

## **Supplementary material**

**Survey S1:** Online survey administered to internal stakeholders. Nine questions from a survey administered at the 4-year mark of the LTM program were repeated in the 15-year survey. Repeated questions, identified by their question numbers in the 15-year survey, were: 1) Q4,16,19 (single question in the 4-year survey but split for skip-logic application in the 15-year survey); 2) Q6; 3) Q8; 4) Q10; 5) Q13,15 (single question in the 4-year survey but split for skip-logic application in the 15-year survey) ; 6) Q17 ; 7) Q18; 8) Q31; and 9) Q32.

## LTM 15 Year Evaluation

This anonymous survey is part of a 15-year evaluation of FWC's Freshwater Fisheries Long-term Monitoring (LTM) Program. Your input will be valuable for helping us identify areas to focus future evaluations and improvement efforts, assess the relevancy of LTM for managing Florida's aquatic resources and provide guidance for the future direction of the program.

Only staff who have experience with the LTM program should take this survey.

Estimated time to complete: ~20 minutes

**NOTE: Please do NOT use your browser's back/forward buttons but use Next/Prev buttons on each page to navigate this survey.**

## LTM 15 Year Evaluation

1. How long have you been involved with LTM?

- ☐ < 1 year
- ☐ 1-5 years
- ☐ 6-10 years
- ☐ > 10 years

2. Which FWC group do you belong to?

- ☐ FWRI-FFR
- ☐ DFFM
- ☐ HSC-AHRES
- ☐ HSC-IPM
- ☐ Other (please specify)

3. In what FWC region do you work?

- ☐ Northwest
- ☐ Northeast
- ☐ North Central
- ☐ South
- ☐ Southwest

# LTM 15 Year Evaluation

## Section 1 – Field Sampling

4. Do you field sample?

☐ Yes

☐ No

## LTM 15 Year Evaluation

Below is a list of Core LTM waterbodies:

Rivers	Lakes			Other
Apalachicola	Apopka	Kissimmee	Santa Fe	L-67A Canal
Chipola	Big Henderson	Lochloosa	Talquin	
Ocklawaha	Blue Cypress	Minneola	Tarpon	
Santa Fe	Crescent	Monroe	Tohopekaliga	
St. Johns (middle and upper)	Dorr	Newnans	Trafford	
Suwannee	George	Okeechobee	Washington	
Yellow	Griffin	Orange	Weir	
	Harris	Panasoffkee	Weohyakapka	
	Istokpoga	Poinsett		
	Johns	Rodman		

5. In a typical year, how many of the following do you sample?

	None	1	2	3	4 or more
Core LTM waterbodies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-LTM waterbodies where you use LTM standard protocols	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-LTM waterbodies where you do NOT use LTM standard protocols	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## LTM 15 Year Evaluation

6. Why do you not use LTM standard protocols for some non-LTM waterbodies?

*Check all that apply*

- ☐ Different sampling objective (e.g., species sampling, different gear)
- ☐ Previously established protocol
- ☐ LTM protocols difficult to use in the field
- ☐ Other (please specify)

## LTM 15 Year Evaluation

7. Considering only the core LTM waterbodies, how would you rate standardized sampling protocols for each of the following:

	Very Poor (1)	Poor (2)	Fair (3)	Good (4)	Very Good (5)	Unsure
Creel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fish health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Habitat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lake boat electrofishing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
River boat electrofishing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trawl	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# LTM 15 Year Evaluation

8. Considering only the core LTM waterbodies, how would you rate each of the following:

	Very Poor (1)	Poor (2)	Fair (3)	Good (4)	Very Good (5)	Unsure
Efficiency of standard sampling program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LTM staff support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Field assistance from LTM Team (Eustis) biologists	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## LTM 15 Year Evaluation

9. Check each of the following that you typically use in a given year for each site type:

	Core LTM Waterbodies	Non-LTM Waterbodies
Standardized Sampling Manual	<input type="checkbox"/>	<input type="checkbox"/>
Standard Species-Targeting Sampling Protocol	<input type="checkbox"/>	<input type="checkbox"/>
Standard Community Sampling Protocol	<input type="checkbox"/>	<input type="checkbox"/>
Standard Vegetation Mapping Protocol	<input type="checkbox"/>	<input type="checkbox"/>

10. Which of the following do you typically use in a given year?

*Check all that apply*

- ☐ LTM Monitoring SharePoint site
- ☐ LTM online Help Desk
- ☐ “Schedule Field Crew” function
- ☐ LTM staff for help

## LTM 15 Year Evaluation

### 11. How would you rate each of the following?

	Very Poor (1)	Poor (2)	Fair (3)	Good (4)	Very Good (5)	Unsure
Standardized Sampling Manual	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Standard Species-Targeting Sampling Protocol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Standard Community Sampling Protocol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Standard Vegetation Mapping Protocol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Long-term Monitoring SharePoint site	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Long-term Monitoring online Help Desk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scheduling field crew	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## LTM 15 Year Evaluation

12. Have you had to contact an LTM staff member regarding field sampling protocols?

☐ Yes

☐ No

## LTM 15 Year Evaluation

**13. How satisfied were you with the support you received for field sampling protocols?**

- ☐ Very dissatisfied (1)
- ☐ Dissatisfied (2)
- ☐ Neither satisfied nor dissatisfied (3)
- ☐ Satisfied (4)
- ☐ Very satisfied (5)

## LTM 15 Year Evaluation

14. Have you had to contact someone regarding field sampling logistics (e.g., coordination of equipment or personnel)?

☐ Yes

☐ No

## LTM 15 Year Evaluation

15. How satisfied were you with the support you received for field sampling logistics?

- ☐ Very dissatisfied (1)
- ☐ Dissatisfied (2)
- ☐ Neither satisfied nor dissatisfied (3)
- ☐ Satisfied (4)
- ☐ Very satisfied (5)

## LTM 15 Year Evaluation

### Section 2 – Data Entry, Summary & Reporting

16. Are you involved in entering, summarizing or reporting LTM data?

☐ Yes

☐ No

## LTM 15 Year Evaluation

17. Check the actions that you typically perform for each site type:

	Core LTM Waterbodies	Non-LTM Waterbodies
Enter field data on the web data entry form on the LTM SharePoint site	<input type="checkbox"/>	<input type="checkbox"/>
Upload spreadsheet data to the LTM SharePoint site	<input type="checkbox"/>	<input type="checkbox"/>
Use fish data queries (accessed from the LTM SharePoint site)	<input type="checkbox"/>	<input type="checkbox"/>
Use site/event data queries (accessed from the LTM SharePoint site)	<input type="checkbox"/>	<input type="checkbox"/>
Use data analysis queries (accessed from the LTM SharePoint site)	<input type="checkbox"/>	<input type="checkbox"/>
Use any of the LTM Help Desk resources	<input type="checkbox"/>	<input type="checkbox"/>
Use the data summary template (to summarize data into written report)	<input type="checkbox"/>	<input type="checkbox"/>
Use the length-weight calculator (to estimate missing weights)	<input type="checkbox"/>	<input type="checkbox"/>



## LTM 15 Year Evaluation

18. How would you rate each of the following?

	Very Poor (1)	Poor (2)	Fair (3)	Good (4)	Very Good (5)	Unsure
LTM SharePoint site	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online LTM Help Desk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data entry form	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Upload features	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Error checking process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data query process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data summary/analysis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communication of results	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Annual LTM report summaries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## LTM 15 Year Evaluation

19. Please tell us why you gave a rating of "Poor" or "Very Poor" for the following?

	Process not intuitive	Difficult to navigate or find	Instructions hard to find or follow	Results hard to read	Results not useful	Takes too long	Lack of support	Other short coming(s)
LTM SharePoint site	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online LTM Help Desk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Data entry form	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Upload features	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Error checking process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Data query process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Data summary/analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication of results	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Annual LTM report summaries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## LTM 15 Year Evaluation

### 20. How often do you do each of the following?

	Never (1)	Rarely (2)	Occasionally (3)	A moderate amount (4)	A great deal (5)
Provide summary data to the public or outside organization/agency for <b>core LTM</b> waterbodies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provide summary data to the public or outside organization/agency for <b>non-LTM</b> waterbodies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Record outside data requests in the SharePoint Data Request Log for <b>core LTM</b> waterbodies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Record outside data requests in the SharePoint Data Request Log for <b>non-LTM</b> waterbodies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## LTM 15 Year Evaluation

21. How would you rate the utility of LTM reports for communicating data results?

- ☐ Very poor (1)
- ☐ Poor (2)
- ☐ Fair (3)
- ☐ Good (4)
- ☐ Very good (5)
- ☐ Unsure

## LTM 15 Year Evaluation

**22. Why did you give a rating of “Poor” or “Very Poor”?**

- ☐ Results hard to read
- ☐ Results not useful
- ☐ Takes too long
- ☐ Other shortcoming (please specify)

## LTM 15 Year Evaluation

23. How would you rate the importance of each of the following data summary information?

	Not at all important (1)	A little important (2)	Somewhat important (3)	Very important (4)	Extremely important (5)
Sportfish abundance, size structure, and condition (e.g., catch per effort, length frequency, relative weight)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sportfish growth and mortality (age data)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fish community metrics (e.g., percent composition, diversity, richness)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lakeswide plant coverage and composition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creel estimates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fish health data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24. Now, please rank the above summary information in order of most important (1) to least important (6) for management:

*Note: you can pick the rank number or drag and drop the items to place in order*



Sportfish abundance, size structure, and condition (e.g., catch per effort, length frequency, relative weight)



Sportfish growth and mortality (age data)



Fish community metrics (e.g., percent composition, diversity, richness)



Lakewide plant coverage and composition



Creel estimates



Fish health data

## LTM 15 Year Evaluation

25. Below is a list of metrics that can be or already are included in annual **Sportfish** summaries for biologists. Which ones would you like to see in future summary reports?

*Check all that apply*

*Note: **Boldfaced** are currently being provided*

- |  |   |
|--|---|
| <input type="checkbox"/> Lake mean total catch rate  | <input type="checkbox"/> Mean relative weight of fish                               |
| <input type="checkbox"/> Statewide average mean catch rate                                     | <input type="checkbox"/> Mean length at age   |
| <input type="checkbox"/> Lake mean catch rate by size group                                    | <input type="checkbox"/> Mean number per age  |
| <input type="checkbox"/> Statewide average mean catch rate by size group                       | <input type="checkbox"/> Proportion of fish with physical abnormalities, by species |
| <input type="checkbox"/> Number and percentage of fish per centimeter group (length frequency) | <input type="checkbox"/> 5-year lake trends   |
| <input type="checkbox"/> Relative stock density values   | <input type="checkbox"/> 10-year lake trends  |
| <input type="checkbox"/> Mean total length of fish   |   |
| <input type="checkbox"/> Other (please specify)  |   |



## LTM 15 Year Evaluation

26. Below is a list of metrics that can be or already are provided in **Fish Community** summary form to biologists. Which ones would you like to see in future summary reports?

*Check all that apply*

*Note: **Boladfaced** are currently being provided*

- |  |   |
|--|---|
| <input type="checkbox"/> Total mean catch rate by number for each species                                  | <input type="checkbox"/> <b>Number of species observed</b>                            |
| <input type="checkbox"/> Total mean catch rate by number for each species group (e.g., sportfish, forage)  | <input type="checkbox"/> List of species observed                                     |
| <input type="checkbox"/> Total mean weight for each species  | <input type="checkbox"/> <b>Total number of species observed (all years combined)</b> |
| <input type="checkbox"/> Total mean weight for each species group (e.g., sportfish, forage)                | <input type="checkbox"/> List of species observed (all years combined)                |
| <input type="checkbox"/> Percent composition by number for each species                                    | <input type="checkbox"/> <b>Diversity index</b>                                       |
| <input type="checkbox"/> <b>Percent composition by number for species groups (e.g., sportfish, forage)</b> | <input type="checkbox"/> 5-year lake trends   |
| <input type="checkbox"/> Percent composition by weight for each species                                    | <input type="checkbox"/> 10-year lake trends  |
| <input type="checkbox"/> <b>Percent composition by weight for species groups (e.g., sportfish, forage)</b> |   |
| <input type="checkbox"/> Other (please specify)  |   |

## LTM 15 Year Evaluation

27. Below is a list of metrics that can be or already are provided in **Creel Data** summary form to biologists. Which ones would you like to see in future summary reports?

*Check all that apply*

*Note: **Boldfaced** are currently being provided*

- |  |  |
|--|--|
| <input type="checkbox"/> Total angler effort by species group  | <input type="checkbox"/> Total angler harvest by species group (divided by days in the creel and lake surface area)                    |
| <input type="checkbox"/> Total angler catch by species group   |  |
| <input type="checkbox"/> Total angler catch by species group (divided by days in the creel)  | <input type="checkbox"/> <b>Statewide average angler harvest by species group (divided by days in the creel and lake surface area)</b> |
| <input type="checkbox"/> Total angler catch by species group (divided by days in the creel and lake surface area)                    | <input type="checkbox"/> Total angler catch rate by species group  |
| <input type="checkbox"/> <b>Statewide average angler catch by species group (divided by days in the creel and lake surface area)</b> | <input type="checkbox"/> Total angler harvest rate by species group  |
| <input type="checkbox"/> Total angler harvest by species group   | <input type="checkbox"/> 5-year lake trends  |
| <input type="checkbox"/> Total angler harvest by species group (divided by days in the creel)  | <input type="checkbox"/> 10-year lake trends   |
| <input type="checkbox"/> Other (please specify)  |  |

## LTM 15 Year Evaluation

28. Below is a list of metrics that can be or already are provided in **Habitat Data** summary form to biologists. Which ones would you like to see in future summary reports?

*Check all that apply*

*Note: Boldfaced are currently being provided*

- |   |   |
|---|---|
| <input type="checkbox"/> Percent occurrence of aquatic plant species                      | <input type="checkbox"/> <b>PAC and PVI estimates for submersed species</b> |
| <input type="checkbox"/> Number of aquatic plant species observed                         | <input type="checkbox"/> Bathymetric map                                    |
| <input type="checkbox"/> <b>List of aquatic species observed</b>                          | <input type="checkbox"/> <b>Plant distribution map by species</b>           |
| <input type="checkbox"/> Total number of aquatic species observed (all years combined)    | <input type="checkbox"/> 5-year lake trends                                 |
| <input type="checkbox"/> List of species of aquatic species observed (all years combined) | <input type="checkbox"/> 10-year lake trends                                |
| <input type="checkbox"/> Other (please specify)   |   |

## LTM 15 Year Evaluation

### Section 3 – Management Decision Support

29. Are you involved in making or informing management decisions?

☐ Yes

☐ No

## LTM 15 Year Evaluation

30. Have you used LTM data in making a management decision?

☐ Yes

☐ No

## LTM 15 Year Evaluation

31. Why have you not used LTM data in making management decisions?

*Check all that apply*

- ☐ Other sources of data more useful
- ☐ LTM data not precise enough
- ☐ Limited availability or access to LTM data
- ☐ Data summaries not relevant or are inadequate
- ☐ Inadequate resources (i.e., money, equipment, training, assistance) to perform long-term monitoring activities on needed water body (or water bodies)
- ☐ Long-term monitoring methods not adequately evaluated
- ☐ Other (please specify)

## LTM 15 Year Evaluation

32. What kinds of management decisions do you make or inform?

*Check all that apply*

- ☐ Fishing regulations
- ☐ Habitat manipulations
- ☐ Fish Stockings
- ☐ Other (please specify)

33. On a scale of 1-5, how important are the following LTM data for making management decisions?

	Not at all important (1)	A little important (2)	Somewhat important (3)	Very important (4)	Extremely important (5)	Unsure
Creel data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fish community data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Habitat maps and estimates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sportfish electrofishing or trawl data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sportfish age data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fish health data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

34. Are there ways we can improve the LTM program to aid in making management decisions?

## LTM 15 Year Evaluation

### Section 4 – Programmatic Views

On a scale of 1-5, how would you answer each of these questions with regards to the LTM program?

#### 35. Data and Reports

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
LTM data are collected in a consistent manner each year.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
QA/QC procedures are important to ensure quality data are entered into the database.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LTM data can be used to provide evidence for a management action.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LTM data can be used for directed research.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LTM data are useful for tracking distribution shifts of non-native species.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creating the LTM summary tables and reports are useful for staying up-to-date on my resource.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are other data that should be prioritized over what we collect now.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## LTM 15 Year Evaluation

### Section 4 – Programmatic Views (Cont.)

On a scale of 1-5, how would you answer each of these questions with regards to the LTM program?

#### 36. LTM Sampling Protocol:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
I am confident I am following LTM protocols as they are written in the LTM Sampling Manual.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The sample size recommendations are adequate for my needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The standard LTM sampling protocol is sufficient to track long-term trends in a water body.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The standard LTM sampling protocol is useful for making comparisons among lakes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sampling the fish community every year is necessary to track trends over time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## LTM 15 Year Evaluation

### Section 4 – Programmatic Views (Cont.)

On a scale of 1-5, how would you answer each of these questions with regards to the LTM program?

#### 37. LTM Program:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly Agree (5)
The LTM program makes efficient use of our time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We are collecting LTM data on the most important resources in my region.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The LTM program provides a base knowledge to FWC about our freshwater aquatic resources.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# LTM 15 Year Evaluation

## Section 4 – Programmatic Views (Cont.)

On a scale of 1-5, how would you answer each of these questions with regards to the LTM program?

### 38. Needs

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
We should have annual training or refresher courses to stay current on LTM protocols.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We are provided enough LTM staff help to complete our LTM sampling each year.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## LTM 15 Year Evaluation

### Section 4 – Programmatic Views (Cont.)

On a scale of 1-5, how would you answer each of these questions with regards to the LTM program?

#### 39. Resources

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
I know where to find the queries, report templates, and other information on the LTM SharePoint site.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having a central database to store our data is beneficial to my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LTM data summaries have been helpful for answering questions from the public.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel my LTM-related concerns are taken seriously and are addressed in a timely manner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## LTM 15 Year Evaluation

### Section 5 – Additional Input

40. How would you rate the importance of following future initiatives?

	Not at all important (1)	A little important (2)	Somewhat important (3)	Very important (4)	Extremely important (5)
Automating summary graphs and tables	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Database development for age and creel data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Re-organization of the SharePoint site	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Annual training to prevent drift from LTM protocol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evaluation of LTM protocol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Updating the LTM Sampling Manual	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

41. Now, please rank the above future initiatives in order of most important (1) to least important (6) for management:

*Note: you can pick the rank number or drag and drop the items to place in order*



Automating summary graphs and tables



Database development for age and creel data



Re-organization of the SharePoint site



Annual training to prevent drift from LTM protocol



Evaluation of LTM protocol



Updating the LTM Sampling Manual

## LTM 15 Year Evaluation

42. Are there any specific trainings related to LTM that you would like to see offered?

43. Are there any other comments or suggestions you would like to add?

## LTM 15 Year Evaluation

Thank you for taking the time to provide your input and helping us improve the LTM Program. Results of this survey will be summarized and presented at a future date.



**Box S2.** List of suggestions for future monitoring efforts, in no particular order.

Concerns

- Effect of gear changes on fish catches
- Inefficiency of data entry process
- Not enough water bodies sampled
- Habitat data collected during fish sampling not useful
- Fish health data not necessary or protocol not valid
- Too much data collected for non-sportfish species
- Not enough focus on non-sportfish species
- Lack of standardization of some data
- Inadequate storage and access to data not housed in the LTM database

Suggestions

- Create a formal assessment process for each LTM system every 3–5 years
- Invest in technology for electronic data recording in the field
- Consider adding more water bodies to the monitoring program
- Incorporate other data (e.g., human dimensions, non-native fish) into the monitoring program
- Provide educational opportunities (e.g., trainings, workshops) for internal and external stakeholders
- Develop thresholds/triggers for management for conveying the status of the aquatic resource to the public
- Develop a quick, user-friendly option to create data summaries (e.g., "just push a button")