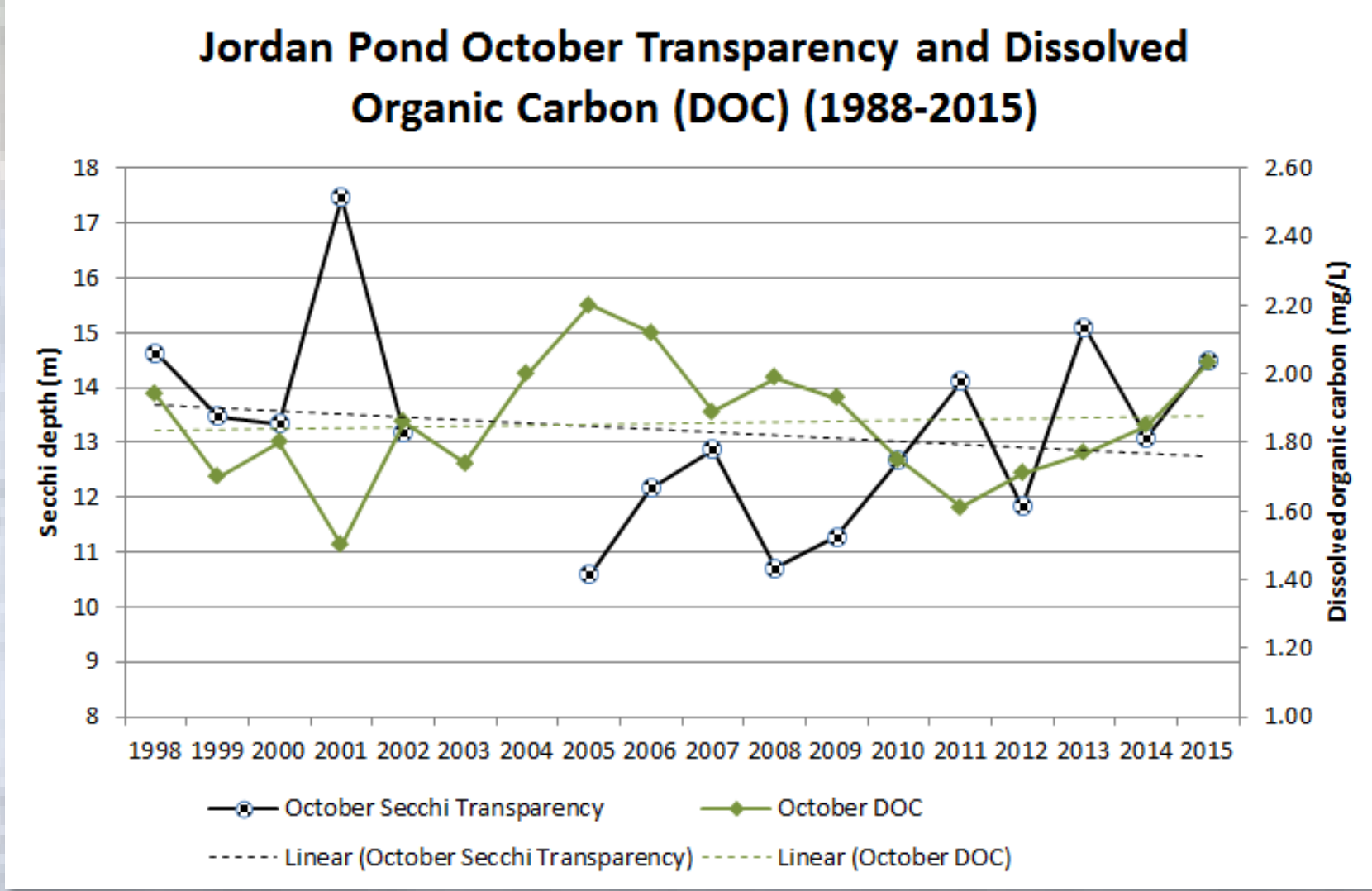
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What we know...

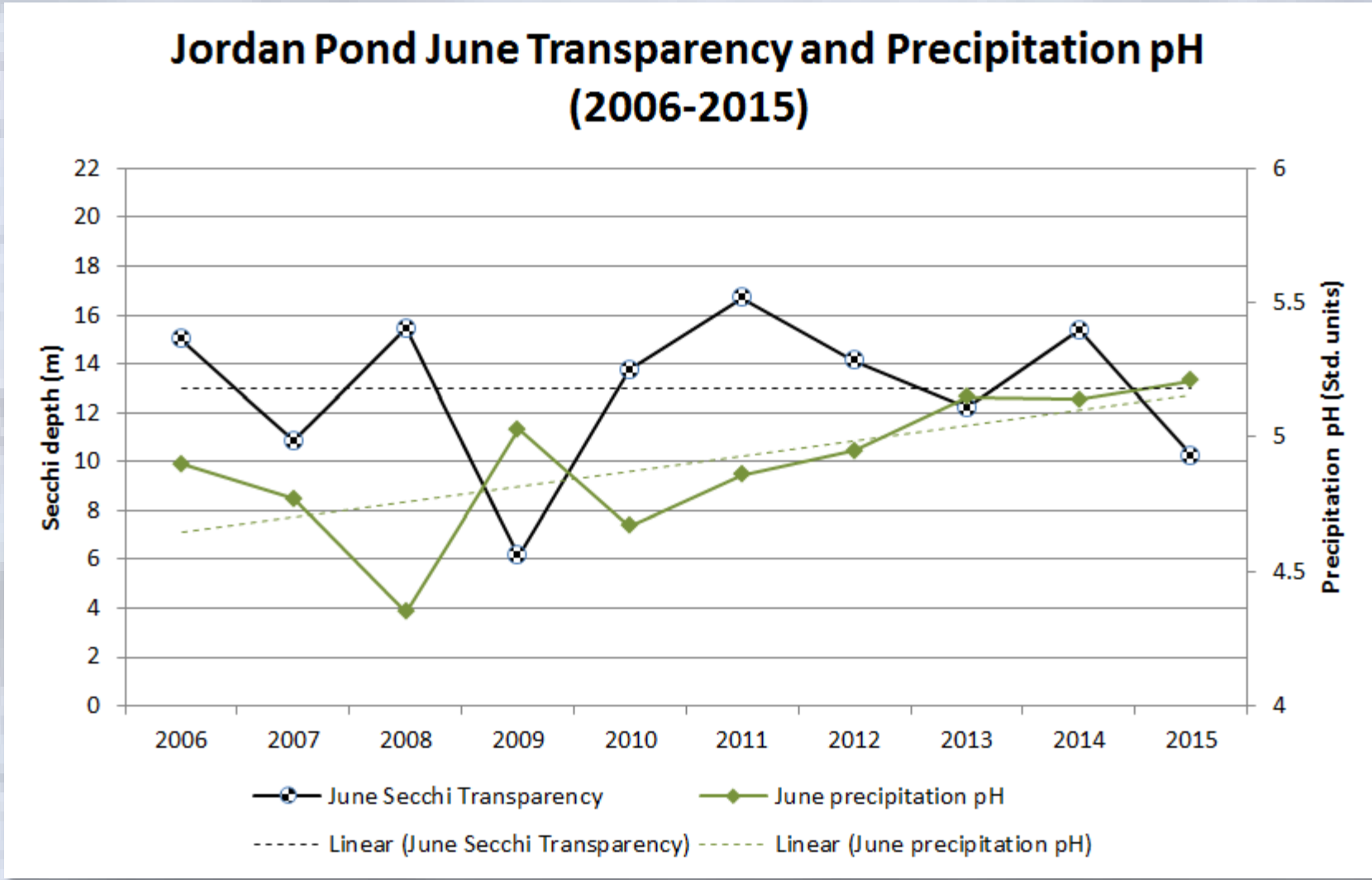
Lake water clarity (transparency) is a general indicator of overall water quality. Clarity is reduced after precipitation events, and tends to be higher in dryer seasons.



Rain events introduce dissolved organic matter that affects light transmission through the water.



Higher precipitation pH allows more dissolved organic matter to be released from the watershed.



How we investigate...

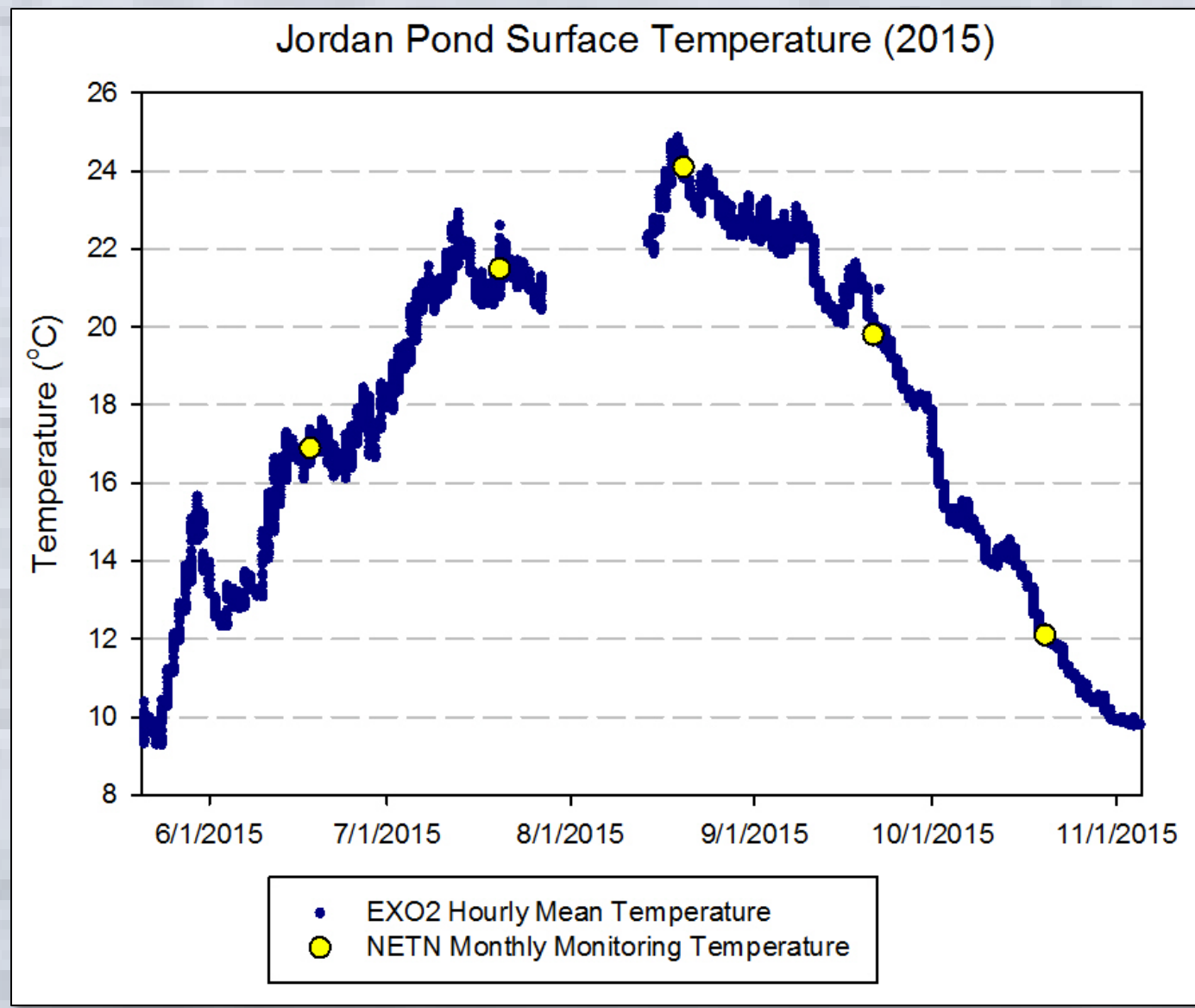
Sensors on the monitoring buoy in Jordan Pond measure temperature, oxygen, pH, chlorophyll, and more every 15 minutes.



Underwater light cells measure light attenuation, which affects water clarity.

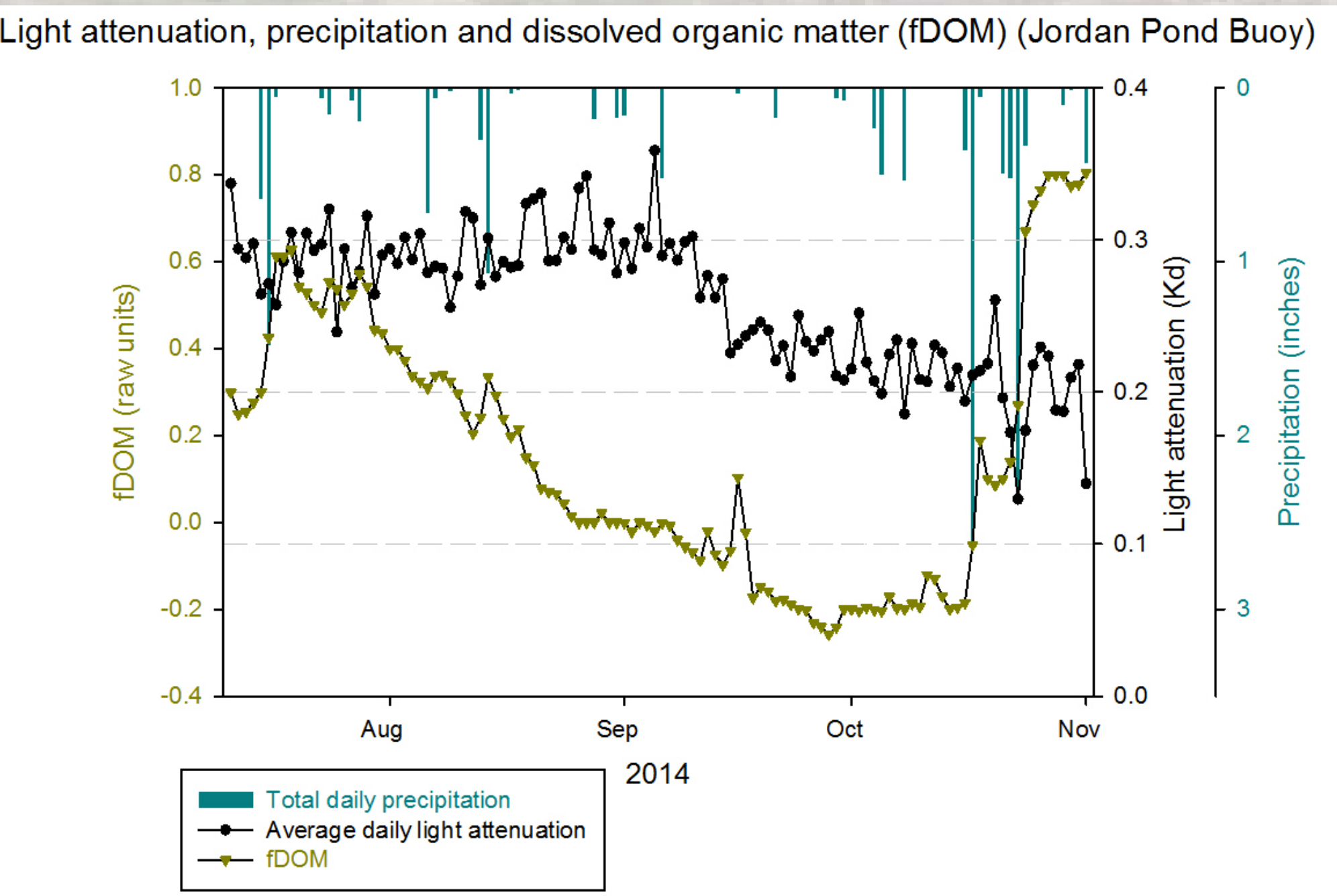


This continuous data fills in the gaps between the information gathered during monthly monitoring visits.



What we're learning...

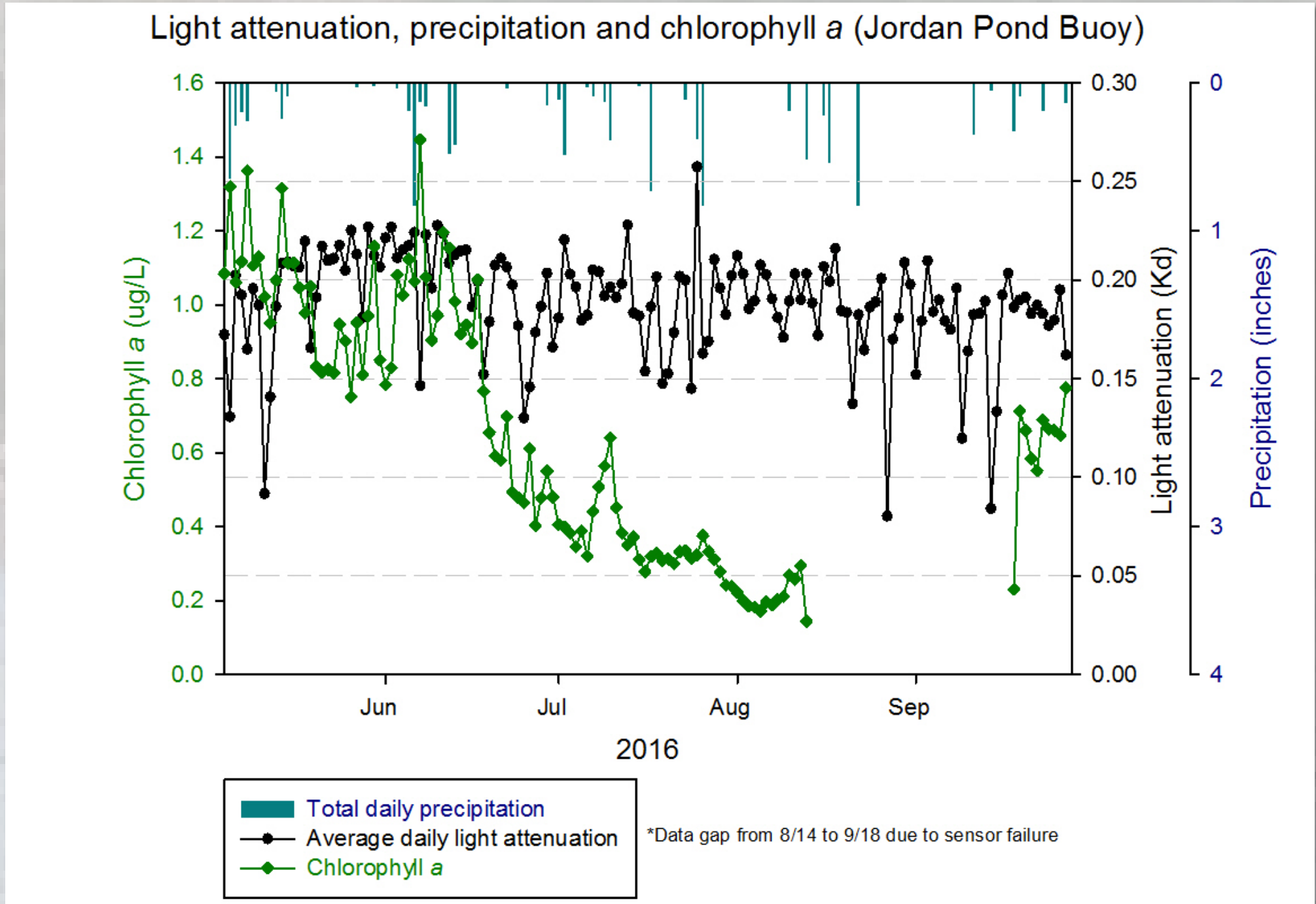
Four years of continuous monitoring have helped us begin to understand the relationships between water clarity and physical and biological processes in Jordan Pond.



The data illustrate how influxes of organic matter (fDOM) after rain events increase light attenuation, lowering water clarity.

The increased light attenuation inhibits phytoplankton production, as indicated by chlorophyll *a* levels.

This relationship appears evident even in low-precipitation years like 2016.



Jordan Pond Buoy Project

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For more information and near real-time data, visit

<http://www.jpbuoy.com/>