Survey of the Nation's Lakes
Lake Evaluation Guidelines

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NOTICE

The intention of the Survey of the Nation's Lakes project is to provide a comprehensive “State of the Lakes” assessment for lakes, ponds, and reservoirs across the United States. The complete documentation of overall project management, design, methods, and standards is contained in companion documents, including:

- Survey of the Nation's Lakes: Quality Assurance Project Plan
- Survey of the Nation's Lakes: Lake Evaluation Guidelines
- Survey of the Nation's Lakes: Field Operations Manual
- Survey of the Nation's Lakes: Laboratory Methods

Additional companion documents will be developed for this project. This document (Lake Evaluation Guidelines) contains an overview of the process involved in locating a sampling lake, evaluating the lake, and selecting appropriate alternate lakes when necessary, and is based on the guidelines developed and followed in the Western Environmental Monitoring and Assessment Program (Peck et al. 2003), the Wadeable Streams Assessment Site Evaluation Guidelines, and the National Lake Fish Tissue Survey. Methods described in this document are to be used specifically in work relating to the Survey of the Nation's Lakes. Mention of trade names or commercial products in this document does not constitute endorsement or recommendation for use. More detail of the project overview and of specific methods for sampling and sample processing can be found in the appropriate companion document.

The suggested citation for this document is:

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# TABLE OF CONTENTS

LIST OF FIGURES......................................................................................................................... iv

1.0 IDENTIFICATION OF RANDOM LAKES .................................................................................. 2
2.0 DETERMINE IF LAKE IS PART OF TARGET POPULATION.................................................. 4
3.0 OBTAINING PERMISSION TO ACCESS CANDIDATE LAKE.............................................. 6
4.0 VERIFY LAKE IS PHYSICALLY ACCESSIBLE AND SAMPLEABLE ..................................... 9
5.0 SELECTING ALTERNATE LAKES ......................................................................................... 10
6.0 LITERATURE CITED ............................................................................................................... 13

## ATTACHMENTS

1 EXAMPLE OF LANDOWNER PERMISSION SLIP & SURVEY OF THE NATION’S LAKES FACT SHEET
2 NATIONAL LAKE ASSESSMENT LAKE EVALUATION FORM
3 ENVIRONMENTAL PROTECTION AGENCY – REGIONAL MONITORING COORDINATORS
LIST OF FIGURES

Figure 1. Process of lake evaluation ................................................................. 2
Figure 2. Example of permission cover letter .................................................. 9
Figure 3. Example lake spreadsheet ............................................................... 12
SURVEY OF THE NATION'S LAKES
LAKE EVALUATION GUIDELINES

This document is provided to clarify all of the steps involved in the process of evaluating a sample lake for the Survey of the Nation's Lakes. The process of lake evaluation is very important for several reasons. The information obtained through this process is used to estimate the number of lakes that:

- are in United States,
- are physically inaccessible,
- are denied access by the landowner, and
- are in National Hydrography Dataset (NHD) but are not actually lakes

Over time, the process of lake evaluation will become much quicker as improvements are made to the NHD and the lake sample frame. Investing in this effort now for this study will help refine the target populations of lakes for future probabilistic studies. It is critical that all evaluators use the same lake evaluation process, that they are consistent in applying the lake criteria for the study, and that they apply the same level of effort in requesting permission and accessing the lake. In order to make the lake evaluation process consistent and efficient, a standard national Lake Evaluation Form will be used to guide and document the process. (This form is designed to be scanned for quick, error-free data entry.)

Every primary lake provided to the state, as well as any assigned alternate lakes, must have a Lake Evaluation Form submitted. The states will keep a copy for their own records, and will submit the original forms to EPA for processing. While most lakes will have a complete set of field sampling forms submitted along with the Lake Evaluation Form, a few lakes will only have a Lake Evaluation Form to submit. This will occur when it is determined that the waterbody is not a target lake or permission to sample is denied.

There are three steps in the process of lake evaluation for the Survey of the Nation’s Lakes. These three steps are outlined on the Lake Evaluation Form:

- conduct Desktop Evaluation and/or
- conduct Field Evaluation, and
- obtain Permission to Sample

The Desktop Evaluation and the Field Evaluation are used to determine if the lake is part of the target population, if it is safe to access, and if permission is needed (in the case of no public access). Then, if needed, permission is requested. Finally, the lake is either scheduled for sampling or replaced with the appropriate alternate lake. Figure 1
Figure 1  Process of Lake Evaluation for Survey of the Nation's Lakes

shows the entire process of actions and decisions that must be made before a lake can be sampled.

1.0  IDENTIFICATION OF RANDOM LAKES

Lakes were chosen from the National Hydrography Dataset (NHD), following a Generalized Random Tessellation Stratified (GRTS) survey design for a finite resource. This selection process was developed by the Office of Research and Development-Western Ecology Division (ORD-WED), and customized for the Survey of the Nation's Lakes sampling. The word “lake” in this document includes lakes, reservoirs and ponds.

EPA provided each state and EPA region a state lake packet consisting of a binder containing the following:
- maps (large and small scale),
- a lake spreadsheet,
- landowner information for each lake they are scheduled to visit,
- contact information and accompanying property maps (when available) for landowners of private lakes, and
- a CD containing all of the associated files.

The name and latitude/longitude of each lake is listed on each state’s lake spreadsheet. Each lake is identified as primary ("Panel_1" in the "Panel" column) or alternate ("Oversamp" in the "Panel" column). The primary lakes are the ones of interest for this project. The alternate lakes are only considered if the primary lakes are rejected. ALL primary (Panel_1) lakes must be evaluated. Within each state, a lake cannot be skipped in the evaluation process. For example, if NLA06608-0235 is the largest Site ID evaluated within a state, then a lake evaluation form must be completed for all Site IDs that are lower than "0235".

Upon receiving the lake packet, the state should verify the name, location, and status of their lakes, relying either on firsthand knowledge of the lake’s location, size, and features, or independent mapping and field evaluation. The next step is to complete the Lake Evaluation Forms for each lake. It is very important to complete the Lake Evaluation Form accurately and completely. The information provided on this form will contribute to the statistical analyses of data from this study, as well as refine estimates of the extent of the population of lakes for future probabilistic studies.

The evaluator should determine whether or not the lake is publicly accessible or located on private property. If the lake is on private property, the evaluator should identify the name and address of the landowner, so that the landowner may be visited during the field evaluation. If the lake is not publicly accessible, the field sampling crew will need landowner permission and the field evaluation provides a good opportunity for personal contact with the landowner to explain the purpose of the study and request permission to access the lake during the sampling season.
2.0 DETERMINE IF LAKE IS PART OF TARGET POPULATION

The primary purpose of the lake evaluation is to determine whether or not the lake is part of the target population for the Survey of the Nation's Lakes. The first step of the evaluation is to conduct a Desktop Evaluation to attempt to verify the lake status without the expense of a field visit. If a conclusive determination cannot be made from the desktop evaluation, a Field Evaluation may be necessary.

Step 1: Desktop Evaluation

In the header box of the Lake Evaluation Form, fill out the site ID, location, and evaluator information. Indicate what sources were used to determine the status of the lake. If NHD was used in the evaluation, be sure to report any discrepancies in lake name, lake shape/size, etc. to the Regional Lakes Coordinator.

Next, fill in Section A of the Desktop Evaluation, which asks the cooperator to determine the presence/absence of certain waterbody characteristics. Many lakes will be well-known lakes, and the evaluator may already have enough first-hand knowledge to determine the lake’s status. Other lakes may require an investigation of maps, online resources, reports, conversations with local experts, etc. The cooperator should use all available means to determine if the randomly selected lake is truly part of the study target population. This is a very important step that will affect the interpretation of the results of the analyses, and care must be taken to make an accurate evaluation.

The target population for this study is all lakes, reservoirs, and ponds within the 48 contiguous United States greater than 4 hectares in surface area that are permanent waterbodies. The lake must be ≥1 meter deep and ≥1000 meter$^2$ open, unvegetated water. Lakes that are saline are excluded as are those used for aquaculture, disposal-tailings, mine-tailings, sewage treatment, evaporation, or other unspecified disposal use.
If the lake does not meet ANY of the above criteria, it is considered "non-target" and it cannot be sampled as part of this study. At this point, the evaluator should check “LAKE SHOULD NOT BE SAMPLED. LAKE EVALUATION COMPLETE” on the Lake Evaluation Form. The evaluator should report the non-target lake to the regional lake coordinator using the contact information found at the back of this document. If the lake does meet all the criteria for sampling, the cooperator should check “LAKE SHOULD BE SCHEDULED FOR SAMPLING. Proceed to STEP 3 (Permission to Sample).”

Step 2: Field Evaluation
If the lake characteristics cannot be determined via desktop evaluation, the lake will require an actual Field Evaluation to determine whether or not the lake meets the study criteria. In this case, the same waterbody characteristics detailed above must be verified and documented on the Lake Evaluation Form labeled Step 2: Field Evaluation. If the lake does not meet ANY of the criteria, it is considered “non-target” and it cannot be sampled as part of this study. The evaluator should check “LAKE SHOULD NOT BE SAMPLED. LAKE EVALUATION COMPLETE” on the Lake Evaluation Form. The evaluator should report the non-target lake to the regional lake coordinator using the contact information found at the back of this document. If the lake does meet all the criteria for sampling, the cooperator should check “LAKE SHOULD BE SCHEDULED FOR SAMPLING. Proceed to STEP 3 (Permission to Sample).” In this case, the field visit should also be used to document any issues associated with accessing the lake, such as steep terrain, livestock, locked gates, or thick, nuisance vegetation. The lake evaluation team should also ascertain whether or not there is a boat ramp, and what type/size boat it can accommodate.
**Frequently Asked Questions**

- **Q ~ If questions arise concerning lake status, who should I contact?**  
  A ~ Please e-mail a detailed description of your concerns about the lake to Laura.Gabanski@epa.gov and Susan.Holdsworth@epa.gov. They will work with the EPA ORD lab to determine the final status of the lake.

- **Q ~ Some reservoirs may be < 1 m deep or <4 ha in area late in the irrigation season – should these lakes be sampled?**  
  A ~ Reservoirs that greater than or equal to 1 meter depth when the state determines this ARE part of the sample frame. If depth at deepest point is less than 1 meter when lake is sampled, then lake IS DROPPED from the list.

- **Q ~ What criteria should be used to determine if a lake should be dropped from the sample population due to salinity?**  
  A ~ Coastal lakes (e.g., salt ponds, dune lakes or lakes under tidal influence) ARE NOT part of the sample frame if they are naturally saline. Inland lakes that are saline or have high conductivity ARE part of the sample frame with the exception of the Great Salt Lake.

- **Q ~ Should oxbows, backwaters, and side-channel reservoirs be sampled?**  
  A ~ Oxbows ARE lakes if they are separated form a river. However, oxbows that have flowing water or wetland connection to a river are NOT lakes. Side-channel reservoirs and drinking water reservoirs where water is pumped from a nearby river that does not have recreation or aquatic life uses ARE NOT part of the sample frame.

- **Q ~ Should ephemeral lakes be sampled?**  
  A ~ Ephemeral lakes that do not meet the inclusion criteria during the index period ARE NOT part of the sample frame.

- **Q ~ Should mining pits be sampled?**  
  A ~ Actively used quarry pits, mine tailing disposal lakes, borrow pits, and stormwater treatment ponds ARE NOT in the sample frame. Abandoned mine lakes that are used for recreation or other beneficial uses, e.g., wildlife ARE part of the sample frame. The Lake Evaluation Form (see resolution below) will include a place to note lake origin to assist in data interpretation.

### 3.0 OBTAINING PERMISSION TO ACCESS CANDIDATE LAKE

Many of the lakes will be publicly accessible with either boat ramps or convenient small boat access. In these cases, explicit permission to access the lake is not needed and little prior work needs to be done outside of determining the best access routes for the sampling crew. However, for those lakes that are on privately owned land, land-owner permission will be required to access and sample these lakes. Obtaining permission
prior to the sampling day is important to minimize loss of time on the part of the field team. Many states have an existing protocol for securing landowner permission; if so, the protocol should be used for this study. Requesting access is Step 3 of the Lake Evaluation Form – Permission to Sample.

Identification of public versus private lakes and some landowner information was included in the lake packet for many of the primary (panel_1) lakes. If no landowner information was obtained for a lake, the contact information for the county office is listed in the “Comments” column of the lake spreadsheet. The best place to start looking for landowner information is with the county office. The county office can direct you to the agency that is responsible in your state/county for holding landowner records, and you can work with the appropriate agency to procure the information. Please be advised that this process can sometimes be time-consuming, as you may need to work with several different agencies and numerous people. Be prepared to submit maps via fax machine, as some counties do not have landowner information in a GIS database and are unable to use coordinates to obtain the information. Also, if your state or county uses the township/range/section system for identifying parcels of land, you will need to know this information for your lake also, and this may require contacting yet another agency. It may also be necessary to visit the records office in person. Each county will be different as far as the organization of their records and their ability to assist the evaluator.

Once the landowner is identified, and the desktop or field evaluation confirm the lake is part of the survey’s target population, the state should begin to request permission to access and sample the lake following the state’s protocols. If no protocol exists, the state should employ the most personal contact practicable. One option is to ask the most local representative possible to make the initial contact. For example, a state or county agent, local official, or Soil and Water Conservation District agent that is familiar to the landowner will usually be more effective at getting access permission than a federal agent or a contractor. The initial contact with the landowner is best done through an “in-person” visit, which could be a part of the field evaluation. The landowner is much more likely to grant permission if they actually meet and speak with a study representative instead of receiving a phone call or letter. With advanced planning, it may be possible to schedule these landowner visits during other field work the season before the Lake Study field work begins. This would maximize efficiency and ensure the best possible responses from the landowners.

If the evaluator is unsuccessful reaching the landowner personally, the next best way to make contact is through a telephone call. Again, a local representative may be more effective in securing permission, so it is important to request help at this level if the evaluator is not local. If the landowner cannot be reached by telephone, the evaluator should mail out a cover letter (Figure 2) with a fact sheet and a permission slip (Attachment 1) for the landowner to return. Whether securing permission through a personal visit, phone call, or letter, a signed permission slip is important to use as documentation on the day of sampling.
If the landowner denies access, verify whether or not there are other landowners that may allow access to the lake via their property. If no other landowner options exist, or all other landowners deny access, the lake will be dropped from the list. Notify the Regional Lake Coordinator using the contact information found at the back of this document.

**Step 3: Permission to Sample**

Fill out the permission information in Step 3: Permission to Sample on the National Lake Assessment Lake Evaluation Form. Document the method of requesting access permission. If the lake is publicly accessible, check “Lake has public access available, no permission required to access and sample lake.” If the lake is private and permission is granted, check “Lake has no public access. Landowner(s) granted permission to access and sample lake” on the form. Fill out the landowner contact information and any special instructions needed to access the lake. If permission is denied for a private lake by all landowners, check “Lake has no public access. Landowner(s) denied permission to access and sample lake.” If access is denied for a private lake, the cooperator should report that to the regional lake coordinator using the contact information found at the back of this document.
4.0  VERIFY LAKE IS PHYSICALLY ACCESSIBLE AND SAMPLEABLE

Lakes for the Survey of the Nation's Lakes were selected from the population of lakes across the U.S. through a probabilistic survey design. In order to achieve the most robust results possible with the probabilistic sampling design, every effort must be made to sample the primary lakes that were generated.

It is very important not to reject a lake based on inconveniences in access. Some lakes may require the team to simply drive their truck onto a boat ramp and go, but others may require a lengthy hike or portage with a small boat. Some lakes may be in areas that are impossible to safely access. A lake may be permanently inaccessible if it is unlikely to be sampled by anyone due to physical barriers that prevent access (e.g., cliffs). Lakes could also be rejected for sampling if they are temporarily inaccessible due to barriers that may not be present at some future date (e.g. forest fire, high water,
road temporarily closed, unsafe weather conditions), but which render them inaccessible during the study index period.

Occasionally, a lake may have to be rejected due to physical barriers. If a lake is part of the target population but is determined to be physically inaccessible, please provide a detailed description on the Lake Evaluation Form as to why the lake was rejected. The evaluator should report the physically inaccessible lake to the regional lake coordinator using the contact information found at the back of this document.

### Frequently Asked Questions

- **Q ~ What constitutes difficulty of access in sampling a lake?**
  
  **A ~** The objective of the Lakes Survey is to sample lakes that are representative of the full range of conditions found across the country. Therefore, every attempt should be made to sample. Accessing remote lakes may result in flagging samples that cannot be handled and shipped within the guidelines of the QAPP.

- **Q ~ What if extreme weather hits, the lake is in flood stage, or there are other unsafe conditions?**
  
  **A ~** If it is unsafe to sample the lake and the lake cannot be re-scheduled within the index period, then it is removed from the draw and the next lake on the oversample list is chosen.

- **Q ~ What if boats are not allowed on a publicly-accessible lake?**
  
  **A ~** Try to gain permission to sample by boat or other means such as rafts. If permission cannot be obtained, then the lake should be dropped from the list.

### 5.0 SELECTING ALTERNATE LAKES

The lakes selected for sampling in the Survey of the Nation's Lakes are organized in individual state spreadsheets. Each spreadsheet contains a list of all primary (“Panel_1”) and alternate (“Oversamp”) lakes in the State. The lakes are listed on the spreadsheet in the order in which they were randomly selected. All primary (“Panel_1”) lakes should be sampled unless they are determined to be non-target or inaccessible, or if permission is denied. If a primary lake is rejected, it will be replaced by the next alternate (“Oversamp”) lake within the same state, regardless of lake size or ecoregion.

In the event that a primary lake is rejected during lake evaluation or when sampling, the sampling or evaluation team must contact the Regional Lake Coordinator to report it. The Regional Lake Coordinator will then identify the next lake from the alternate list to replace it. The first alternate lake is the first lake on the state spreadsheet that is
identified as “Oversamp” in the Panel column; these lakes are also shaded gray (see Fig. 3). For example, in Fig. 3, if the lake with SITEID number 0251 is reported as permission denied, the first alternate lake, the lake with SITEID number 1051, will be added as a replacement. If lake with SITEID number 0907 is then rejected as non-target, the next alternate lake, SITEID number 1067, will be added. As primary lakes are rejected, the Regional Lake Coordinator will continue to replace them with alternate lakes by selecting the next alternate lake on the state list.

It is very important to remember that lakes cannot be skipped in the evaluation process. Also, every effort must be made to give each lake a fair, thorough evaluation before rejecting it. As mentioned earlier, the information provided on the Lake Evaluation Form will contribute to the statistical analyses of data from this study, as well as refine the target population of lakes for future probabilistic studies.

NOTE: 4000 lakes were selected as potential replacement lakes. The large over sample size was generated to accommodate those states who may want to increase the number of lakes sampled to about 50 lakes within their state for a state-level design.

Frequently Asked Questions

- Q ~ If a lake drops from my list, can I replace it with the next oversample site, or do I need to wait until the replacement is assigned by my Regional Lake Coordinator?
  
A ~ If a lake is dropped, replace it with the first available site on your state’s oversample list; DO NOT skip lakes on your oversample list. Please report the dropped lake to your Regional Lake Coordinator as soon as possible.
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<th>PANEL</th>
<th>NAME</th>
<th>ST</th>
<th>CNTYNAME</th>
<th>LAT</th>
<th>LONG</th>
<th>AREA_ HA</th>
<th>WSA_ ECO9</th>
<th>Access</th>
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<td>NLA06608-1999</td>
<td>OverSamp</td>
<td>Lake Ada</td>
<td>AL</td>
<td>PERRY</td>
<td>32.610888</td>
<td>-87.376151</td>
<td>7.0</td>
<td>CPL</td>
<td>Owned by City of Birmingham</td>
</tr>
<tr>
<td>NLA06608-1995</td>
<td>OverSamp</td>
<td>Lake Ada</td>
<td>AL</td>
<td>ETOWAH</td>
<td>33.856222</td>
<td>-86.038069</td>
<td>64.3</td>
<td>UMW</td>
<td>Owned by City of Birmingham</td>
</tr>
<tr>
<td>NLA06608-2091</td>
<td>OverSamp</td>
<td>AL ELMORE</td>
<td>AL</td>
<td>CRENshaw</td>
<td>32.352558</td>
<td>-86.490657</td>
<td>5325.7</td>
<td>TPL</td>
<td>Owned by City of Birmingham</td>
</tr>
<tr>
<td>NLA06608-2154</td>
<td>OverSamp</td>
<td>L Pond</td>
<td>AL</td>
<td>CONECUH</td>
<td>31.267671</td>
<td>-86.947666</td>
<td>23.0</td>
<td>WMT</td>
<td>Owned by City of Birmingham</td>
</tr>
</tbody>
</table>

Figure 3 Example lake spreadsheet
6.0 LITERATURE CITED

I grant permission to the biological field crew from (state agency or contractor) to access the lake sampling lake located on my property as part of the EPA’s Survey of the Nation’s Lakes project.

________ Do grant permission

________ Do grant permission but with the following restrictions:

_________________________________________________________________________________

_________________________________________________________________________________

________ Do not grant permission

Landowner Name (Please print): ______________________________________________________

Landowner Signature: _____________________________________________________________

Date: __________________________________________________________________________

Phone Number: _________________________________________________________________

Address: ________________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

*If the operator is different than the landowner, please list the name and phone number below so that we may contact the operator before the lake visit.
Survey of the Nation’s Lakes  
Fact Sheet

What is the Survey of the Nation’s Lakes?

The goal of this survey is to address two key questions about the quality of the Nation’s lakes, ponds, and reservoirs:

- What percent of the Nation’s lakes are in good, fair, and poor condition for key indicators of ecological health and human activities?
- What is the relative importance of key stressors such as nutrients and pathogens?

The sampling design for this survey is a probability-based network which will provide statistically-valid estimates of the condition of all lakes with known confidence. It is designed using modern survey techniques such that sample lakes are selected at random to represent the condition of all lakes in regions that share similar ecological characteristics. This design will provide regional and national estimates of the condition of the Nation’s lake resource.

The parameters measured will be used to evaluate the ecological condition of lakes and to evaluate the extent that lake resources support human activities. The measurements will be taken using consistent procedures at all lakes to ensure the results can be compared across the country.

This survey is one of a series of surveys being implemented cooperatively by states, tribes, the U.S. Environmental Protection Agency, the U.S. Geological Survey and other partners. The purpose of these surveys is to periodically generate statistically-valid and environmentally relevant reports on the condition of the Nation’s water resources. In addition to providing information on the condition of the Nation’s waters these collaborative assessments are intended to provide funding and experience that enhance state’s and tribe’s ability to assess and manage water quality.

What is the schedule for the survey?

EPA, states, tribes and others are working on the scope and design of the survey in 2005 and 2006. This collaboration is exploring how to define the population of lakes that should be included in the survey and which indicators best reflect

---

For purposes of this survey “lakes” refers to natural and man-made freshwater lakes, ponds, and reservoirs in the continental U.S., excluding the Great Lakes.
ecological health and human activities. After these decisions are made, EPA and its partners will develop a quality assurance plan and field manuals that describe how to conduct the survey. Training and field sampling will be conducted in 2007. Sample processing and data analysis will be completed during 2008 in order to publish a report in 2009.

How can I learn more about the Lakes Survey?

EPA is posting basic information about the survey on the internet at www.epa.gov/owow/lakes. This web site provides information on meetings with states and other partners to develop the design and scope of the survey. It is also the site to visit to get more detailed information on what will be measured and how it will be measured.

You are invited to send questions or comments to the EPA Lakes Team at lakessurvey@epa.gov

You may also contact the Lakes Survey Coordinator for your state at:

Insert name and contact info for state and/or EPA regional point of contact here:
ATTACHMENT 2

National Lake Assessment Lake Evaluation Form
Step 1: Desktop Evaluation

SITE ID: NLA06608 - SITE NAME: ________________ STATE: _____
COUNTY: ________________ DATE: __/___/_____
EVALUATOR: __________________ AFFILIATION: __________________

Lake Origin Comments (Natural, Man made, Kettle, etc.): __________________

Please check and describe all sources used to determine lake status during desktop evaluation:

- [ ] NHD Coverage
- [ ] Road maps
- [ ] Online topographic maps (e.g. topozone.com)
- [ ] Firsthand knowledge
- [ ] Online aerial photos (e.g., Terraserver)
- [ ] Discussion with state personnel, landowner, etc.
- [ ] Hardcopy quad/topographic maps
- [ ] Literature, reports
- [ ] Hardcopy aerial photos or LandSat tiles
- [ ] Internet (URL: __________________)
- [ ] Wetland maps from USFWS
- [ ] Other: __________________

If NHD was used in the evaluation, are there discrepancies in lake name, lake shape, size, etc. that need to be reconciled before final status can be assigned?  [ ] No  [ ] Yes (Notify evaluation coordinator)

Comments

A. Identify presence (Y), absence (N), or cannot be determined (U) for the following waterbody characteristics.

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>U</td>
<td>U</td>
</tr>
<tr>
<td>Is a permanent water body</td>
<td>Is a private aquaculture waterbody</td>
</tr>
<tr>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>U</td>
<td>U</td>
</tr>
<tr>
<td>Is non-saline</td>
<td>Is used for disposal (tailings, mine-tailings or other unspecified disposal use)</td>
</tr>
<tr>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>U</td>
<td>U</td>
</tr>
<tr>
<td>Surface area is ≥4 hectares (10 acres)</td>
<td>Is sewage treatment pond</td>
</tr>
<tr>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>U</td>
<td>U</td>
</tr>
<tr>
<td>Is ≥1 meter (3 feet) deep</td>
<td>Is used for evaporation</td>
</tr>
<tr>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>U</td>
<td>U</td>
</tr>
<tr>
<td>Has ≥1000 m² (10,764 ft², 0.25 acres) of open water</td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>U</td>
<td>U</td>
</tr>
<tr>
<td>Is physically accessible for crew and boat(s) (e.g., no steep/ unstable terrain, dense/ toxic vegetation, canyons/gullies). If N, explain in comments below.</td>
<td></td>
</tr>
</tbody>
</table>

Comments

B. If any answer above is Cannot be Determined, schedule a site evaluation visit and complete a Field Evaluation Visit form (Step 2.)

C. If ANY answer in column 1 is NO OR if ANY answer in column 2 is YES:
- [ ] LAKE SHOULD NOT BE SAMPLED. LAKE EVALUATION COMPLETE.

D. If all answers to Column 1 are YES and all answers to Column 2 are NO:
- [ ] LAKE SHOULD BE SCHEDULED FOR SAMPLING. Proceed to STEP 3 (Permission to Sample)
National Lake Assessment Lake Evaluation Form
Step 2: Field Evaluation of Lake

SITE ID: NLA06608
SITE NAME: ____________________
DATE: __/__/______
EVALUATOR: ____________________
AFFILIATION: ____________________

A. Location where lake evaluation took place

<table>
<thead>
<tr>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degrees, Minutes, and Seconds</td>
<td>Degrees, Minutes, and Seconds</td>
</tr>
<tr>
<td>OR</td>
<td>OR</td>
</tr>
<tr>
<td>Decimal Degrees</td>
<td>Decimal Degrees</td>
</tr>
</tbody>
</table>

Was lake visible (did you see the waterbody) or was information from some other source?
- [ ] Visible
- [ ] Other Source

Road names and/or physical landmarks if applicable

B. Identify presence (Y) or absence (N) for the following waterbody characteristics.

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y N Is a permanent water body</td>
<td>Y N Is a private aquaculture waterbody</td>
</tr>
<tr>
<td>Y N Is non-saline</td>
<td>Y N Is used for disposal (tailings, mine-tailings or other unspecified disposal use)</td>
</tr>
<tr>
<td>Y N Surface area is ≥4 hectares (10 acres)</td>
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</tr>
<tr>
<td>Y N Has ≥1000 m² (10,764 ft², 0.25 acres) of open water</td>
<td></td>
</tr>
<tr>
<td>Y N Is physically accessible for crew and boat(s) (e.g., no steep/ unstable terrain, dense/toxic vegetation, canyons/gullies.) If N, explain in comments below.</td>
<td></td>
</tr>
</tbody>
</table>

Comments

C. If ANY answer in column 1 is NO or ANY answer in column 2 is YES:
- [ ] LAKE SHOULD NOT BE SAMPLED. LAKE EVALUATION COMPLETE.
### Step 2: Field Evaluation of Lake

**SITE ID:** NLA06908  
**DATE:** __/__/____

<table>
<thead>
<tr>
<th>D. If all answers to Column 1 are <strong>YES</strong> and all answers to Column 2 are <strong>NO:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ LAKE SHOULD BE SCHEDULED FOR SAMPLING.</td>
</tr>
</tbody>
</table>

Please note any difficulties associated with accessing the lake. Check all that apply:

- ☐ None
- ☐ Vegetation (poison ivy/oak, brambles, etc.)
- ☐ Livestock
- ☐ Steep and/or unstable terrain
- ☐ Canyon/Gullies
- ☐ Other...

**Gate(s), key(s), and/or special access requirements?**

| ☐ Yes | ☐ No | If yes, describe: |

**Boat ramp?**

| ☐ Yes | ☐ No |

If yes, give details (paved/unpaved, size of boat that can be accommodated, etc.) in comments.

**Comments**

---

**Directions to site**

---

**Proceed to Step 3 (Permission to Sample)**
# National Lake Assessment Lake Evaluation Form

## Step 3: Permission to Sample

| SITE ID: | NLA06608 - | SITE NAME: |  | STATE: |
| COUNTY: |  | DATE: | / /  |  |

**EVALUATOR:**  
**AFFILIATION:**

### Method of requesting access:

- [ ] Letter  
- [ ] Telephone  
- [ ] E-mail  
- [ ] Personal visit  
- [ ] Other (describe below):  

### Lake Access Permission-check only one:

- [ ] Lake has public access available, no permission required to access and sample lake  
- [ ] Lake has no public access, Landowner(s) granted permission to access and sample lake  
- [ ] Lake has no public access, Landowner(s) denied permission to access and sample lake  

*If lake can only be accessed by private land, provide landowner information:*

- **Name:**  
- **Address:**  
- **Phone:**  

**Call required before sampling event?:**  
- [ ] Yes  
- [ ] No

### Parking & access comments:

- e.g. (big, mean dog, locked gates, tenants, restricted areas)

---

07/27/2006
ATTACHMENT 3
Environmental Protection Agency – Regional Lake Survey Coordinators

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U. S. EPA Region 1
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U. S. EPA Region 3
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U. S. EPA Region 4
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