

MARCHS POND

2025 SAMPLING HIGHLIGHTS

Station Deep

New Durham, NH



Water quality data displayed in Tables 1 and 2 are surface water measurements with the exception of the dissolved oxygen data that are collected near the lake bottom. Summary statistics are provided for monthly samples collected between May 27 and September 22, 2025.

Blue = Oligotrophic

Yellow = Mesotrophic

Red = Eutrophic

Gray = No Data

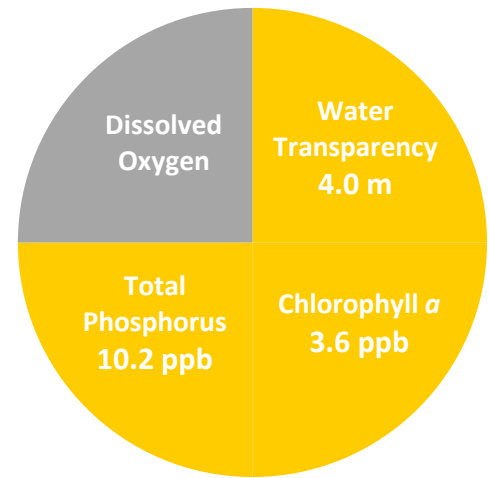


Figure 1. Marches Pond Water Quality (2025)

Table 1. 2025 Marches Pond Seasonal Averages and NH DES Aquatic Life Nutrient Criteria¹

Parameter	Oligotrophic	Mesotrophic	Eutrophic	Marches Pond Average (range)	Marches Pond Classification
Water Clarity (meters)	> 4.0 – 7.0	2.5 - 4.0	< 2.5	4.0 meters (2.4 – 6.1)	Mesotrophic
Chlorophyll <i>a</i> ¹ (ppb)	< 3.3	3.3 – 5.0	> 5.0 – 11.0	3.6 ppb (2.5 – 5.2)	Mesotrophic
Total Phosphorus ¹ (ppb)	< 8.0	8.0 – 12.0	> 12.0 – 28.0	10.2 ppb (6.6 – 13.7)	Mesotrophic
Dissolved Oxygen (ppm)	> 5.0 – 7.0	2.0 – 5.0	< 2.0	Not Assessed *	Not Assessed

* Marches Pond did not develop a mid or deep-water layer that is the basis for the dissolved oxygen classification criteria.

Table 2. 2025 Marches Pond Seasonal Average Accessory Water Quality Measurements

Parameter		Assessment Criteria		Marches Pond Average (range)		Marches Pond Classification	
Color (color units)	< 10 uncolored	10 – 20 slightly colored	20 – 40 lightly tea colored	40 – 80 tea colored	> 80 highly colored	10.8 color units (range: 8.6 – 14.0)	Slightly colored
Alkalinity (ppm)	< 0.0 acidified	0.1 – 2.0 extremely vulnerable	2.1 – 10 moderately vulnerable	10.1 – 25.0 low vulnerability	> 25.0 not vulnerable	5.7 ppm (range: 4.8 – 6.5)	Moderately vulnerable
pH (std units)	< 5.5 suboptimal for successful growth and reproduction		6.5 – 9.0 optimal range for fish growth and reproduction		7.2 standard units (range: 7.0 – 7.4)		Optimal range for fish growth and reproduction
Specific Conductivity (uS/cm)	< 50 uS/cm Characteristic of minimally impacted NH lakes		50-100 uS/cm Lakes with some human influence		> 100 uS/cm Characteristic of lakes experiencing human disturbances		84.6 uS/cm (range: 77.2 – 88.7) Characteristic of lakes with some human influence

Figure 2. Marchs Pond (2025 Seasonal Data)
Secchi Disk Transparency and Chlorophyll *a* Data

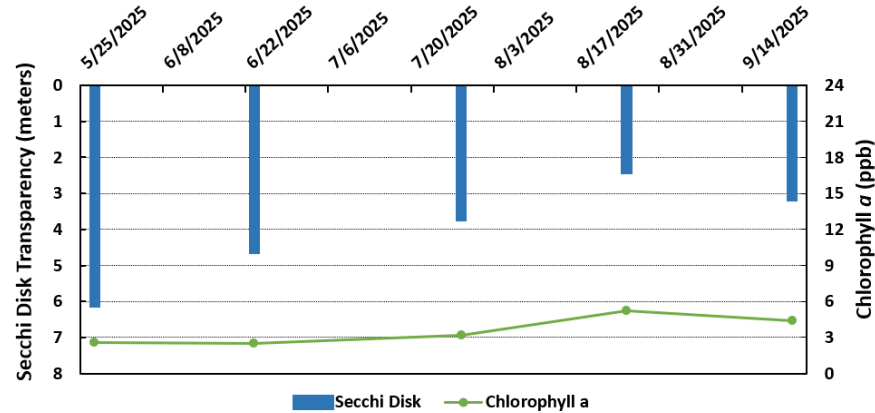


Figure 3. Marchs Pond (2025 Seasonal Data)
Secchi Disk Transparency and Dissolved Color Data

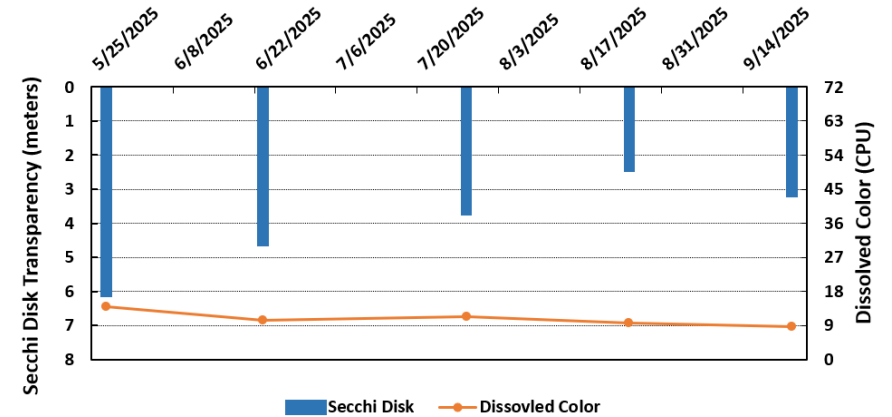


Figure 4. Marchs Pond - Deep Site (1984-2025)
Long-term Secchi Disk Transparency and Chlorophyll *a* Data

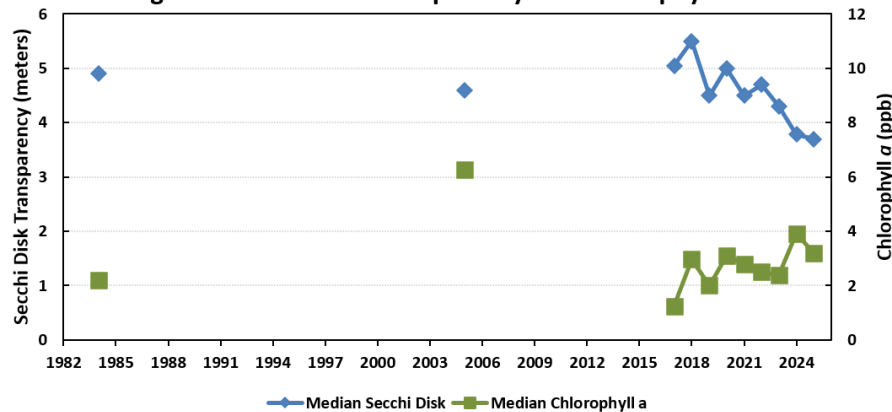
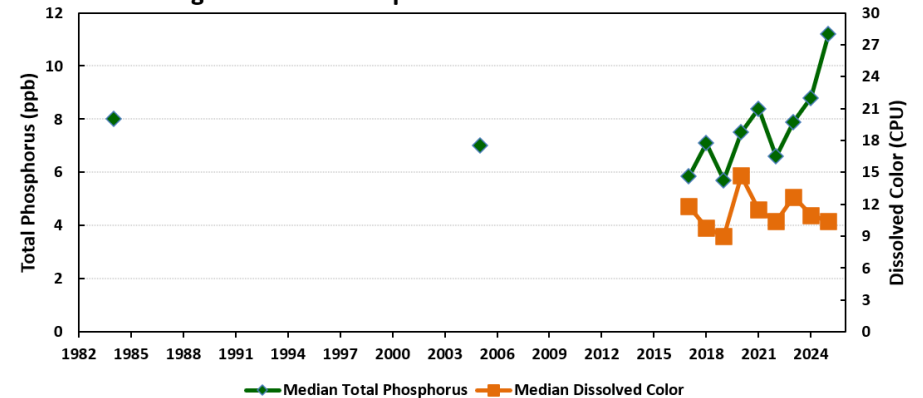


Figure 5. Marchs Pond - Deep Site (1984-2025)
Long-term Total Phosphorus and Dissolved Color Data



Figures 2 and 3. Seasonal comparison of Marchs Pond water transparency (Secchi Disk depth), chlorophyll *a*, and dissolved color for 2025. Shallower water transparency measurements oftentimes correspond to increases in chlorophyll *a* and/or color concentrations.

Figures 4 and 5. Annual median Marchs Pond water transparency, chlorophyll *a*, dissolved color, and total phosphorus concentrations measured between 1984 and 2025, through the New Hampshire Lakes Lay Monitoring Program and the New Hampshire Department of Environmental Services. The long-term data provide insight into the water quality fluctuations, among years, that have been documented in Marchs Pond.

Figure 6. Marchs Pond - Site Deep
Temperature Profiles (May 27 - September 22, 2025)

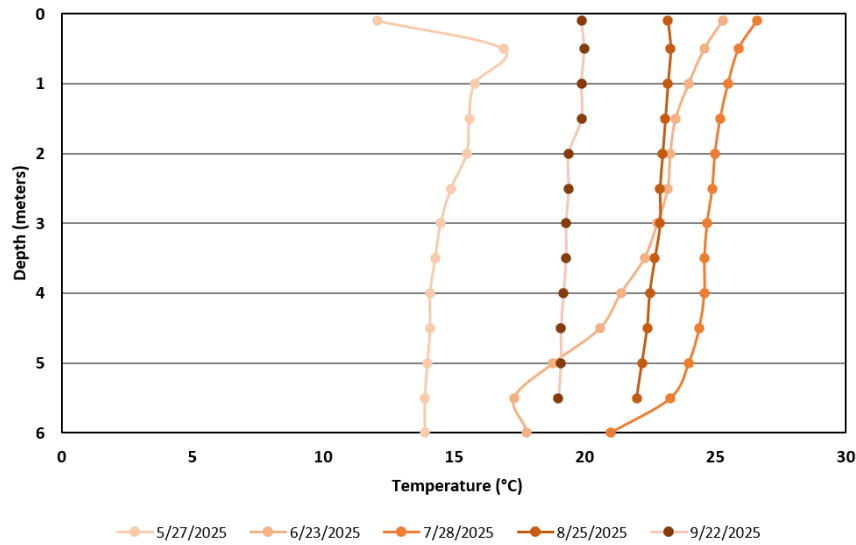


Figure 7. Marchs Pond - Site Deep
Temperature Profiles (May 27 - September 22, 2025)

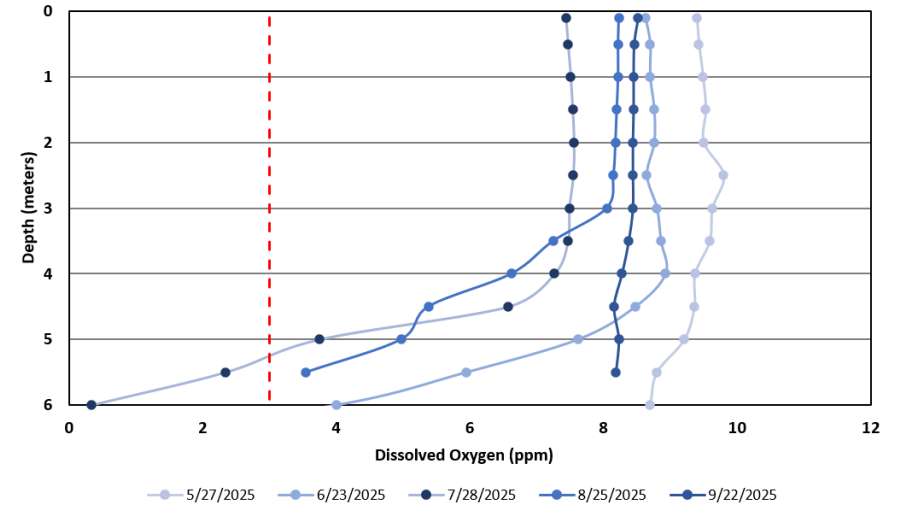


Figure 8. Marchs Pond - Site Deep
Specific Conductivity Profiles (May 27 - September 22, 2025)

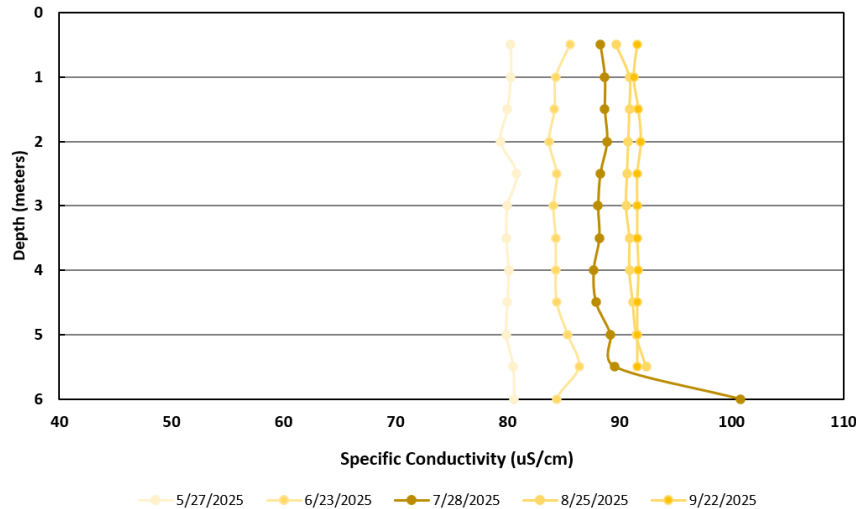
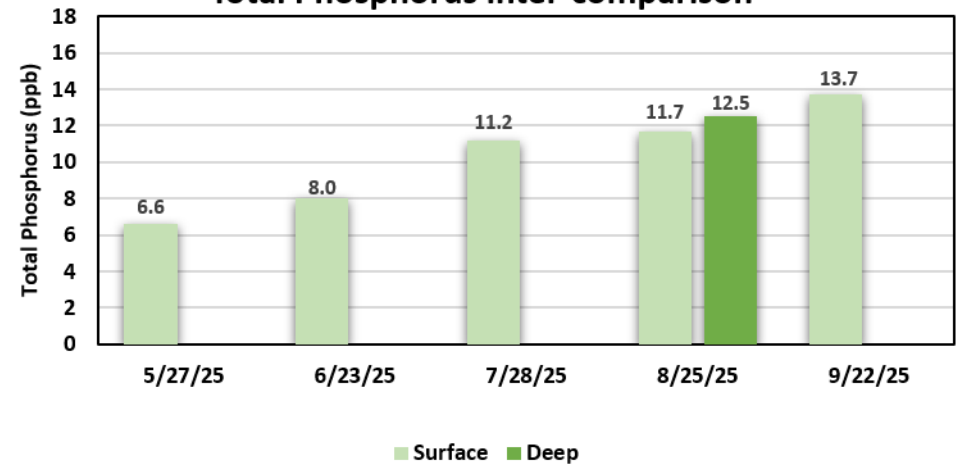


Figure 9. Marchs Pond - Site Deep
Total Phosphorus inter-comparison



Figures 6, 7, and 8. Temperature, dissolved oxygen, and specific conductivity profiles display the water quality differences in 0.5-meter increments. Notice the decreasing dissolved oxygen concentrations, near the lake bottom, through the season. The dashed vertical red line in Figure 7 displays the dissolved oxygen threshold for the successful growth and reproduction of warm-water fish such as bass and perch.

Figure 9. Total phosphorus comparison between the surface (epilimnion) and bottom water zones.

Data Interpretation: Overview of factors to consider when reviewing the Marchs Pond data

This highlight report provides a general overview of the current and historical conditions of Marchs Pond. The report is intended to provide a simple assessment of the water quality trends. Should you have additional questions about interpreting your water quality results, we would be happy to discuss the data with you and/or any concerns you may have. In general, some factors that influence the current and long-term water quality results/trends for our New Hampshire lakes and ponds include:

- **Land-use Patterns** within the watershed (drainage basin) – Research indicates land-use patterns have an impact on how much phosphorus (nutrient) is washing into our lakes. In general, more urbanized watersheds have a greater degree of phosphorus runoff than highly forested/vegetated drainage areas.
- **Weather Patterns** – Rainfall and temperature can influence water quality. Wet periods, and overland runoff, tend to be a time when elevated nutrients and other pollutants are transported into our lakes. Temperature can also influence water quality conditions since many aquatic plants and algae tend to respond to changing seasonal conditions. Unusually warm periods are sometimes tied to short-term algal and cyanobacteria blooms.
- **Best Management Practices (BMPs)** – The presence/absence of best management practices can have an interplay on water quality. BMPs are measures that are used to manage nutrients and other pollutants that could otherwise make their way into our lakes. Properties that employ BMPs, designed specifically to remove pollutants of concern (e.g. sediments and phosphorus), are less likely to contribute nutrients and other pollutants into our lakes.
- **Temperature (Thermal) Stratification** – Many lakes become thermally stratified during the summer months and may form three distinct thermal layers: upper water layer (epilimnion), middle lake layer (metalimnion), and bottom cold-water layer (hypolimnion). These thermal zones form a barrier to lake mixing, during the summer months, and can coincide with differences in dissolved oxygen and specific conductivity through the water column (Figures 6, 7, and 8).

Internal Nutrient Loading (nutrients that are introduced from the sediments along the lake bottom) – Some of our lakes experience significant internal nutrient loading. Such lakes generally tend to be well stratified and exhibit increasing deep water phosphorus concentrations, relative to surface levels, during the summer months. For more information about your lake, [please visit the UNH LLMP data viewer and lake water quality reporting site](#).

Other relevant resources from the [New Hampshire Department of Environmental Services](#), such as the “[Lake Info Mapper](#)” and the “[Surface Water Quality Assessment Viewer](#)”, provide additional information on NH lakes, streams and watersheds.

Strategies to stabilize and improve water quality

Refer to “[Landscaping at the Water’s Edge: An Ecological Approach](#)” and “[New Hampshire Homeowner’s Guide to Stormwater Management: Do-It-Yourself Stormwater Solutions for Your Home](#)” for more information on how to reduce nutrient loading caused by overland run-off. NH Lakes also provides a series of resources aimed at educating residents and protecting our lakes and ponds through the [LakeSmart](#) program.

Chalk Pond and Marchs Pond

New Durham, NH

Deep water sampling sites



0 0.1 0.2 0.3 0.4 Miles

GPS Coordinates collected by the UNH Center for Freshwater Biology



Extension



MARSH POND

2025 SAMPLING HIGHLIGHTS

Station Deep

New Durham, NH



Water quality data displayed in Tables 1 and 2 are surface water measurements with the exception of the dissolved oxygen data that are collected near the lake bottom. Summary statistics are provided for monthly samples collected between May 15 and September 7, 2025.

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Yellow = Mesotrophic

Red = Eutrophic

Gray = No Data

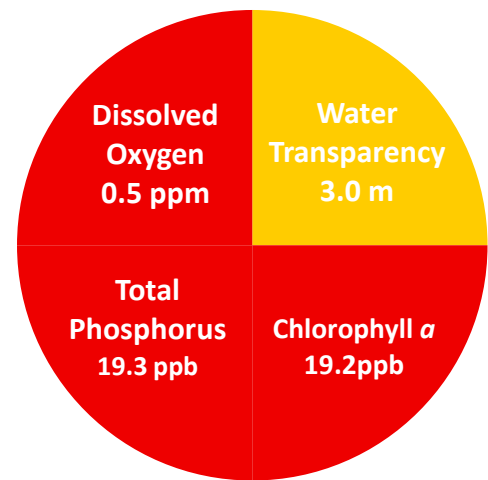


Figure 1. Marsh Pond Water Quality (2025)

Table 1. 2025 Marsh Pond Seasonal Averages and NH DES Aquatic Life Nutrient Criteria¹

Parameter	Oligotrophic	Mesotrophic	Eutrophic	Marsh Pond Average (range)	Marsh Pond Classification
Water Clarity (meters)	> 4.0 – 7.0	2.5 - 4.0	< 2.5	3.0 meters (2.1– 3.5)	Mesotrophic
Chlorophyll <i>a</i> ¹ (ppb)	< 3.3	3.3 – 5.0	> 5.0 – 11.0	*19.2 ppb (2.8 – *80.8)	Eutrophic
Total Phosphorus ¹ (ppb)	< 8.0	8.0 – 12.0	> 12.0 – 28.0	19.3 ppb (14.3 – 25.0)	Eutrophic
Dissolved Oxygen (ppm)	> 5.0 – 7.0	2.0 – 5.0	< 2.0	0.5 ppm (0.3 – 0.7) *	Eutrophic

* Elevated mean chlorophyll due to late season blooms. Median value = 4.5 ppb (reported in trend graph, fig. 4).

* Dissolved oxygen concentrations were measured between 4.0 and 4.5 meters, in the middle lake layer, on August 12, 2025.

Table 2. 2025 Marsh Pond Seasonal Average Accessory Water Quality Measurements

Parameter	Assessment Criteria					Marsh Pond Average (range)	Marsh Pond Classification
Color (color units)	< 10 uncolored	10 – 20 slightly colored	20 – 40 lightly tea colored	40 – 80 tea colored	> 80 highly colored	32.7 color units (range: 16.3 – 57.8)	Lightly tea colored
Alkalinity (ppm)	< 0.0 acidified	0.1 – 2.0 extremely vulnerable	2.1 – 10 moderately vulnerable	10.1 – 25.0 low vulnerability	> 25.0 not vulnerable	7.6 ppm (range: 5.1 – 9.0)	Moderately vulnerable
pH (std units)	< 5.5 suboptimal for successful growth and reproduction		6.5 – 9.0 optimal range for fish growth and reproduction			6.9 standard units (range: 6.6 – 7.2)	Optimal range for fish growth and reproduction
Specific Conductivity (uS/cm)	< 50 uS/cm Characteristic of minimally impacted NH lakes		50-100 uS/cm Lakes with some human influence	> 100 uS/cm Characteristic of lakes experiencing human disturbances		51.7 uS/cm (range: 44.5 – 57.5)	Characteristic of lakes with some human influence

Figure 2. Marsh Pond (2025 Seasonal Data)
Secchi Disk Transparency and Chlorophyll *a* Data

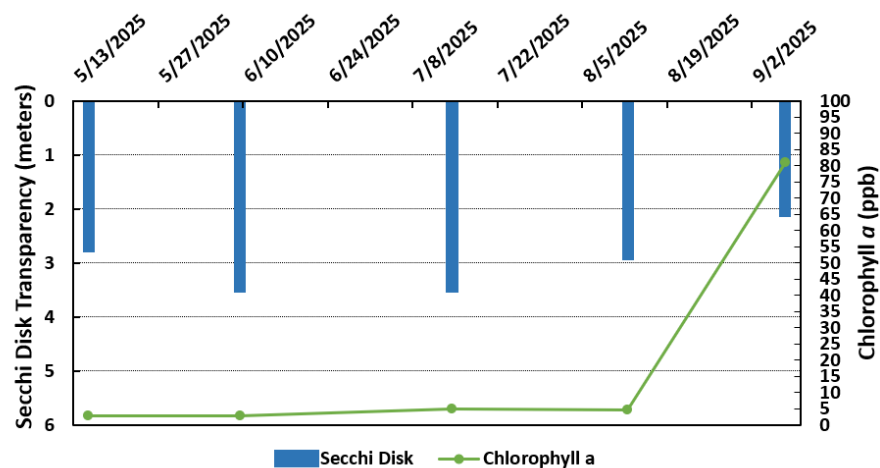


Figure 3. Marsh Pond (2025 Seasonal Data)
Secchi Disk Transparency and Dissolved Color Data

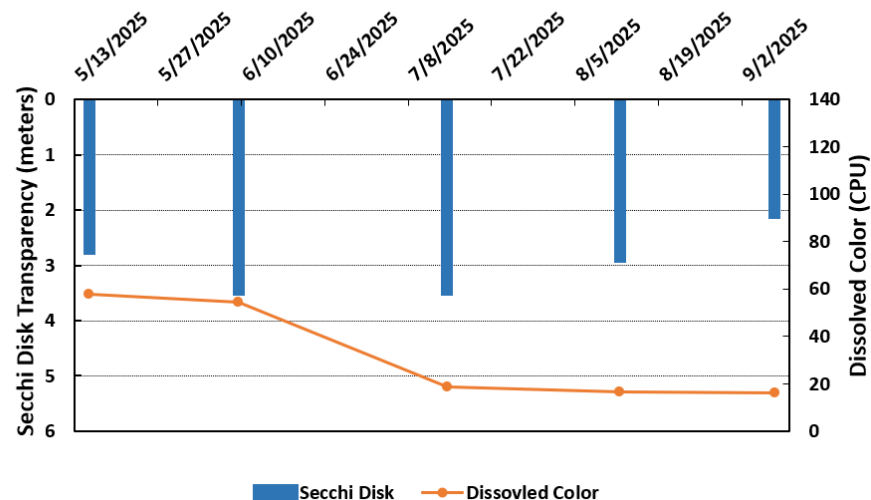


Figure 4. Marsh Pond - Deep Site (2017-2025)
Long-term Secchi Disk Transparency and Chlorophyll *a* Data

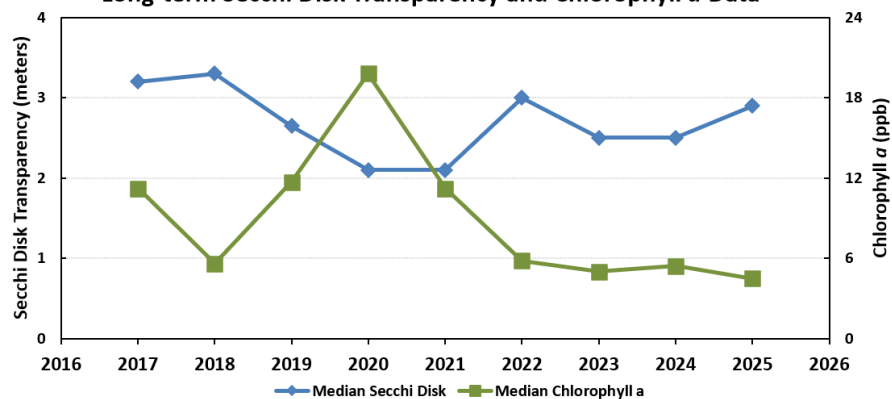
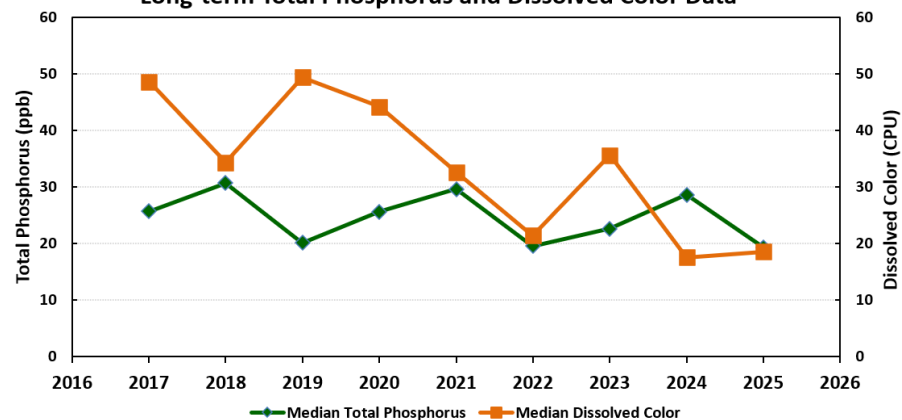


Figure 5. Marsh Pond - Deep Site (2017-2025)
Long-term Total Phosphorus and Dissolved Color Data



Figures 2 and 3. Seasonal comparison of Marsh Pond water transparency (Secchi Disk depth), chlorophyll *a*, and dissolved color for 2025. Shallower water transparency measurements oftentimes correspond to increases in chlorophyll *a* and/or color concentrations.

Figures 4 and 5. Annual median Marsh Pond water transparency, chlorophyll *a*, dissolved color, and total phosphorus concentrations measured between 2017 and 2025, through the New Hampshire Lakes Lay Monitoring Program. The long-term data provide insight into the water quality fluctuations, among years, that have been documented in Marsh Pond.

Figure 6. Marsh Pond - Site Deep
Temperature Profiles (May 15- September 7, 2025)

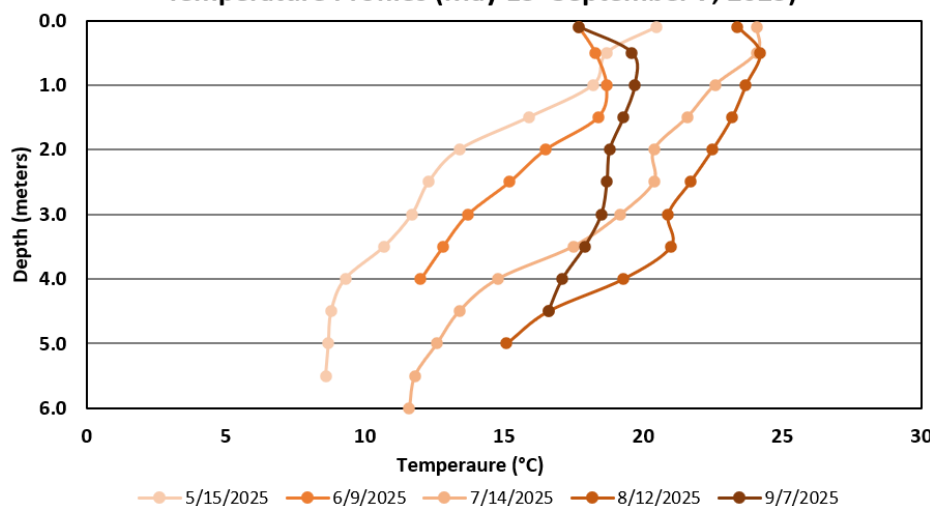


Figure 7. Marsh Pond - Site Deep
Dissolved Oxygen Profiles (May 15 - September 7, 2025)

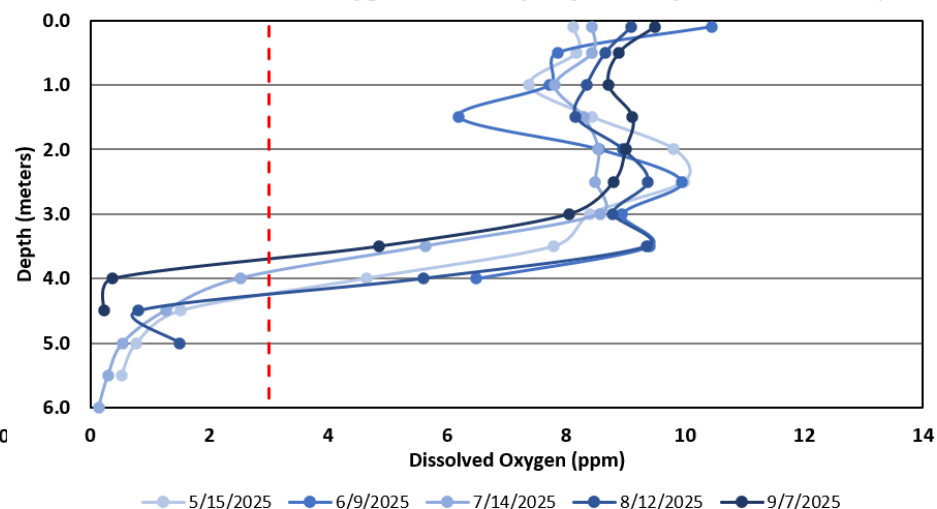


Figure 8. Marsh Pond - Site Deep
Specific Conductivity Profiles (May 15 - September 7, 2025)

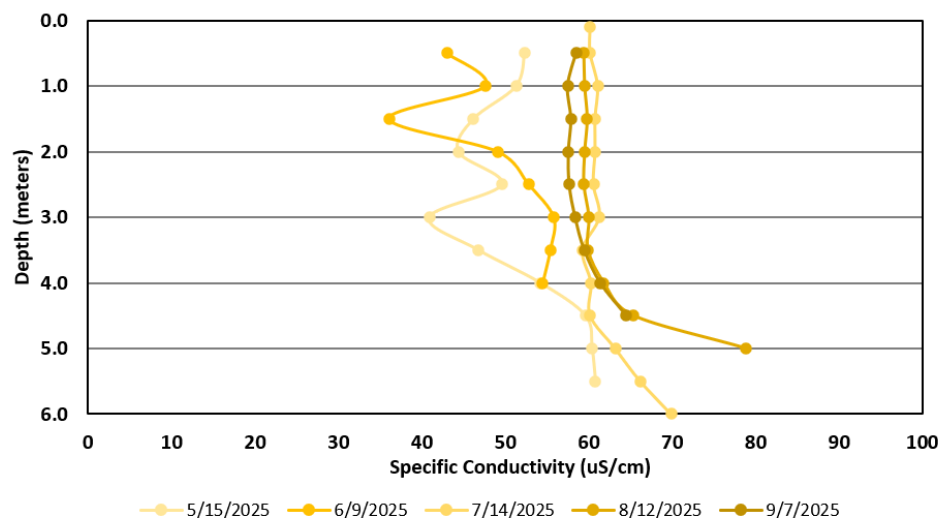
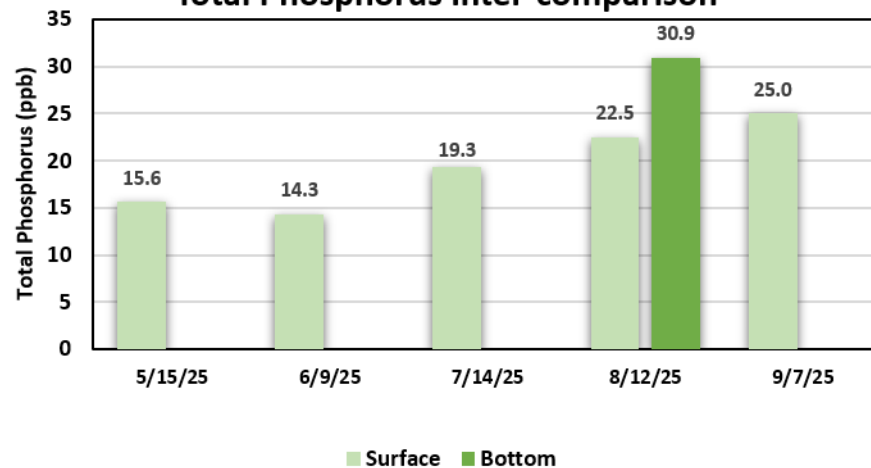


Figure 9. Marsh Pond- Site Deep
Total Phosphorus inter-comparison



Figures 6, 7, and 8. Temperature, dissolved oxygen, and specific conductivity profiles display the water quality differences in 0.5-meter increments. Notice the decreasing dissolved oxygen concentrations, near the lake bottom, through the season. The dashed vertical red line in Figure 7 displays the dissolved oxygen threshold for the successful growth and reproduction of warm-water fish such as bass and perch.

Figure 9. Total phosphorus comparison between the surface (epilimnion) and bottom water (hypolimnion) zones.

Data Interpretation: Overview of factors to consider when reviewing the Marsh Pond data

This highlight report provides a general overview of the current and historical conditions of Marsh Pond. The report is intended to provide a simple assessment of the water quality trends. Should you have additional questions about interpreting your water quality results, we would be happy to discuss the data with you and/or any concerns you may have. In general, some factors that influence the current and long-term water quality results/trends for our New Hampshire lakes and ponds include:

- **Land-use Patterns** within the watershed (drainage basin) – Research indicates land use patterns have an impact on how much phosphorus (nutrient) is washing into our lakes. In general, more urbanized watersheds have a greater degree of phosphorus runoff than highly forested/vegetated drainage areas.
- **Weather Patterns** – Rainfall and temperature can influence water quality. Wet periods, and overland runoff, tend to be a time when elevated nutrients and other pollutants are transported into our lakes. Temperature can also influence water quality conditions since many aquatic plants and algae tend to respond to changing seasonal conditions. Unusually warm periods are sometimes tied to short-term algal and cyanobacteria blooms.
- **Best Management Practices (BMPs)** – The presence/absence of best management practices can have an interplay on water quality. BMPs are measures that are used to manage nutrients and other pollutants that could otherwise make their way into our lakes. Properties that employ BMPs, designed specifically to remove pollutants of concern (e.g. sediments and phosphorus), are less likely to contribute nutrients and other pollutants into our lakes.
- **Temperature (Thermal) Stratification** – Many lakes become thermally stratified during the summer months and may form three distinct thermal layers: upper water layer (epilimnion), middle lake layer (metalimnion) and bottom cold-water layer (hypolimnion). These thermal zones form a barrier to lake mixing, during the summer months, and can coincide with differences in dissolved oxygen and specific conductivity through the water column (Figures 6, 7 and 8).
- **Internal Nutrient Loading** (nutrients that are introduced from the sediments along the lake bottom) – Some of our lakes experience significant internal nutrient loading. Such lakes generally tend to be well stratified and exhibit increasing deep water phosphorus concentrations, relative to surface levels, from May through September (Figure 9). Lakes that exhibit internal nutrient loading may also exhibit increasing deep water specific conductivity concentrations (a measure of dissolved materials) through the summer months (Figure 8).

For more information about your lake, [please visit the UNH LLMP data viewer and lake water quality reporting site](#).

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Strategies to stabilize and improve water quality

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Marsh Pond

New Durham, NH
Deep water sampling site



GPS Coordinates collected by the UNH Center for Freshwater Biology



Extension



SHAWS POND

2025 SAMPLING HIGHLIGHTS

Station Deep

New Durham, NH



Water quality data displayed in Tables 1 and 2 are surface water measurements with the exception of the dissolved oxygen data that are collected near the lake bottom. Summary statistics are provided for monthly samples collected between May 29 and October 31, 2025.

Blue = Oligotrophic

Yellow = Mesotrophic

Red = Eutrophic

Gray = No Data

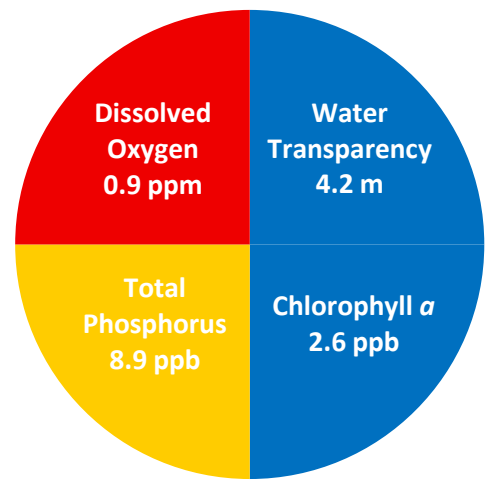


Figure 1. Shaws Pond Water Quality (2025)

Table 1. 2025 Shaws Pond Seasonal Averages and NH DES Aquatic Life Nutrient Criteria¹

Parameter	Oligotrophic	Mesotrophic	Eutrophic	Shaws Pond Average (range)	Shaws Pond Classification
Water Clarity (meters)	> 4.0 – 7.0	2.5 - 4.0	< 2.5	4.2 meters (3.7 – 4.4)	Oligotrophic
Chlorophyll <i>a</i> ¹ (ppb)	< 3.3	3.3 – 5.0	> 5.0 – 11.0	2.6 ppb (1.9 – 3.7)	Oligotrophic
Total Phosphorus ¹ (ppb)	< 8.0	8.0 – 12.0	> 12.0 – 28.0	8.5 ppb (6.1 – 10.8)	Mesotrophic
Dissolved Oxygen (ppm)	> 5.0 – 7.0	2.0 – 5.0	< 2.0	0.9 ppm (0.13 – 2.1) *	Eutrophic

* Dissolved oxygen concentrations were measured between 3.5 and 4.5 meters, on July 28, 2025.

Table 2. 2025 Shaws Pond Seasonal Average Accessory Water Quality Measurements

Parameter	Assessment Criteria					Shaws Pond Average (range)	Shaws Pond Classification
Color (color units)	< 10 uncolored	10 – 20 slightly colored	20 – 40 lightly tea colored	40 – 80 tea colored	> 80 highly colored	43.3 color units (range: 26.6 – 59.1)	Tea colored
Alkalinity (ppm)	< 0.0 acidified	0.1 – 2.0 extremely vulnerable	2.1 – 10 moderately vulnerable	10.1 – 25.0 low vulnerability	> 25.0 not vulnerable	11.2 ppm (range: 8.5 – 12.9)	Low vulnerable
pH (std units)	< 5.5 suboptimal for successful growth and reproduction		6.5 – 9.0 optimal range for fish growth and reproduction			7.1 standard units (range: 7.0 – 7.3)	Optimal range for fish growth and reproduction
Specific Conductivity (uS/cm)	< 50 uS/cm Characteristic of minimally impacted NH lakes		50-100 uS/cm Lakes with some human influence	> 100 uS/cm Characteristic of lakes experiencing human disturbances		89.1 uS/cm (range: 77.8 – 95.7)	Characteristic of lakes with some human influence

Figure 3. Shaws Pond (2025 Seasonal Data)
Secchi Disk Transparency and Dissolved Color Data

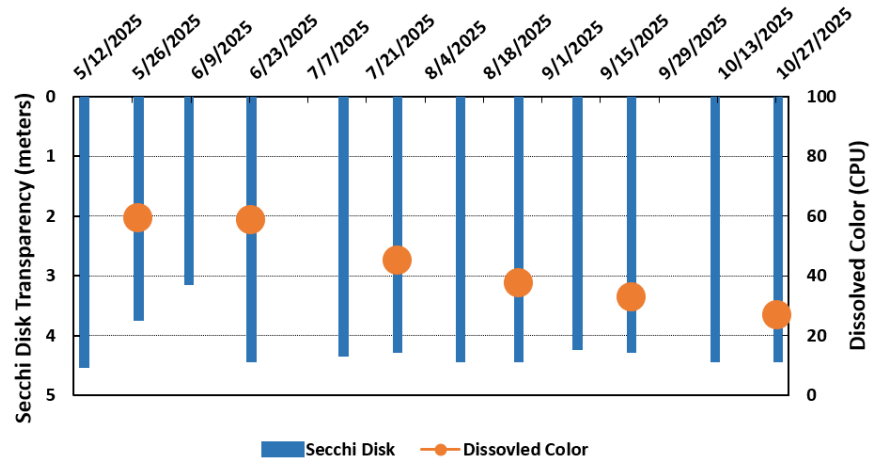


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Secchi Disk Transparency and Chlorophyll *a* Data

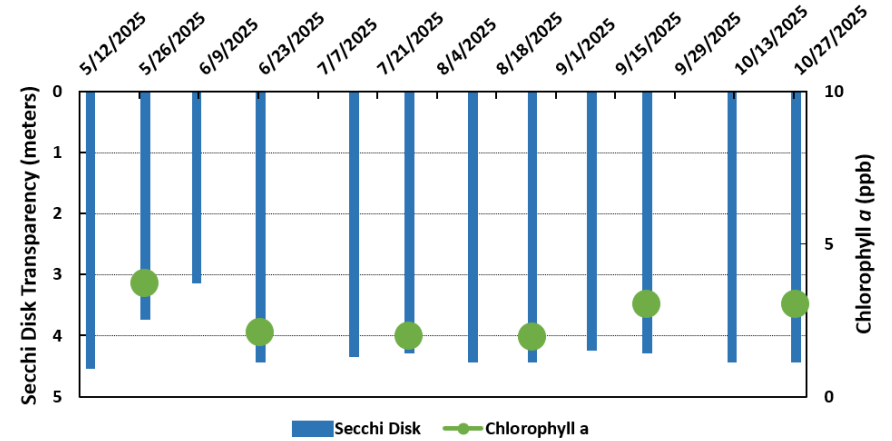


Figure 4. Shaws Pond - Deep Site (1984-2025)
Long-term Secchi Disk Transparency and Chlorophyll *a* Data

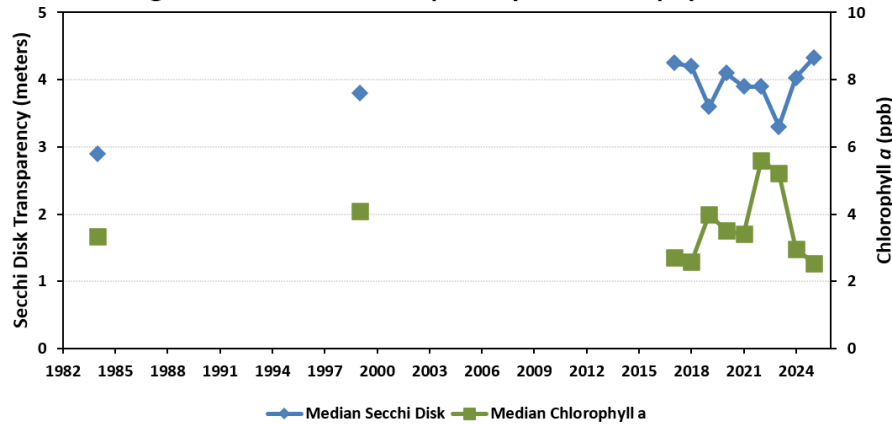
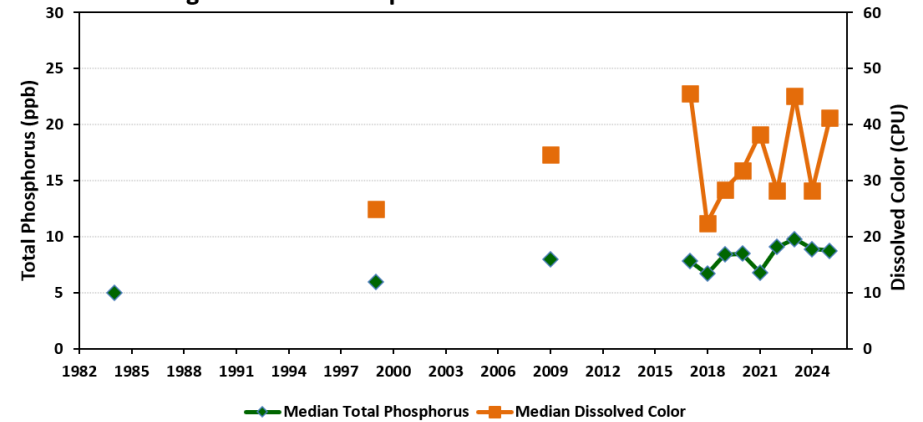


Figure 5. Shaws Pond - Deep Site (1984-2025)
Long-term Total Phosphorus and Dissolved Color Data



Figures 2 and 3. Seasonal comparison of Shaws Pond water transparency (Secchi Disk depth), chlorophyll *a*, and dissolved color for 2025. Shallower water transparency measurements oftentimes correspond to increases in chlorophyll *a* and/or color concentrations.

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Figure 6. Shaws Pond - Site Deep
Temperature Profiles (May 14 - October 27, 2025)

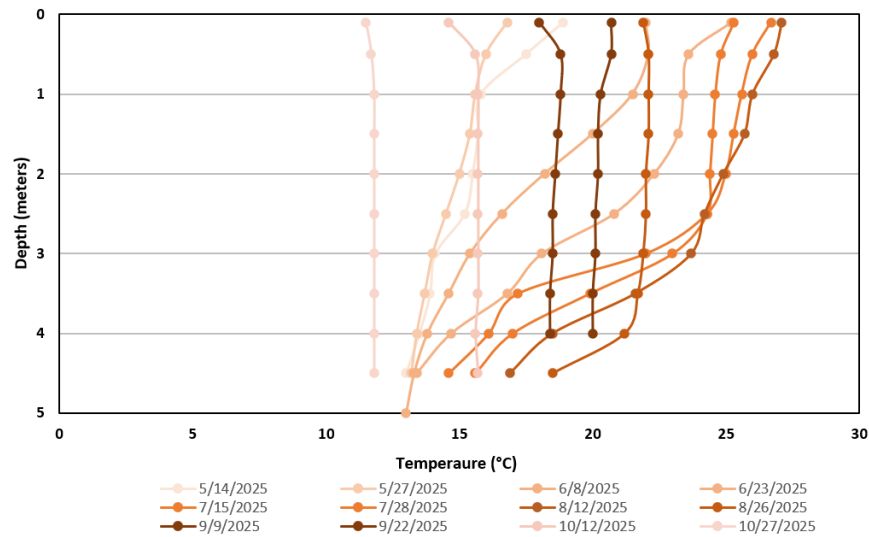


Figure 7. Shaws Pond - Site Deep
Dissolved Oxygen Profiles (May 15 - October 27, 2025)

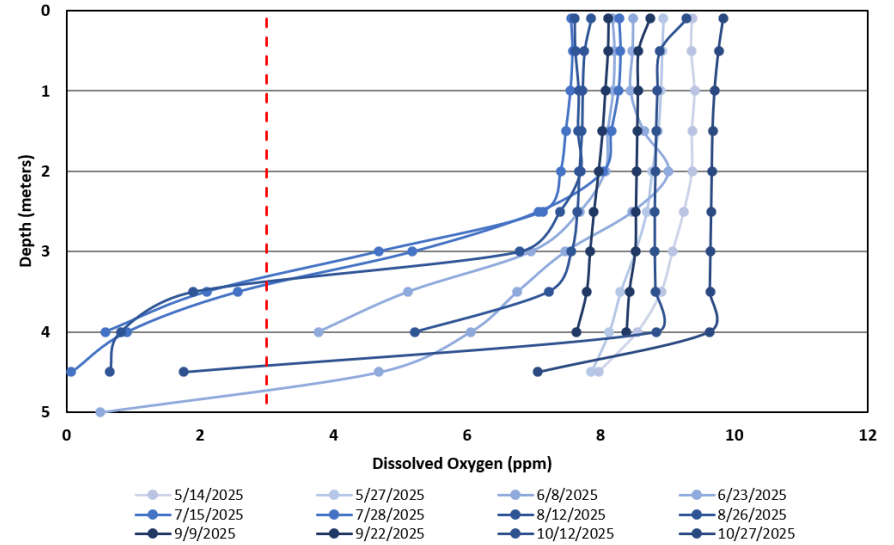


Figure 8. Shaws Pond - Site Deep
Conductivity Profiles (May 14 - October 27, 2025)

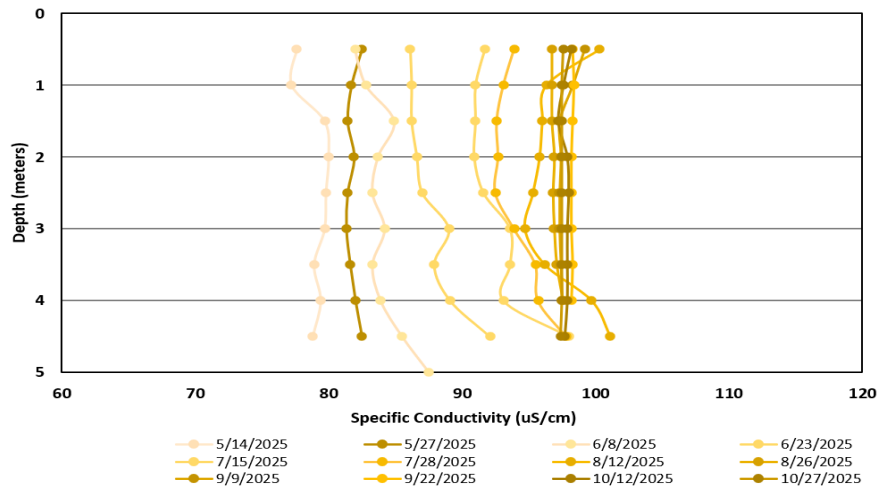
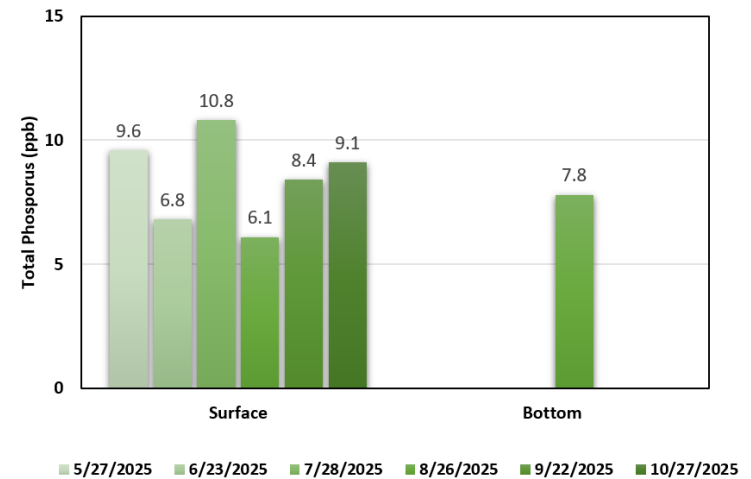


Figure 9. Shaws Pond - Site 1 Deep
Total Phosphorus inter-comparison



Figures 6, 7, and 8. Temperature, dissolved oxygen, and specific conductivity profiles display the water quality differences in 0.5-meter increments. The dashed vertical red line in Figure 7 displays the dissolved oxygen threshold for the successful growth and reproduction of warm-water fish such as bass and perch.

Figure 9. Total phosphorus comparison between the surface (epilimnion) and bottom water zones.

Figure 10. Shaws Pond 2025 Sites

Tributary Total Phosphorus Results (March 27 through October 27, 2025)

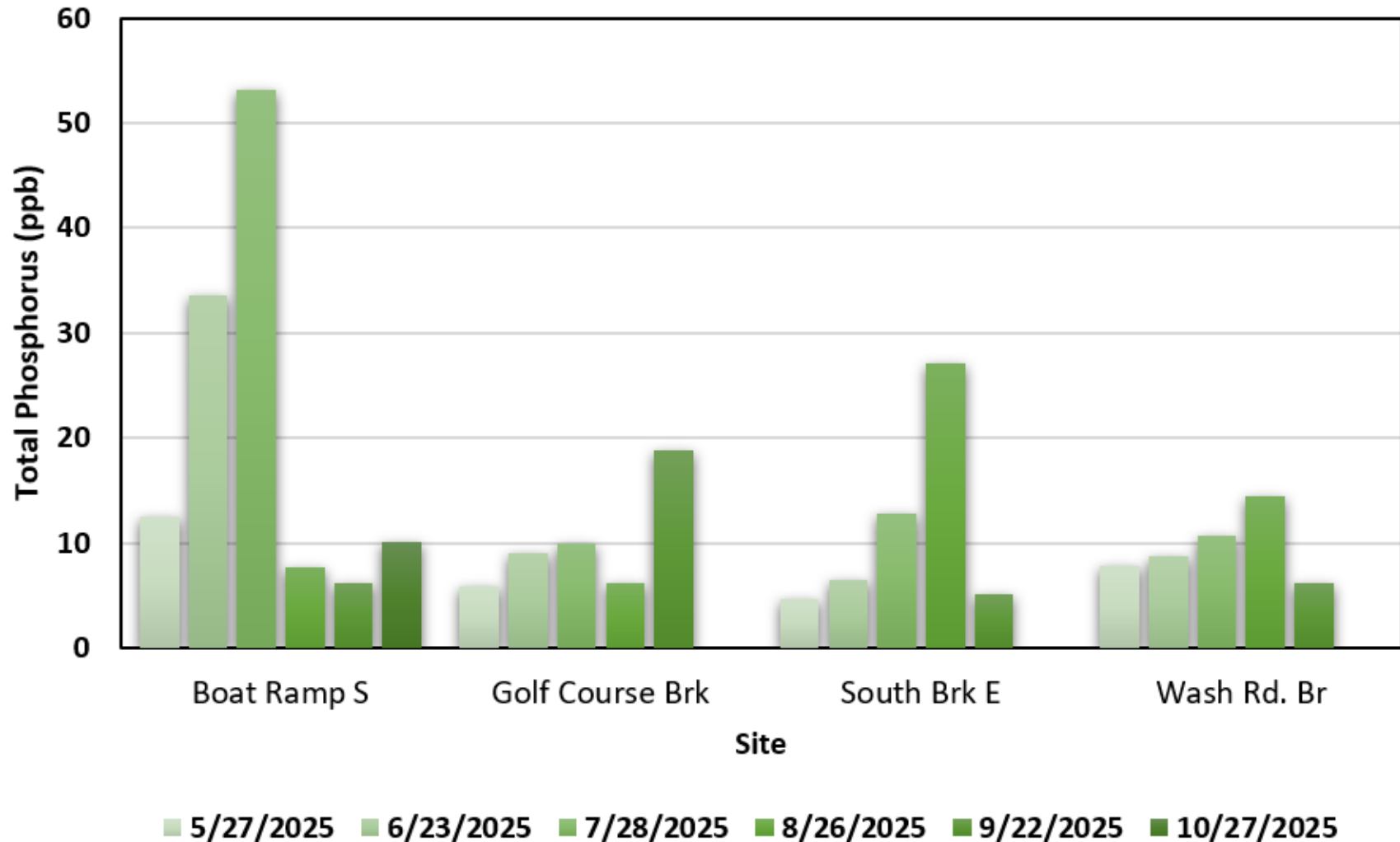


Figure 10. Total phosphorus comparison between sites over time in 2025.

Data Interpretation: Overview of factors to consider when reviewing the Shaws Pond data

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Strategies to stabilize and improve water quality

Refer to “[Landscaping at the Water’s Edge: An Ecological Approach](#)” and “[New Hampshire Homeowner’s Guide to Stormwater Management: Do-It-Yourself Stormwater Solutions for Your Home](#)” for more information on how to reduce nutrient loading caused by overland run-off. NH Lakes also provides a series of resources aimed at educating residents and protecting our lakes and ponds through the [LakeSmart](#) program.

Shaws Pond

New Durham, NH

Deep and tributary sampling locations



CHALK POND

2025 SAMPLING HIGHLIGHTS

Station Deep

New Durham, NH



Extension

Blue = Oligotrophic

Yellow = Mesotrophic

Red = Eutrophic

Gray = No Data

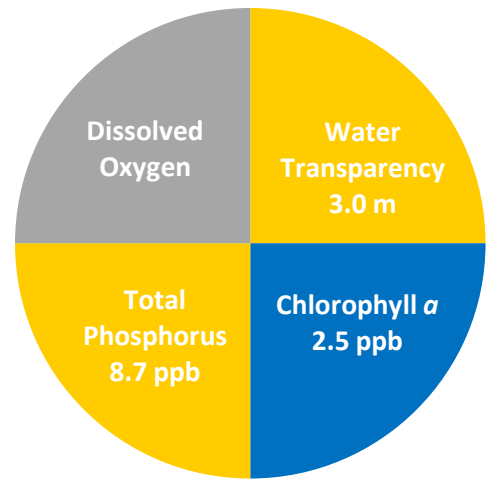


Figure 1. Chalk Pond Water Quality (2025)

Table 1. 2025 Chalk Pond Seasonal Averages and NH DES Aquatic Life Nutrient Criteria¹

Parameter	Oligotrophic	Mesotrophic	Eutrophic	Chalk Pond Average (range)	Chalk Pond Classification
Water Clarity (meters)	> 4.0 – 7.0	2.5 - 4.0	< 2.5	3.0 meters (*VOB)	Mesotrophic
Chlorophyll <i>a</i> ¹ (ppb)	< 3.3	3.3 – 5.0	> 5.0 – 11.0	2.5 ppb (1.9 – 3.6)	Oligotrophic
Total Phosphorus ¹ (ppb)	< 8.0	8.0 – 12.0	> 12.0 – 28.0	8.7 ppb (7.3 – 10.2)	Mesotrophic
Dissolved Oxygen (ppm)	> 5.0 – 7.0	2.0 – 5.0	< 2.0	Not Assessed *	Not Assessed

* Chalk Pond did not develop a mid or deep-water layer that is the basis for the dissolved oxygen classification criteria. VOB= visible on bottom.

Table 2. 2025 Chalk Pond Seasonal Average Accessory Water Quality Measurements

Parameter	Assessment Criteria					Chalk Pond Average (range)	Chalk Pond Classification
Color (color units)	< 10 uncolored	10 – 20 slightly colored	20 – 40 lightly tea colored	40 – 80 tea colored	> 80 highly colored	13.9 color units (range: 11.0 – 20.3)	Slightly colored
Alkalinity (ppm)	< 0.0 acidified	0.1 – 2.0 extremely vulnerable	2.1 – 10 moderately vulnerable	10.1 – 25.0 low vulnerability	> 25.0 not vulnerable	6.9 ppm (range: 5.6 – 7.4)	Moderately vulnerable
pH (std units)	< 5.5 suboptimal for successful growth and reproduction		6.5 – 9.0 optimal range for fish growth and reproduction			7.1 standard units (range: 6.9 – 7.3)	Optimal range for fish growth and reproduction
Specific Conductivity (uS/cm)	< 50 uS/cm Characteristic of minimally impacted NH lakes		50-100 uS/cm Lakes with some human influence	> 100 uS/cm Characteristic of lakes experiencing human disturbances		61.9 uS/cm (range: 54.2 – 67.5)	Characteristic of minimally impacted NH lakes

Figure 2. Chalk Pond (2025 Seasonal Data)
Secchi Disk Transparency and Chlorophyll *a* Data

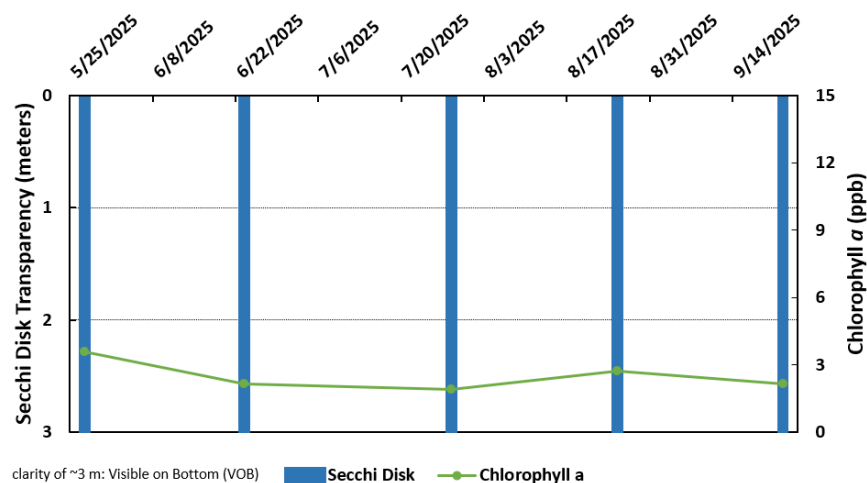


Figure 3. Chalk Pond (2025 Seasonal Data)
Secchi Disk Transparency and Dissolved Color Data

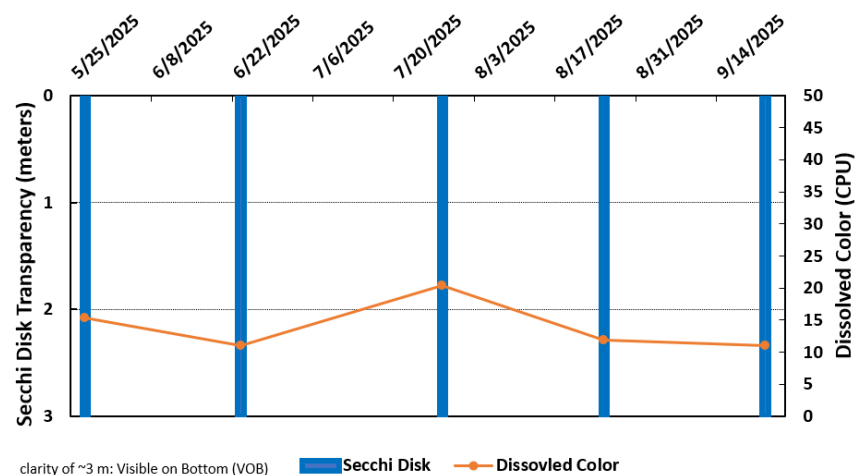


Figure 4. Chalk Pond - Deep Site (1982-2025)
Long-term Secchi Disk Transparency and Chlorophyll *a* Data

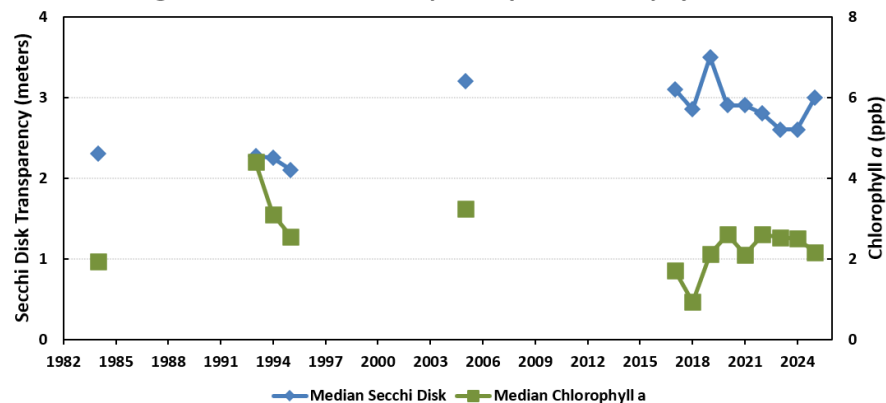
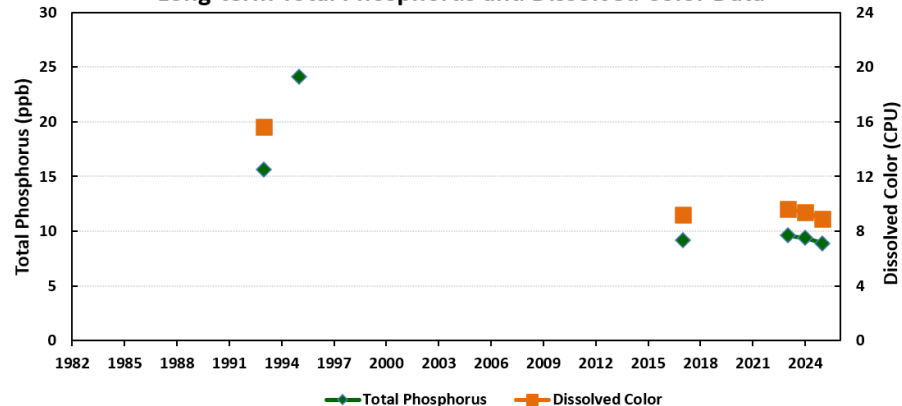


Figure 5. Chalk Pond - Deep Site (1982-2025)
Long-term Total Phosphorus and Dissolved Color Data



Figures 2 and 3. Seasonal comparison of Chalk Pond water transparency (Secchi Disk depth), chlorophyll *a*, and dissolved color for 2025. Shallower water transparency measurements oftentimes correspond to increases in chlorophyll *a* and/or color concentrations.

Figures 4 and 5. Annual median Chalk Pond water transparency, chlorophyll *a*, dissolved color, and total phosphorus concentrations measured between 1984 and 2025, through the New Hampshire Lakes Lay Monitoring Program and the New Hampshire Department of Environmental Services. The long-term data provide insight into the water quality fluctuations, among years, that have been documented in Chalk Pond.

Figure 6. Chalk Pond - Site Deep
Temperature Profiles (May 27 - September 22, 2025)

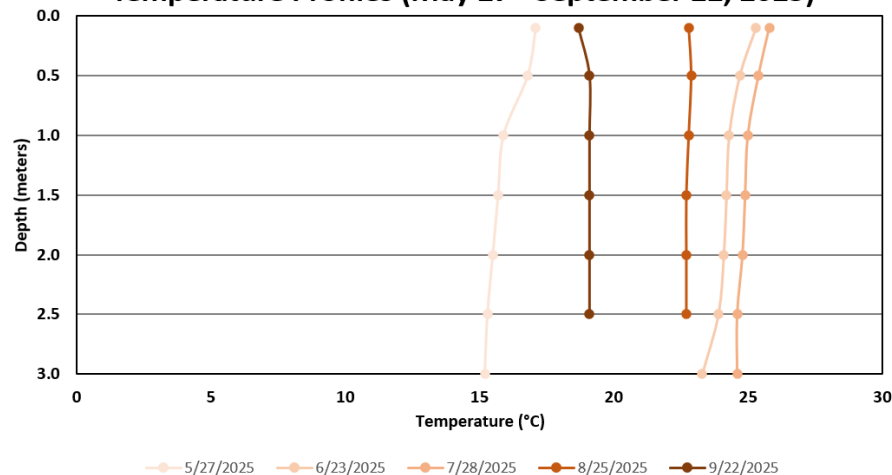


Figure 7. Chalk Pond - Site Deep
Dissolved Oxygen Profiles (May 27 - September 22, 2025)

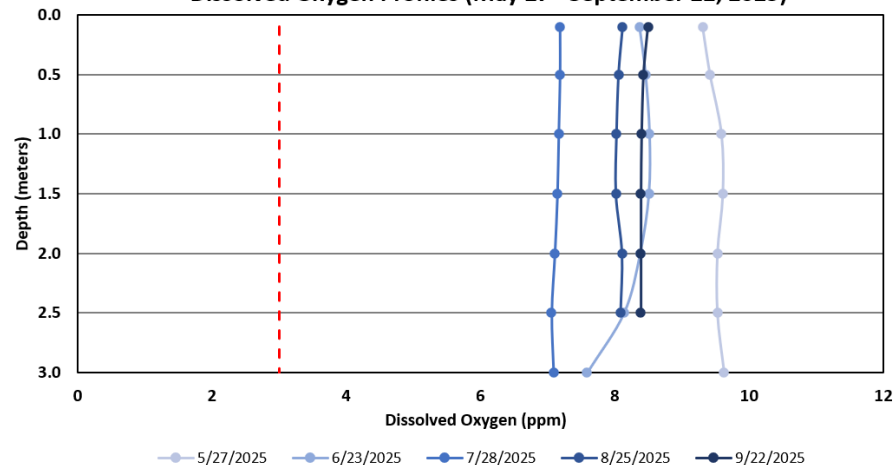


Figure 8. Chalk Pond - Site Deep
Conductivity Profiles (May 27 - September 22, 2025)

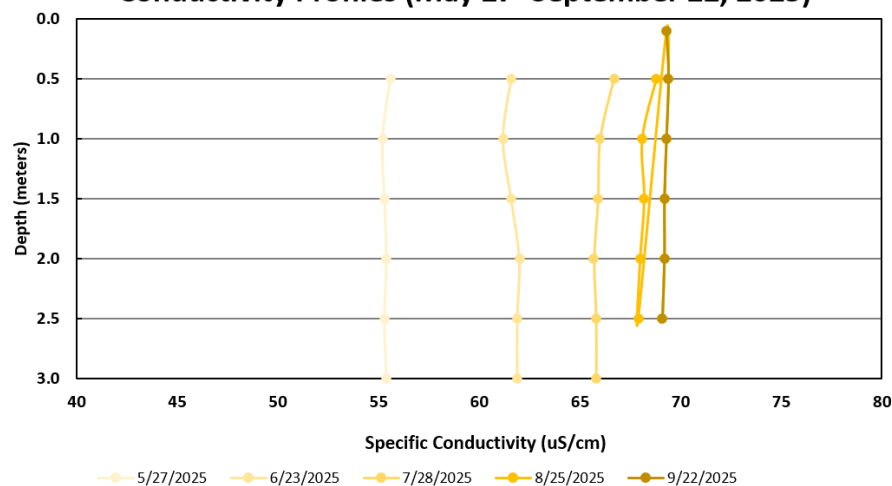
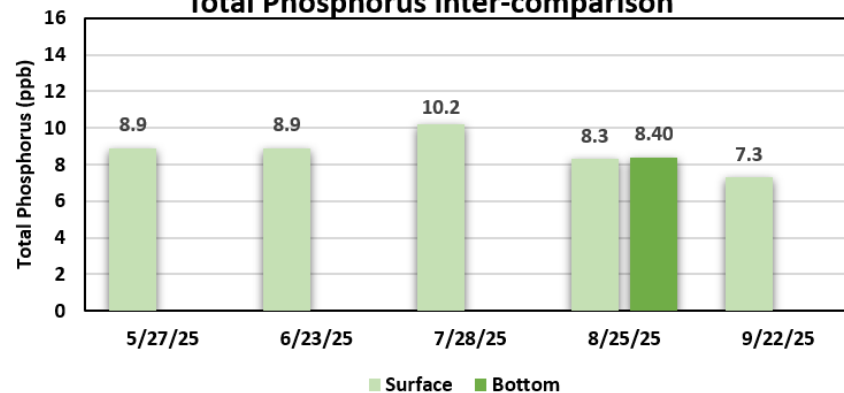


Figure 9. Chalk Pond - Site Deep
Total Phosphorus inter-comparison



Figures 6, 7, and 8. Temperature, dissolved oxygen, and specific conductivity profiles display the water quality differences in 0.5-meter increments. The dashed vertical red line in Figure 7 displays the dissolved oxygen threshold for the successful growth and reproduction of warm-water fish such as bass and perch.

Figure 9. Total phosphorus comparison between the surface (epilimnion) and bottom water zones.

Data Interpretation: Overview of factors to consider when reviewing the Chalk Pond data

This highlight report provides a general overview of the current and historical conditions of Chalk Pond. The report is intended to provide a simple assessment of the water quality trends. Should you have additional questions about interpreting your water quality results, we would be happy to discuss the data with you and/or any concerns you may have. In general, some factors that influence the current and long-term water quality results/trends for our New Hampshire lakes and ponds include:

- **Land-use Patterns** within the watershed (drainage basin) – Research indicates land-use patterns have an impact on how much phosphorus (nutrient) is washing into our lakes. In general, more urbanized watersheds have a greater degree of phosphorus runoff than highly forested/vegetated drainage areas.
- **Weather Patterns** – Rainfall and temperature can influence water quality. Wet periods, and overland runoff, tend to be a time when elevated nutrients and other pollutants are transported into our lakes. Temperature can also influence water quality conditions since many aquatic plants and algae tend to respond to changing seasonal conditions. Unusually warm periods are sometimes tied to short-term algal and cyanobacteria blooms.
- **Best Management Practices (BMPs)** – The presence/absence of best management practices can have an interplay on water quality. BMPs are measures that are used to manage nutrients and other pollutants that could otherwise make their way into our lakes. Properties that employ BMPs, designed specifically to remove pollutants of concern (e.g. sediments and phosphorus), are less likely to contribute nutrients and other pollutants into our lakes.
- **Temperature (Thermal) Stratification** – Many lakes become thermally stratified during the summer months and may form three distinct thermal layers: upper water layer (epilimnion), middle lake layer (metalimnion), and bottom cold-water layer (hypolimnion). These thermal zones form a barrier to lake mixing, during the summer months, and can coincide with differences in dissolved oxygen and specific conductivity through the water column.
- **Internal Nutrient Loading** (nutrients that are introduced from the sediments along the lake bottom) – Some of our lakes experience significant internal nutrient loading. Such lakes generally tend to be well stratified and exhibit increasing deep water phosphorus concentrations, relative to surface levels, during the summer months.

For more information about your lake, [please visit the UNH LLMP data viewer and lake water quality reporting site](#).

Other relevant resources from the [New Hampshire Department of Environmental Services](#), such as the “[Lake Info Mapper](#)” and the “[Surface Water Quality Assessment Viewer](#)”, provide additional information on NH lakes, streams and watersheds.

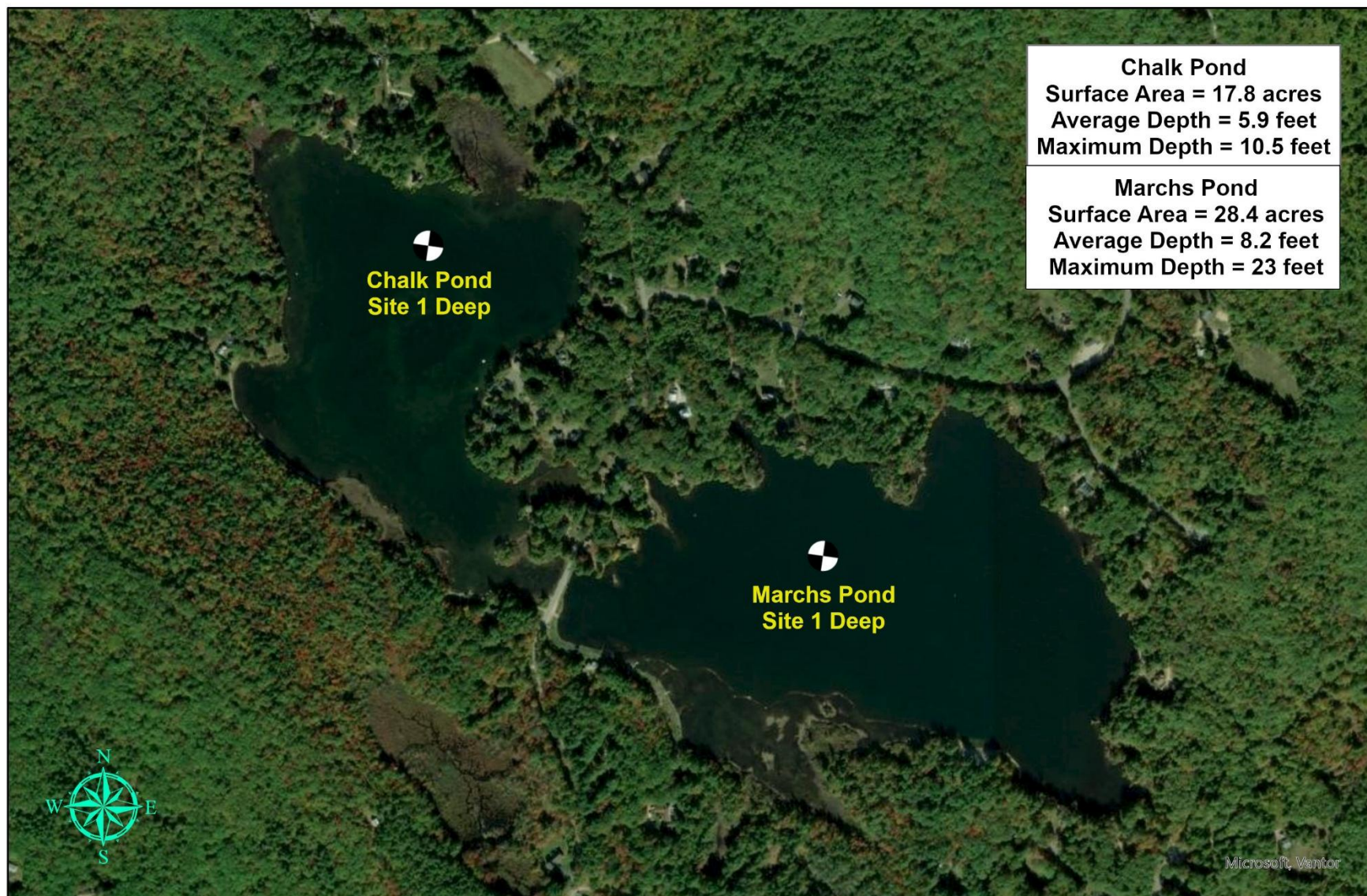
Strategies to stabilize and improve water quality

Refer to “[Landscaping at the Water’s Edge: An Ecological Approach](#)” and “[New Hampshire Homeowner’s Guide to Stormwater Management: Do-It-Yourself Stormwater Solutions for Your Home](#)” for more information on how to reduce nutrient loading caused by overland run-off. NH Lakes also provides a series of resources aimed at educating residents and protecting our lakes and ponds through the [LakeSmart](#) program.

Chalk Pond and Marchs Pond

New Durham, NH

Deep water sampling sites



0 0.1 0.2 0.3 0.4 Miles

GPS Coordinates collected by the UNH Center for Freshwater Biology



Extension



DOWNING POND

2025 SAMPLING HIGHLIGHTS

Station Deep

New Durham, NH



Blue = Oligotrophic

Yellow = Mesotrophic

Red = Eutrophic

Gray = No Data

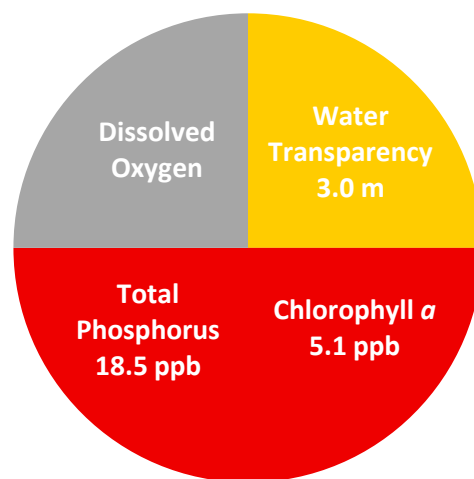


Figure 1. Downing Pond Water Quality (2025)

Table 1. 2025 Downing Pond Seasonal Averages and NH DES Aquatic Life Nutrient Criteria¹

Parameter	Oligotrophic	Mesotrophic	Eutrophic	Downing Pond Average (range)	Downing Pond Classification
Water Clarity (meters)	> 4.0 – 7.0	2.5 - 4.0	< 2.5	3.0 meters (*VOB)	Mesotrophic
Chlorophyll <i>a</i> ¹ (ppb)	< 3.3	3.3 – 5.0	> 5.0 – 11.0	5.1 ppb (4.1 – 6.7)	Eutrophic
Total Phosphorus ¹ (ppb)	< 8.0	8.0 – 12.0	> 12.0 – 28.0	18.5 ppb (14.8 – 25.2)	Eutrophic
Dissolved Oxygen (ppm)	> 5.0 – 7.0	2.0 – 5.0	< 2.0	Not Assessed *	Not Assessed

* Downing Pond did not develop a stable mid or deep-water layer that is the basis for the dissolved oxygen classification criteria. VOB = visible on bottom.

Table 2. 2025 Downing Pond Seasonal Average Accessory Water Quality Measurements

Parameter		Assessment Criteria		Downing Pond Average (range)		Downing Pond Classification	
Color (color units)	< 10 uncolored	10 – 20 slightly colored	20 – 40 lightly tea colored	40 – 80 tea colored	> 80 highly colored	29.3 color units (range: 19.6 – 37.0)	Lightly tea colored
Alkalinity (ppm)	< 0.0 acidified	0.1 – 2.0 extremely vulnerable	2.1 – 10 moderately vulnerable	10.1 – 25.0 low vulnerability	> 25.0 not vulnerable	7.5 ppm (range: 5.8 – 8.3)	Moderately vulnerable
pH (std units)		< 5.5 suboptimal for successful growth and reproduction		6.5 – 9.0 optimal range for fish growth and reproduction		7.0 standard units (range: 6.8 – 7.1)	
Specific Conductivity (uS/cm)		< 50 uS/cm Characteristic of minimally impacted NH lakes		50-100 uS/cm Lakes with some human influence		> 100 uS/cm Characteristic of lakes experiencing human disturbances	
				57.2 uS/cm (range: 54.2 – 60.5)		Characteristic of lakes with some human influence	

Figure 2. Downing Pond (2025 Seasonal Data)
Secchi Disk Transparency and Chlorophyll *a* Data

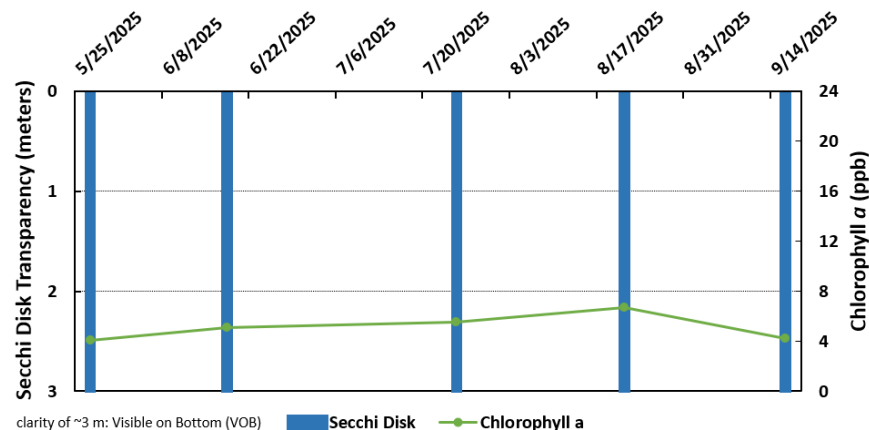


Figure 3. Downing Pond (2025 Seasonal Data)
Secchi Disk Transparency and Dissolved Color Data

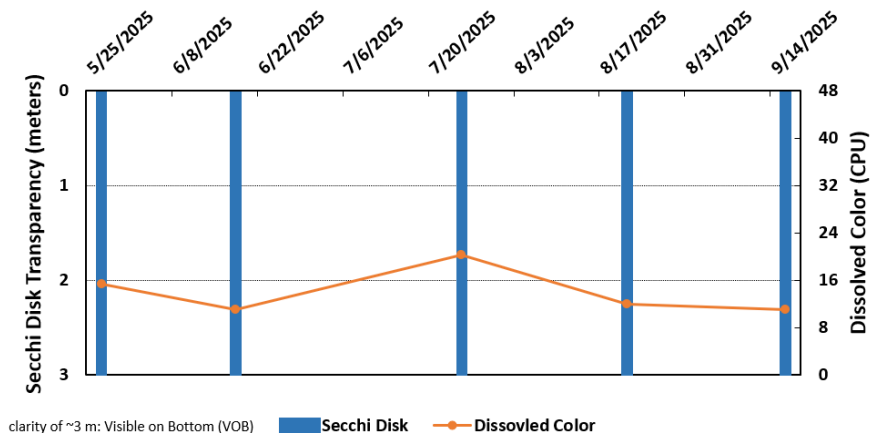


Figure 4. Downing Pond - Deep Site (2017-2025)
Long-term Secchi Disk Transparency and Chlorophyll *a* Data

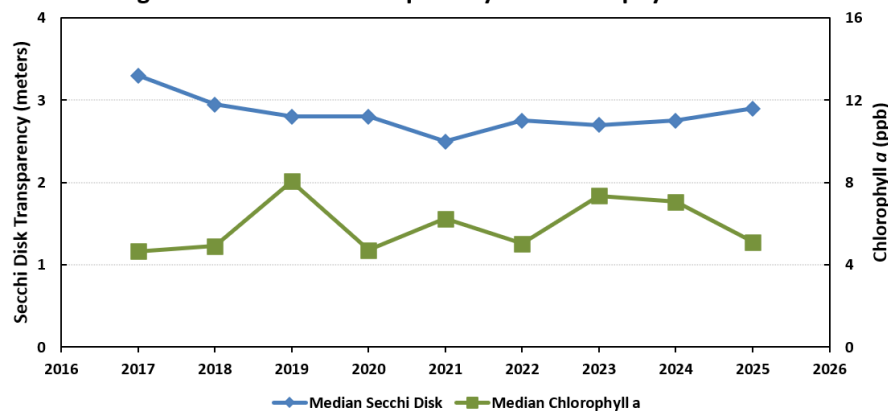
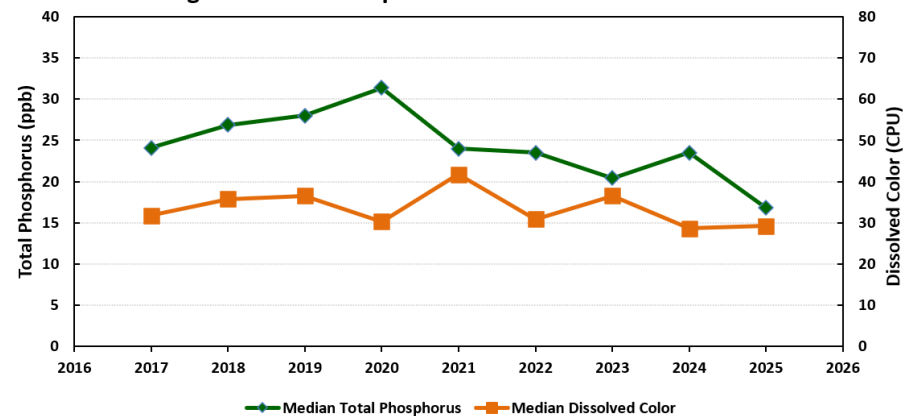


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Long-term Total Phosphorus and Dissolved Color Data



Figures 2 and 3. Seasonal comparison of Downing Pond water transparency (Secchi Disk depth), chlorophyll *a*, and dissolved color for 2025. Shallower water transparency measurements oftentimes correspond to increases in chlorophyll *a* and/or color concentrations.

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Figure 6. Downing Pond - Site Deep
Temperature Profiles (May 27 - September 16, 2025)

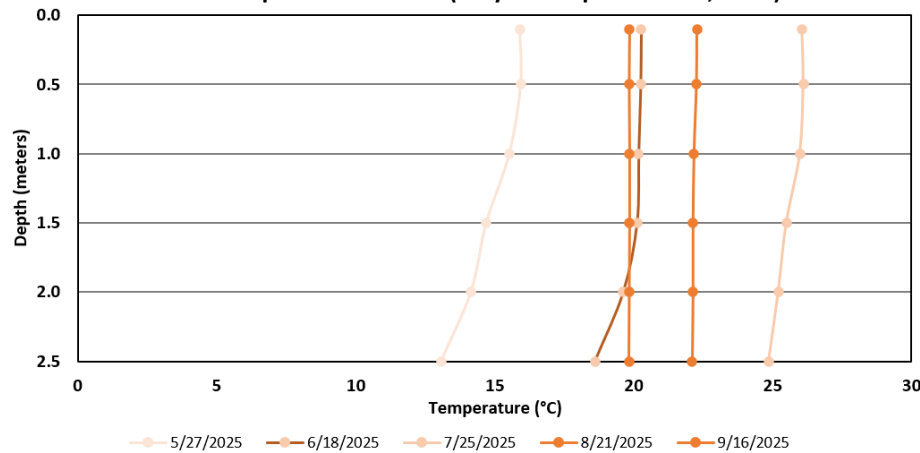


Figure 7. Downing Pond - Site Deep
Dissolved Oxygen Profiles (May 27 - September 16, 2025)

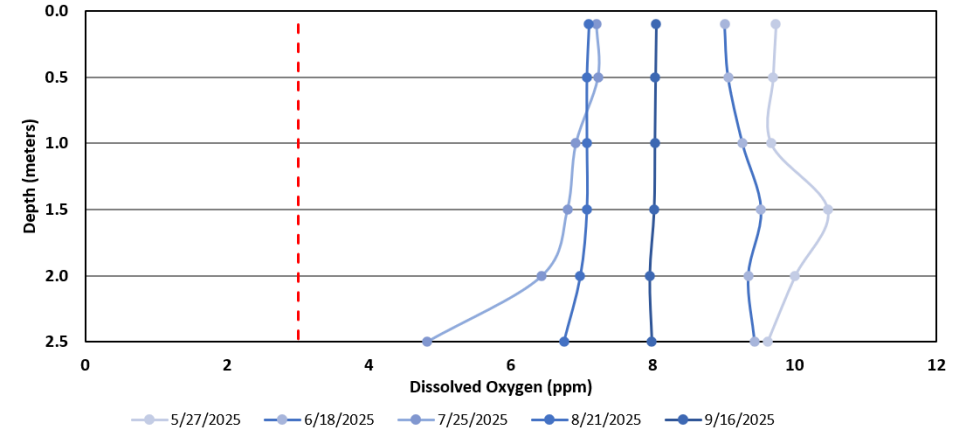


Figure 8. Downing Pond - Site Deep
Conductivity Profiles (May 27 - September 16, 2025)

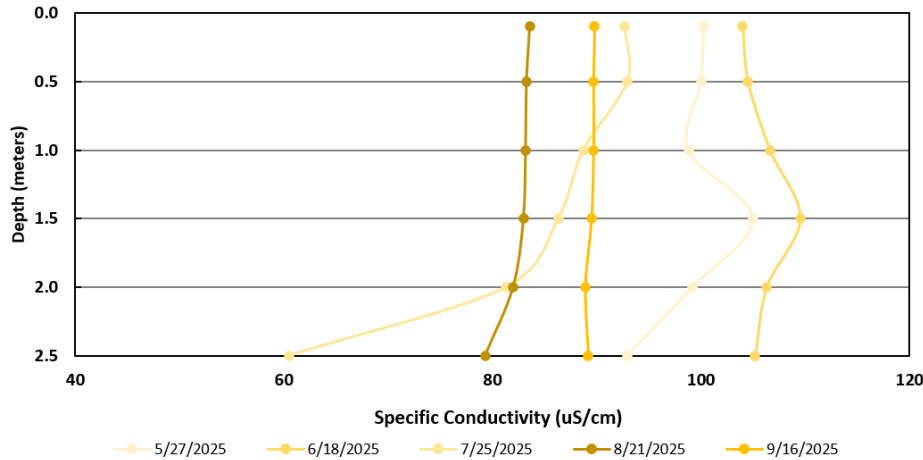
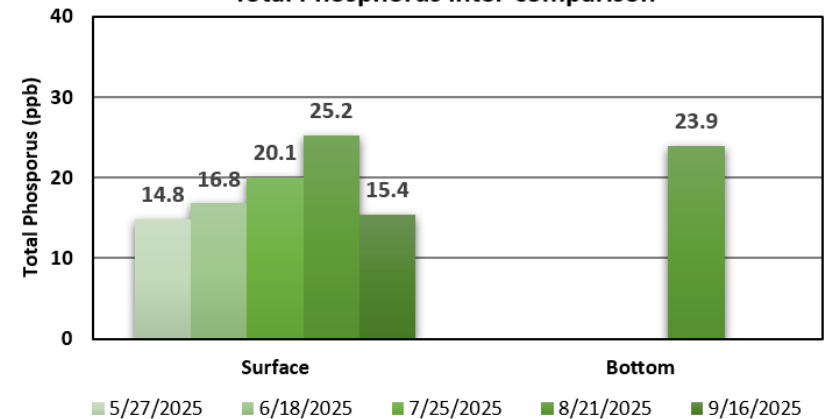


Figure 9. Downing Pond- Site Deep
Total Phosphorus inter-comparison



Figures 6, 7, and 8. Temperature, dissolved oxygen, and specific conductivity profiles display the water quality differences in 0.5-meter increments. Notice the decreasing dissolved oxygen concentrations, near the lake bottom, through the season. The dashed vertical red line in Figure 7 displays the dissolved oxygen threshold for the successful growth and reproduction of warm water fish such as bass and perch.

Figure 9. Total phosphorus comparison between the surface (epilimnion) and bottom water zones.

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For more information about your lake, [please visit the UNH LLMP data viewer and lake water quality reporting site](#).

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Downing Pond

New Durham, NH
Deep water sampling site



Extension



JONES POND

2025 SAMPLING HIGHLIGHTS

Station Deep

New Durham, NH



Blue = Oligotrophic

Yellow = Mesotrophic

Red = Eutrophic

Gray = No Data

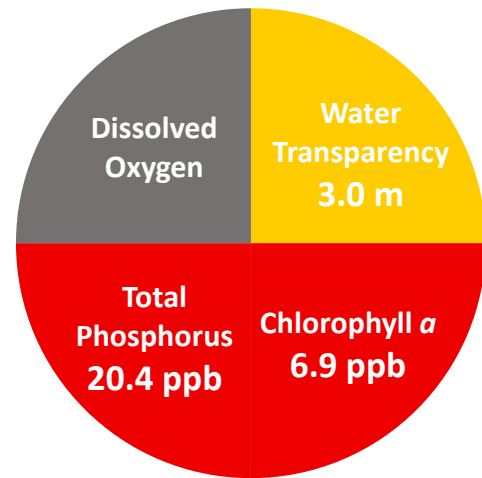


Figure 1. Jones Pond Water Quality (2025)

Water quality data displayed in Tables 1 and 2 are surface water measurements except for the dissolved oxygen data that are collected near the lake bottom during stratification. Summary results are provided for monthly samples collected between May 27 and September 16, 2025.

Table 1. 2025 Jones Pond Seasonal Averages and NH DES Aquatic Life Nutrient Criteria¹

Parameter	Oligotrophic	Mesotrophic	Eutrophic	Jones Pond Average (range)	Jones Pond Classification
Water Clarity (meters)	> 4.0 – 7.0	2.5 - 4.0	< 2.5	3.0 meters (VOB)	Mesotrophic
Chlorophyll <i>a</i> ¹ (ppb)	< 3.3	3.3 – 5.0	> 5.0 – 11.0	6.9 ppb (5.1 – 9.4)	Eutrophic
Total Phosphorus ¹ (ppb)	< 8.0	8.0 – 12.0	> 12.0 – 28.0	20.4 ppb (15.6 – 26.2)	Eutrophic
Dissolved Oxygen (ppm)	> 5.0 – 7.0	2.0 – 5.0	< 2.0	Not Assessed *	NA

* Jones Pond did not develop a mid or deep-water layer that is the basis for the dissolved oxygen classification criteria. VOB=visible on bottom.

Table 2. 2025 Jones Pond Seasonal Average Accessory Water Quality Measurements

Parameter	Assessment Criteria					Jones Pond Average (range)	Jones Pond Classification
Color (color units)	< 10 uncolored	10 – 20 slightly colored	20 – 40 lightly tea colored	40 – 80 tea colored	> 80 highly colored	25.4 color units (range: 20.6 – 30.1)	Lightly tea colored
Alkalinity (ppm)	< 0.0 acidified	0.1 – 2.0 extremely vulnerable	2.1 – 10 moderately vulnerable	10.1 – 25.0 low vulnerability	> 25.0 not vulnerable	7.9 ppm (range: 7.7 – 8.1)	Moderately vulnerable
pH (std units)	< 5.5 suboptimal for successful growth and reproduction		6.5 – 9.0 optimal range for fish growth and reproduction			6.9 ppm (range: 6.8 – 7.2)	Optimal range for fish growth and reproduction
Specific Conductivity (uS/cm)	< 50 uS/cm Characteristic of minimally impacted NH lakes		50-100 uS/cm Lakes with some human influence	> 100 uS/cm Characteristic of lakes experiencing human disturbances		57.3 uS/cm (range: 54.4 – 59.5)	Characteristic of lakes with some human influence

Figure 2. Jones Pond (2025 Seasonal Data)
Secchi Disk Transparency and Chlorophyll a Data

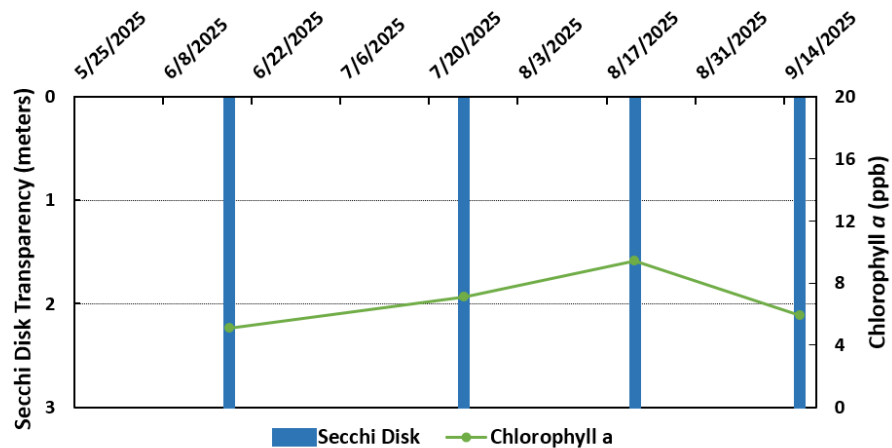


Figure 3. Jones Pond (2025 Seasonal Data)
Secchi Disk Transparency and Dissolved Color Data

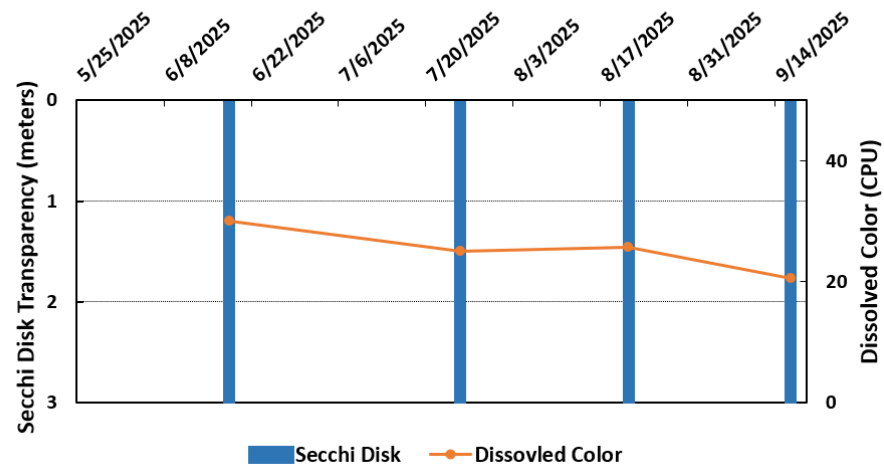


Figure 4. Jones Pond - Deep Site (2017-2025)
Long-term Secchi Disk Transparency and Chlorophyll a Data

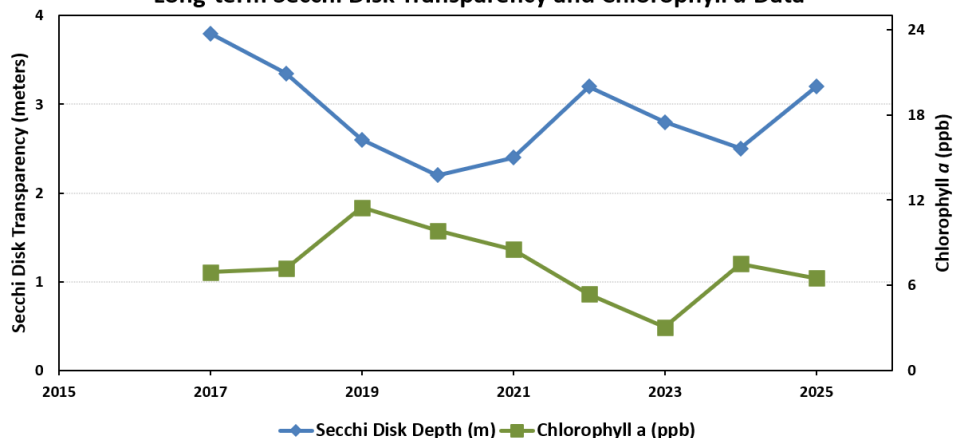
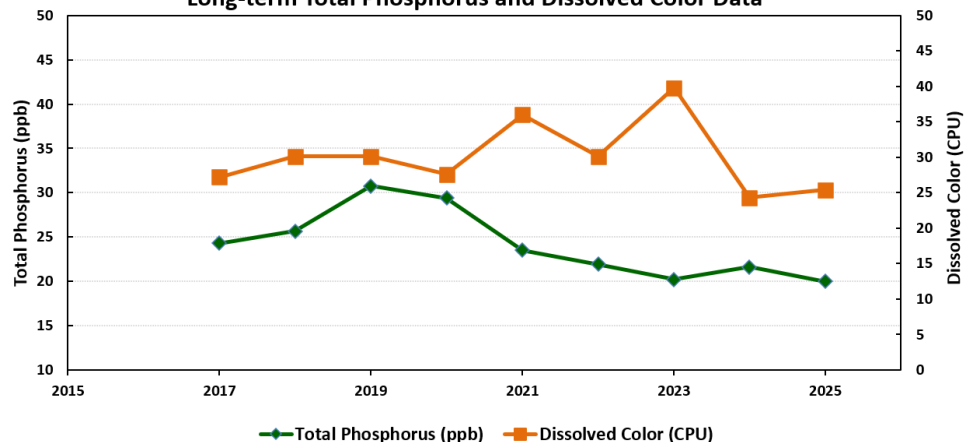


Figure 5. Jones Pond - Deep Site (2017-2025)
Long-term Total Phosphorus and Dissolved Color Data



Figures 2 and 3. Seasonal comparison of Jones Pond water transparency (Secchi Disk depth), chlorophyll a , and dissolved color for 2025. Shallower water transparency measurements oftentimes correspond to increases in chlorophyll a and/or color concentrations. The water clarity was visible on the bottom of the pond at each visit in 2025 (~ 3-3.5m).

Figures 4 and 5. Annual median Jones Pond water transparency, chlorophyll a , dissolved color, and total phosphorus (TP) concentrations measured between 2017 and 2025, through the New Hampshire Lakes Lay Monitoring Program. The long-term data provide insight into the water quality fluctuations, among years, that have been documented in Jones Pond. A 1986 NHDES report summarized Total Phosphorus as ~ 30 ppb in mid July.

Figure 6. Jones Pond - Site Deep
Temperature Profiles (June 18- September 16, 2025)

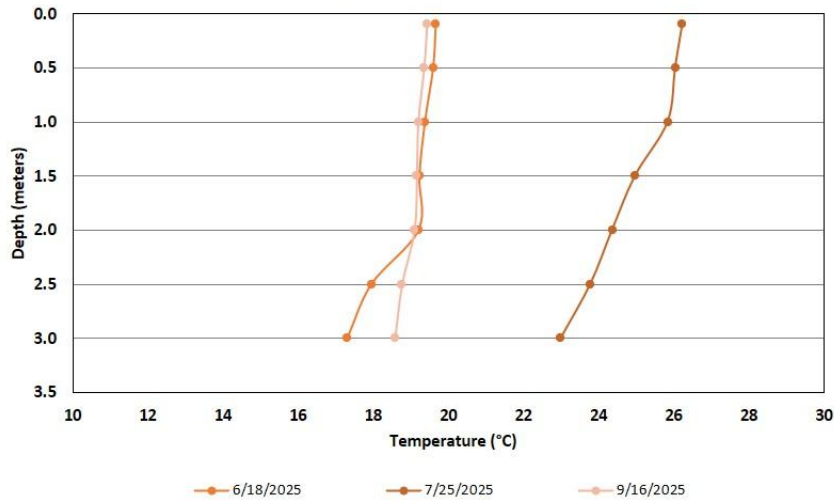


Figure 7. Jones Pond - Site Deep
Dissolved Oxygen Profiles (June 18- September 16, 2025)

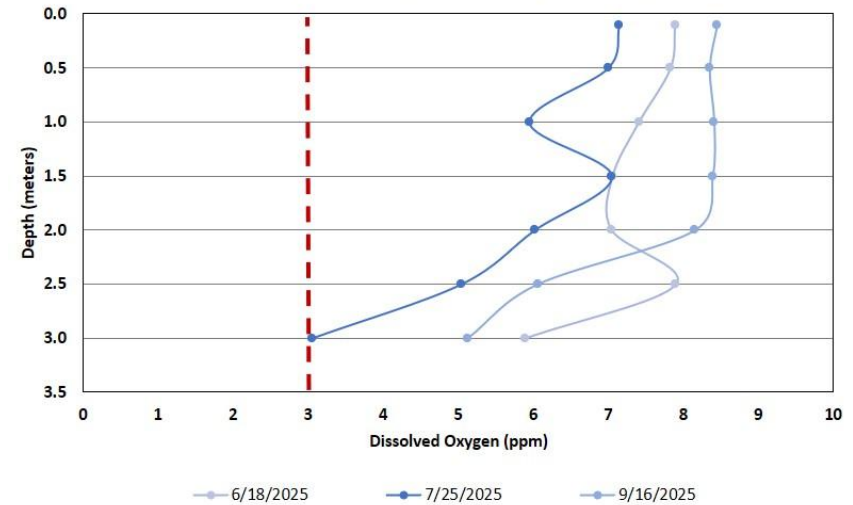


Figure 8. Jones Pond - Site Deep
Specific Conductivity (June 18- September 16, 2025)

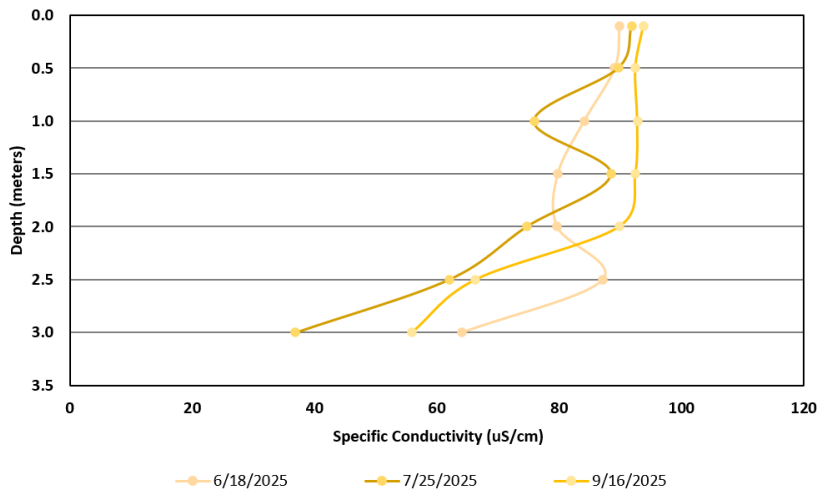
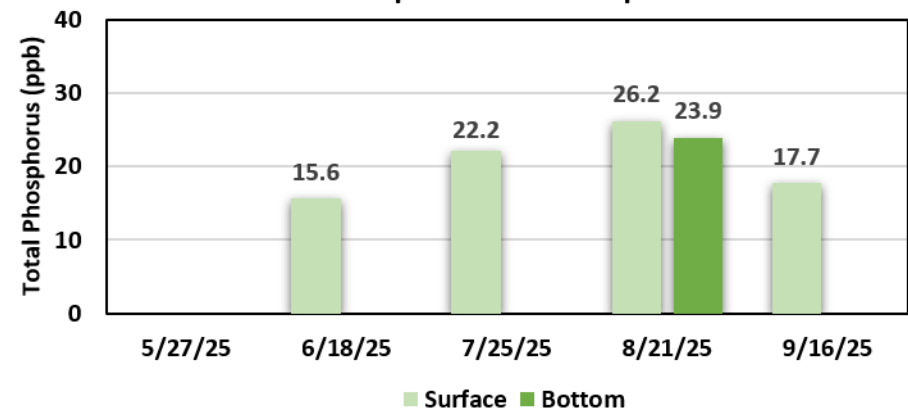


Figure 9. Jones Pond - Site Deep
Total Phosphorus inter-comparison



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Figure 9. Total phosphorus comparison between the surface (epilimnion) and bottom water (hypolimnion) zones.

Data Interpretation: Overview of factors to consider when reviewing the Jones Pond data

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- **Internal Nutrient Loading** (nutrients that are introduced from the sediments along the lake bottom) – Some of our lakes experience significant internal nutrient loading. Such lakes generally tend to be well stratified and exhibit increasing deep water phosphorus concentrations, relative to surface levels, from May through September/October (Figure 9). Lakes that exhibit internal nutrient loading may also exhibit increasing deep water-specific conductivity concentrations (a measure of dissolved materials) through the summer months.

For more information about your lake, [please visit the UNH LLMP data viewer and lake water quality reporting site](#).

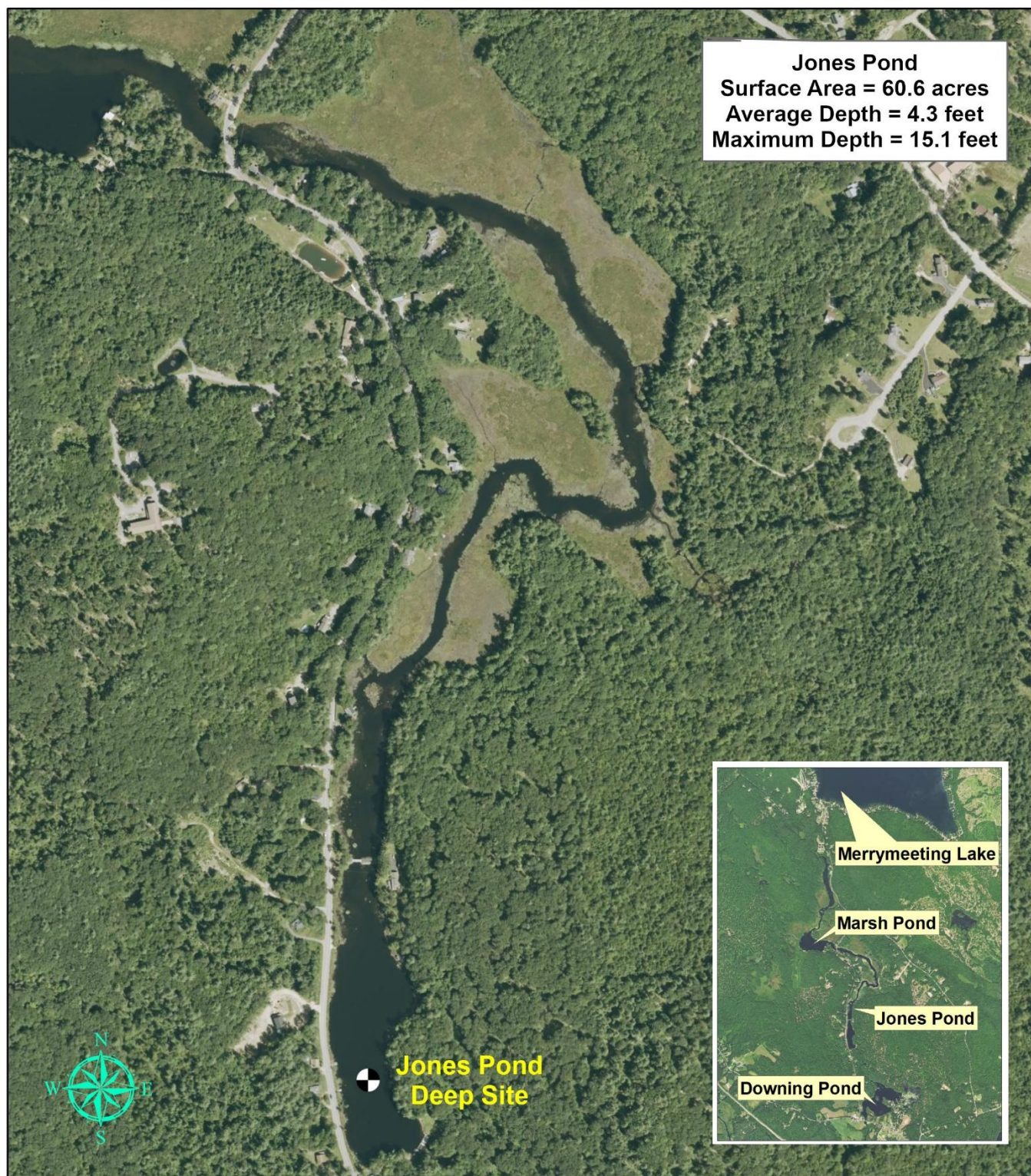
Other relevant resources from the [New Hampshire Department of Environmental Services](#), such as the [“Lake Info Mapper”](#) and the [“Surface Water Quality Assessment Viewer”](#), provide additional information on NH lakes, streams and watersheds.

Strategies to stabilize and improve water quality

Refer to [“Landscaping at the Water’s Edge: An Ecological Approach”](#) and [“New Hampshire Homeowner’s Guide to Stormwater Management: Do-It-Yourself Stormwater Solutions for Your Home”](#) for more information on how to reduce nutrient loading caused by overland run-off. NH Lakes also provides a series of resources aimed at educating residents and protecting our lakes and ponds through the [LakeSmart](#) program.

Jones Pond

New Durham, NH
Deep water sampling site



0 0.1 0.2 0.3 0.4 Miles

GPS Coordinates collected by the UNH Center for Freshwater Biology



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