

CSLAP Field Sample Collection Checklist

I. Pre-departure Equipment Check - Complete the following checklist *before departing* the dock:

<input type="checkbox"/>	CSLAP Field Observation Form – Lake Perception, and Health and Safety Form; Sampling Record Form	<input type="checkbox"/>	Pen or pencil to fill out forms
<input type="checkbox"/>	HAB Visual Observation Reference Sheet & Shoreline Survey	<input type="checkbox"/>	HAB sample collection bottle
<input type="checkbox"/>	Thermometer	<input type="checkbox"/>	Watch, phone, etc. to get time of day, GPS
<input type="checkbox"/>	Secchi disk and tape measure	<input type="checkbox"/>	Boat, anchor and line, appropriate safety equipment
<input type="checkbox"/>	Kemmerer sampling bottle and marked line	<input type="checkbox"/>	Camera or phone for photos of algal blooms
<input type="checkbox"/>	Collapsible water sample container and cap with spigot (For stratified lakes – deep collection container also)	<input type="checkbox"/>	Supplemental shallow water collection container (or replacement large container)
<input type="checkbox"/>	Plastic gloves for surface and deep water collection		

II. On-Lake Observations, Secchi and Air Temperature Readings

1. ___ Go to your sampling site by using GPS or triangulation and anchor (if possible)
2. ___ Fill out both sides of the “**CSLAP Field Observation Form – Lake Perception and Health and Safety**”
3. ___ Fill out the **CSLAP Sampling Record Form**
 - ___ Record the lake name, county, CSLAP Sampling Round #, date of sampling, and volunteer names.
 - ___ Determine sounding depth (lake depth) with Secchi disk or depth finder and record in meters.
 - ___ Record Lake Level (High, Normal, Low)
 - ___ Record Secchi Disk measurement off the shady side of boat to the nearest 1/10th meter – *do not use aids or sunglasses.*
 - ___ Record the sampling time
 - ___ Take the air temperature reading using the provided thermometer, and record to nearest 1° C.
 - ___ Record harmful algal bloom conditions at the CSLAP sampling site (including “no evidence of bloom”).
 - ___ Assess and record today’s wind and sky conditions
 - ___ Record the weather conditions that have occurred over the past week
 - ___ Record the wind direction. (Note to non-sailors: A SW wind means that the wind is “out of the southwest”, and the arrow should point from the SW towards the NE.)
 - ___ Note any unusual weather conditions, if applicable
 - ___ Complete the comments section. Please include any lake management activities taking place (herbicide applications, harvesting, oxygenation, etc.)

III. Sample Collection, Water Temperature, and H2S Odor Observations

1. ___ Put on gloves; collect Surface Sample (1.5 m depth unless otherwise instructed). Record collection depth.
2. Remember to:
 - Keep the Kemmerer line as straight as possible
 - Avoid touching inside the Kemmerer while setting the tripping mechanism
 - Rinse the collapsible container with sample water- fill ¼ full, shake, and discard completely before filling
 - Avoid touching the spigot/sample while discharging from container
 - Collect additional samples if needed until the surface collapsible container is filled
2. ___ Take the water temperature reading from the water sample, and record to the nearest 1° C
3. ___ Put collapsible container(s) in a cooler (preferable) or in the shade to keep cool, out of sunlight prior to on-shore processing
4. ___ (For those collecting a Deep Sample) – Collect and record depth of deep sample as above.

III. Shoreline Algae and Aquatic Plant Observations

1. ___ Fill out Shoreline Survey Form
 - Inspect portion of the shoreline and note location
 - Assess observed shoreline bloom conditions
 - Collect a HAB sample by skimming bloom surface using the 1L HAB Event bottle – **make sure to wear gloves**
 - Take photos of HAB accumulations
2. ___ Complete aquatic plant observations. Collect specimens for photographing and ID if needed.

CSLAP On-Shore Sample Processing Checklist

IV. On-Shore Process for the Surface Sample – Samples should be processed immediately! Failure to do so will change the water chemistry and impact the integrity of the data.

Remember to wear gloves throughout sample processing!

Only open bottle caps one at a time, as you fill them and avoid touching the inside of the bottle caps and bottle. Date and organize the bottles and chain of custody (COC).

1. Fill the following bottles without filtration from the **shallow** collapsible container:

- Completely fill the pH bottle to the top with water, leaving no air gap or headspace, and **refrigerate**.
- Mix the sample by gently inverting the shallow collapsible container.
- Fill Total Phosphorus (TP), Total Nitrogen (TN), and NOx/NH3 bottles to the shoulder with surface water and **freeze**.
- Fill the calcium bottle (not in every round) to the shoulder with shallow water and **freeze**.
- Fill the chloride bottle (not in every round) to the shoulder with shallow water and **freeze**.
- Fill the open water HABs bottle (if applicable) to the shoulder with shallow water, place in bubble wrap, and **refrigerate**.

2. Filter the following (Color and Chl-a Samples):

- Rinse the entire filtration apparatus with distilled water and discard the water.
- Mix the shallow sample by gently inverting the collapsible container.

Color Sample

- Using forceps, place 1 filter paper in the filter holder.
- Secure filter to holder by gently threading the upper cup onto the holder
- Filter 100 ml water – *apply a slight vacuum (a few pumps) to the sample to avoid rupturing the filter*
- Discard the filter
- Pour filtered water into the Color (Field filtered) bottle and **freeze**.
- Rinse equipment with distilled water

Chlorophyll a Sample

- Using forceps, place a second filter into the filter holder
- Shake the MgCO₃ bottle well, and cover the filter paper with 6-10 drops of MgCO₃.
- Filter 100ml of water
- Wash graduated cylinder and walls of upper apparatus with distilled water and filter to capture all Chl-a
- Remove filter paper, fold in quarters, and place in pointed end vial labeled Chl-a (NO WATER)
- Wrap Chl-a filter vial with aluminum foil and **freeze**.
- Discard remaining water and rinse equipment with distilled water

V. On Shore Processing for the Deep Sample (if applicable) and Shoreline HAB sample (if applicable)

Mix deep sample by gently inverting the collapsible container. Only open bottle caps one at a time as you fill them; avoid touching the inside of the bottle caps. Date and organize the bottles and COC.

1. Fill the TP and NOx/NH3 bottles to the shoulder from the deep collapsible container with deep water without filtration and **freeze**.
2. Gently mix the shoreline HAB sample by slowly inverting the 1L HAB event bottle one or two times. Fill the glass amber bloom bottle to the shoulder, put in the bubble wrap bag, and **refrigerate**.

VI. Finish Processing

- Verify paperwork is complete, all bottles are labeled and dated correctly.
- Enter field data and report HABs using the CSLAP Dashboard: on.ny.gov/cslap_dashboard (case sensitive)
- Refrigerate** pH, surface “open water” HAB (if applicable), and shoreline bloom HAB (if applicable) bottles
- Freeze** all other bottles and chl a vial. Fill 1L “ice pack” bottle with water (to shoulder) to freeze.
- Rinse equipment with distilled water and set aside to dry. Hang Kemmerer to dry completely.
- Ship all samples the following day (samples have “holding times”). Completely fill out the Chain of Custody form and compare the bottle list to the ones you are shipping.
- Pack all samples and 1L “ice pack” bottle in the big cooler box.
- Place paperwork on top of cooler inside cardboard box. Use a separate sheet on top to request supplies. (Do not write notes on COC or Sampling Record Form). Take to the nearest UPS facility for shipment.