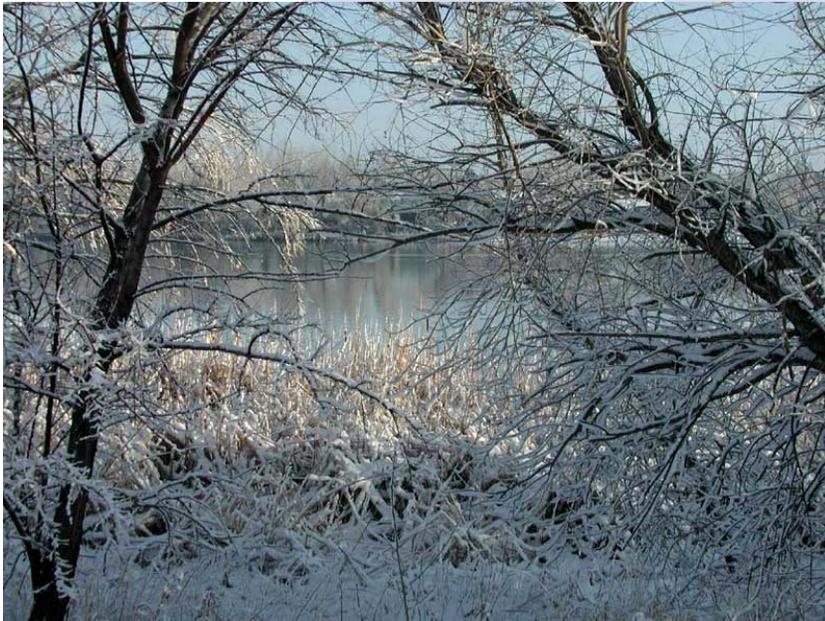
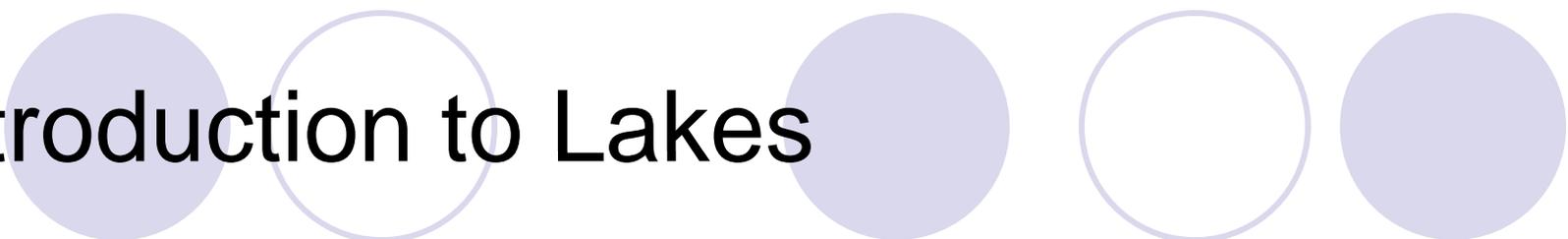


# Standing Water Assessment

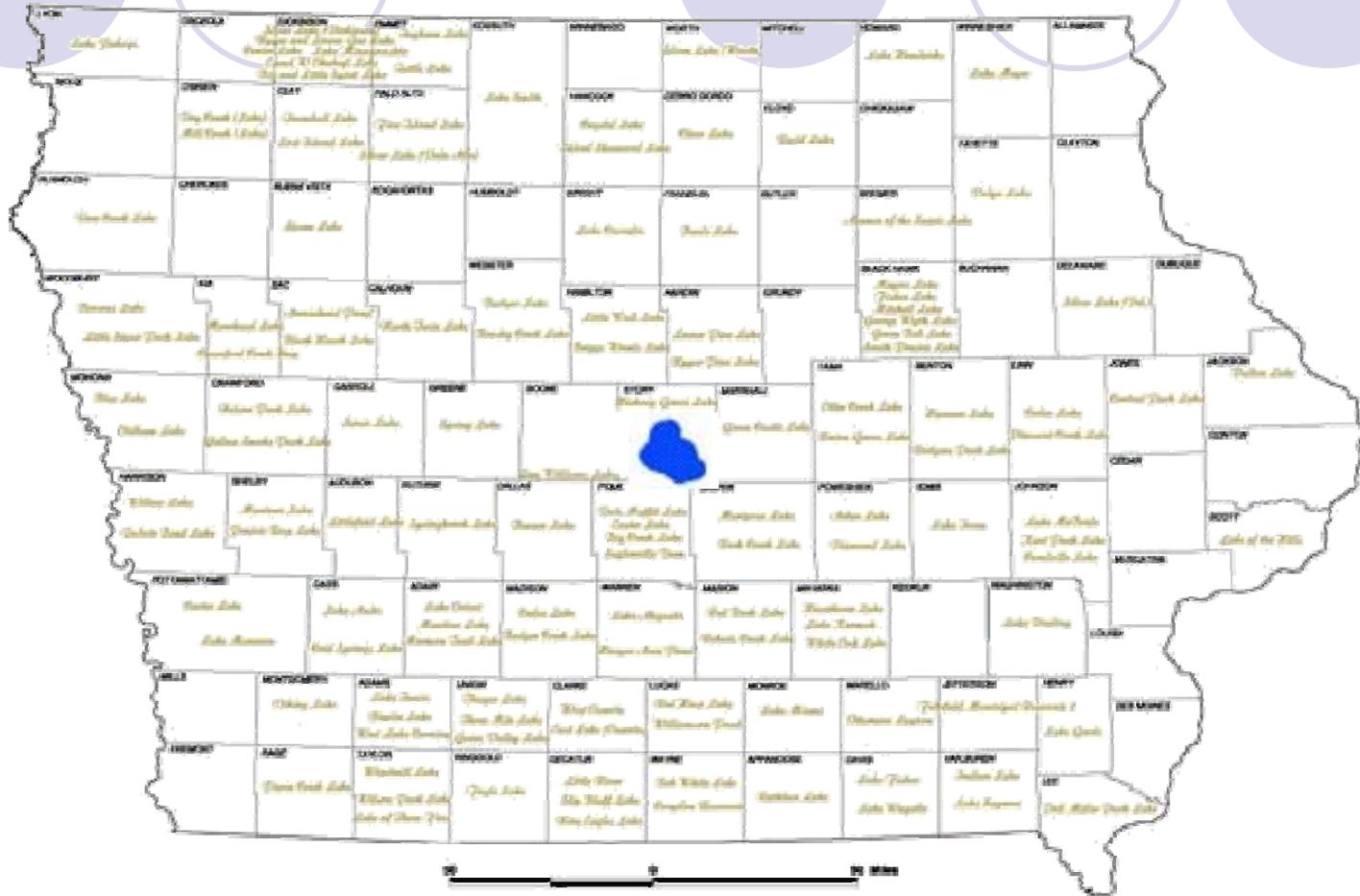


# Introduction to Lakes



- The Iowa DNR has cataloged 5,432 “standing waters” in Iowa
  - Lakes and ponds
    - 115 Significant publicly owned lakes 67 “meandered” lakes
  - Reservoirs and Impoundments
    - 4 Flood control reservoirs
  - Wetlands
- Total acres: 161,366

# If All of Our Public Lakes...



Were in Just One Spot

# Seasonal Turnover

**Winter**  
No circulation  
of water.

Ice

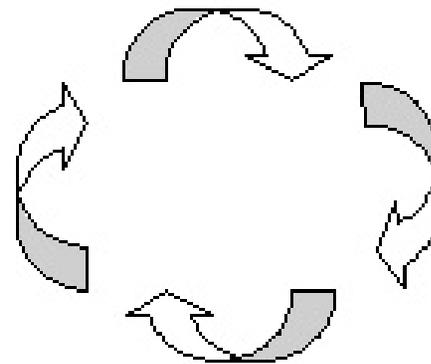
32°F

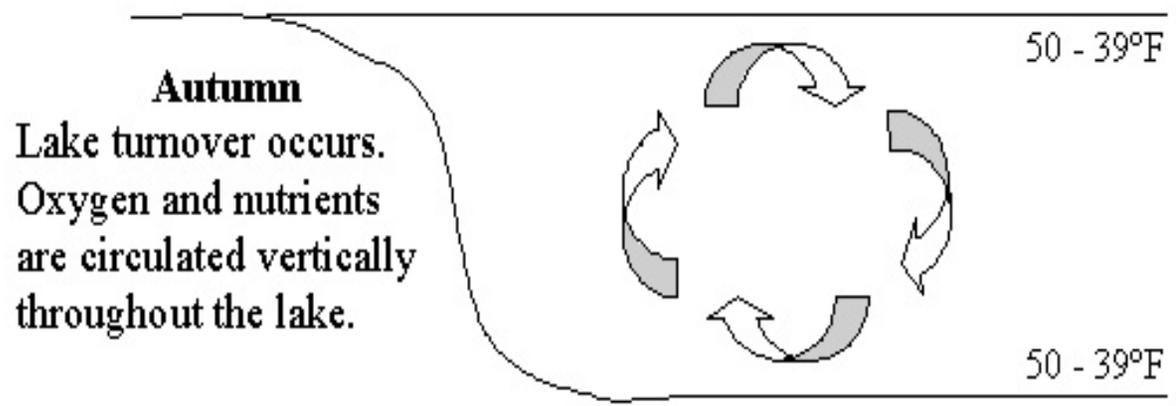
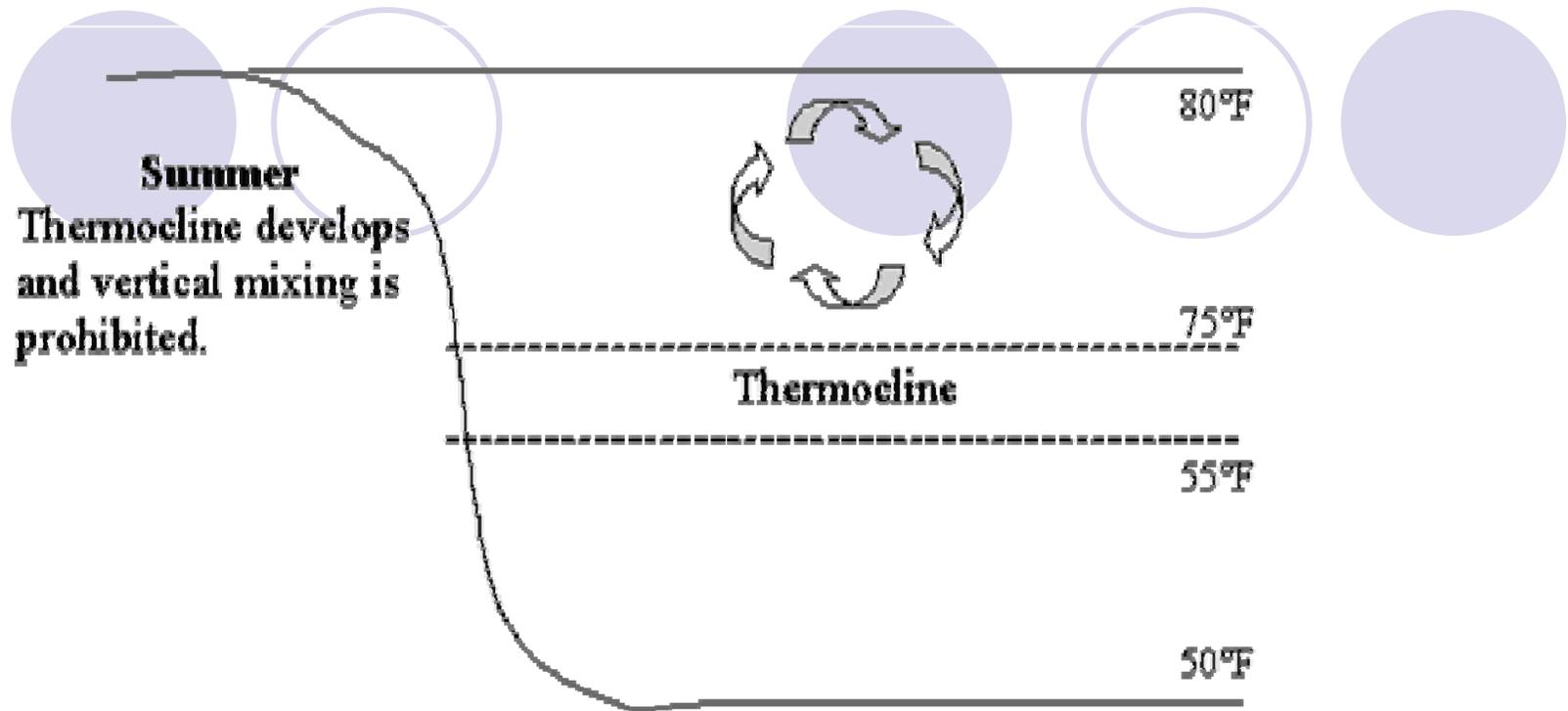
39°F

**Spring**  
Lake turnover occurs.  
Oxygen and nutrients  
are circulated vertically  
throughout the lake.

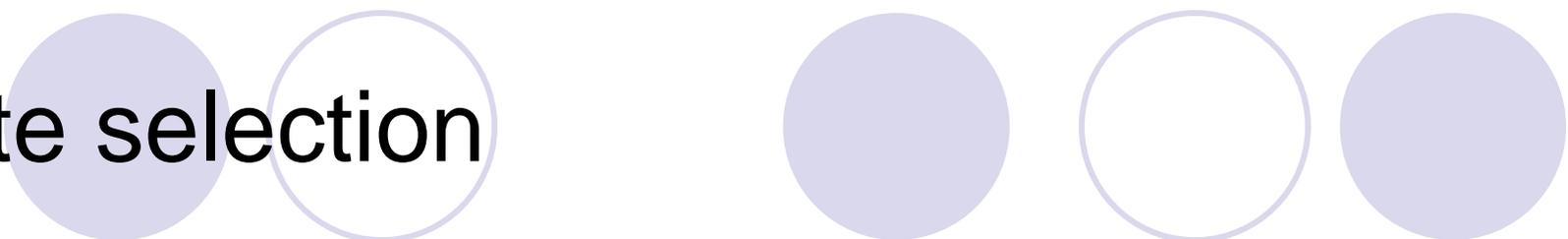
39 - 50°F

39 - 50°F



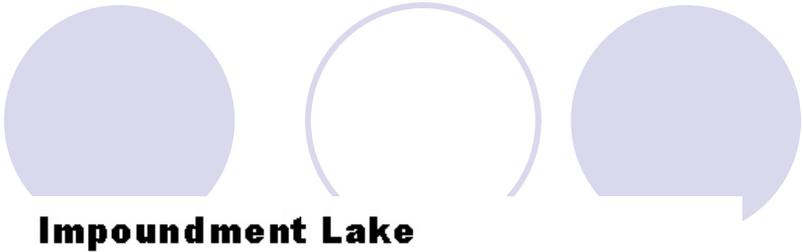


# Site selection



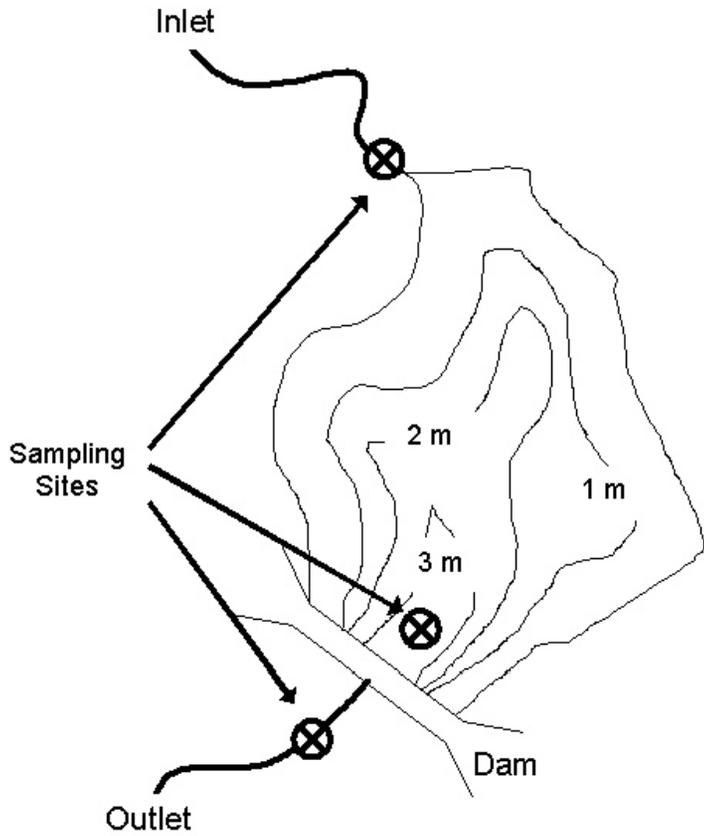
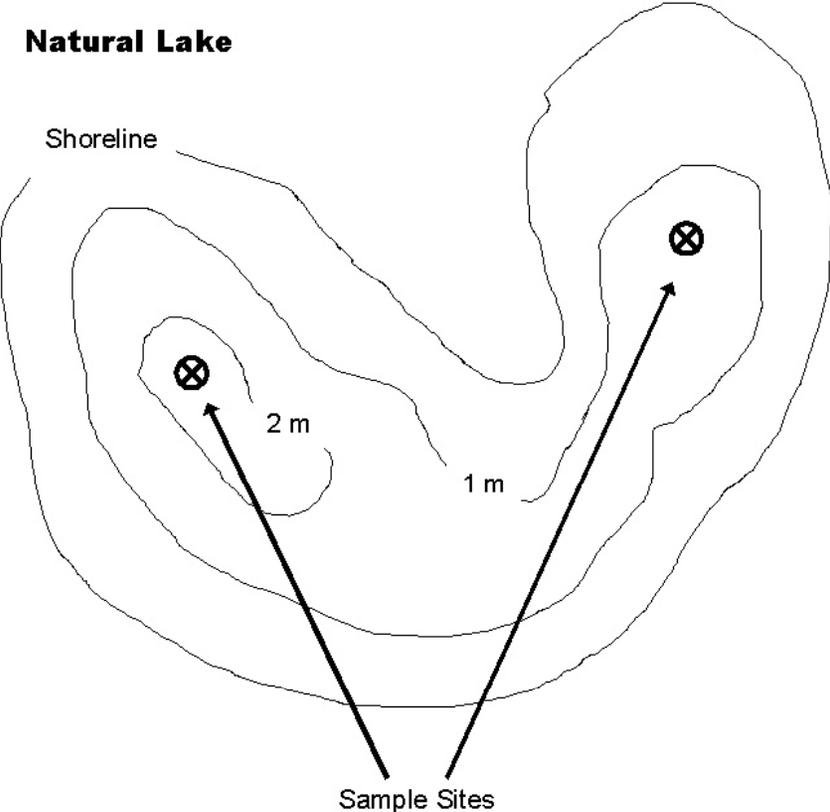
- Most representative location
  - Deepest point
    - In circular natural lakes – the center
    - In man-made reservoirs – near the dam
- If I don't have a boat what do I do?
  - Sample from a dock
  - Sample from the shore
  - Indicate dock/shore sampling on the datasheet

# Site selection



## Impoundment Lake

### Natural Lake



# Sampling from a dock



# Point sampling and sampling frequency

- Sampling from a specific depth
  - Elbow depth (Approx. ½ meter)
- Monthly sampling is recommended
  - From ice-out to freeze-over, between 10 AM and 3 PM
  - Be consistent – If you can only sample every other month or quarterly then stick with it!
  - Remember – **SAMPLE SAFELY!!**

## Physical Assessment

### Weather (check all that apply)

Sunny \_\_\_\_ Partly Sunny \_\_\_\_ Cloudy \_\_\_\_ Rain/Snow \_\_\_\_ Windy \_\_\_\_ Calm \_\_\_\_

Air Temperature \_\_\_\_\_ °Fahrenheit

Precipitation \_\_\_\_\_ inches over the last 24 hours

### Wind Direction (check one)

\_\_\_\_ Not applicable    \_\_\_\_ Northeast  
\_\_\_\_ North            \_\_\_\_ Northwest  
\_\_\_\_ South            \_\_\_\_ Southeast  
\_\_\_\_ East              \_\_\_\_ Southwest  
\_\_\_\_ West

### Wind Speed (check one)

\_\_\_\_ Calm (0-5 mph, felt on face, leaves rustle)  
\_\_\_\_ Breezy (sustained 5-15 mph, small branches move)  
\_\_\_\_ Strong (sustained over 15 mph, small trees sway continuously, waves form)  
\_\_\_\_ Gusty (gust over 15 mph, small trees sway occasionally)

Site Location \_\_\_\_ Open Water    \_\_\_\_ Shore or Dock

Secchi Disc Depth \_\_\_\_ . \_\_\_\_ meters

OR Transparency Tube \_\_\_\_\_ cm (record whole numbers only – no tenths)

Water Temperature \_\_\_\_\_ °Fahrenheit

### Water Level (check one)

Above Normal \_\_\_\_ Normal \_\_\_\_ Below Normal \_\_\_\_

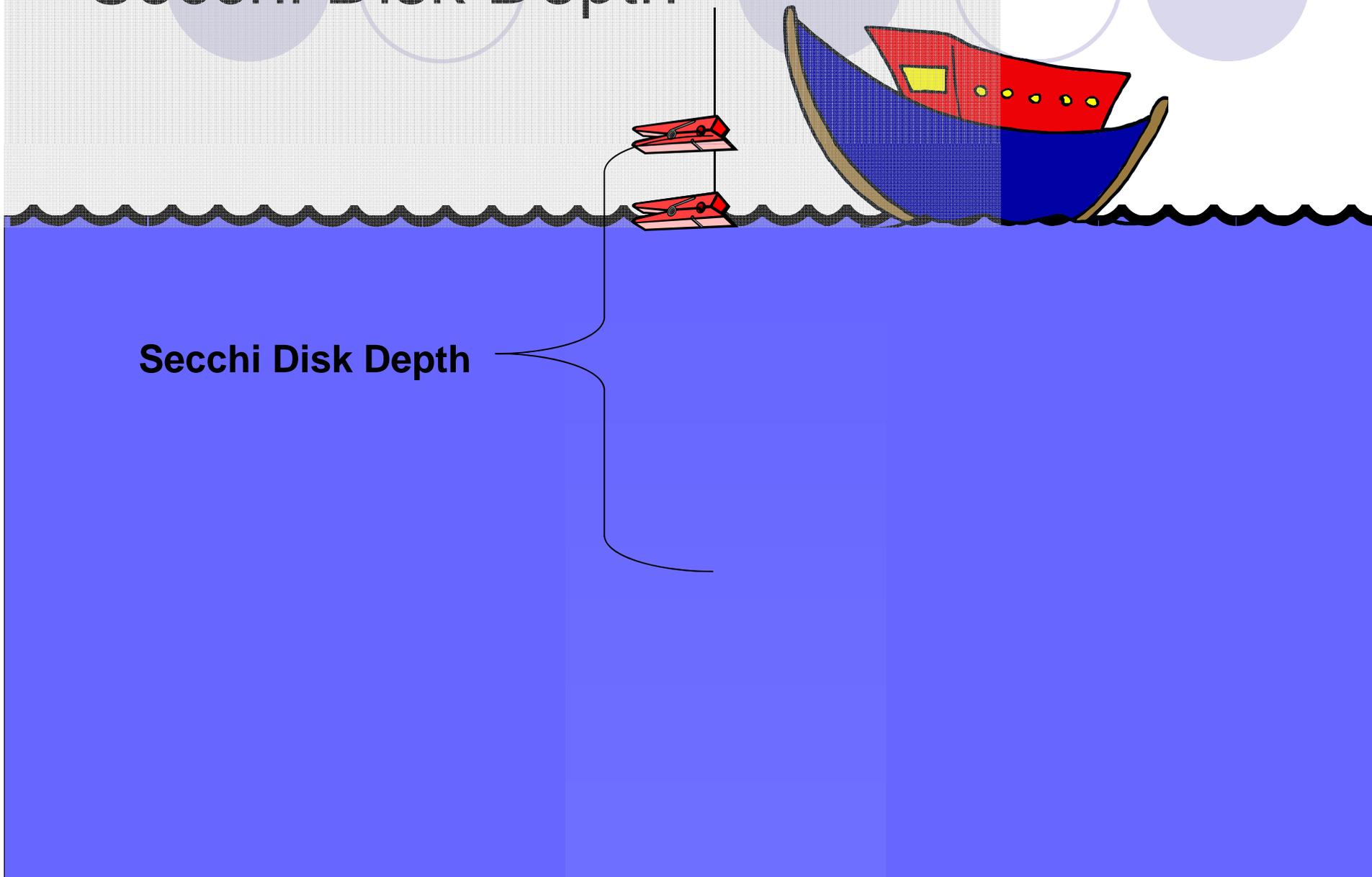
*If lake is not at normal level, and you have means to measure, please specify:*

inches above \_\_\_\_\_ or below \_\_\_\_\_ normal

### Water Odor (check all that apply)

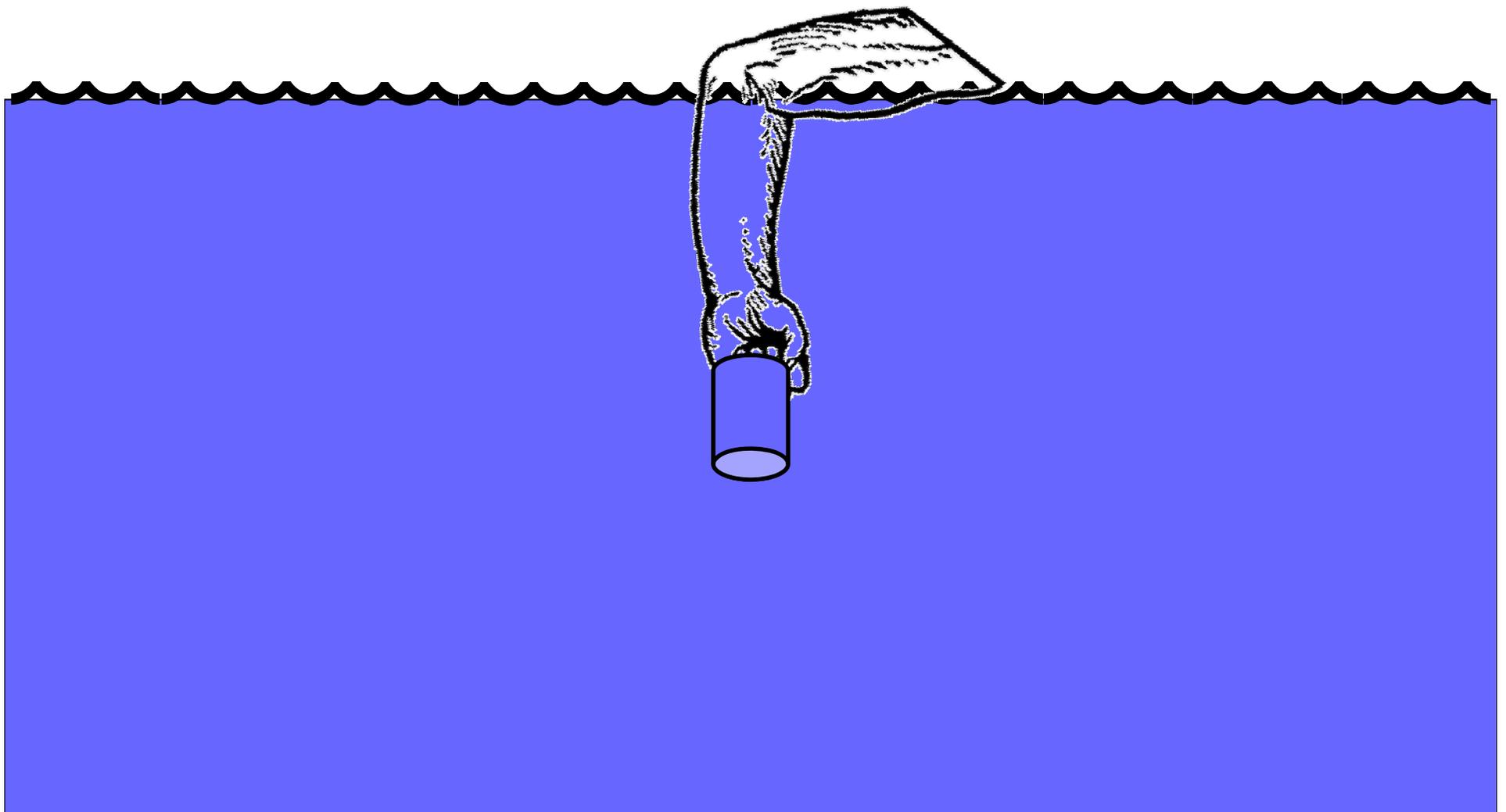
None \_\_\_\_ Sewage/Manure \_\_\_\_ Rotten Eggs \_\_\_\_ Petroleum \_\_\_\_ Fishy \_\_\_\_

# Secchi Disk Depth



**Secchi Disk Depth**

# Point Sampling



## Chemical Assessment

**IMPORTANT: Use Point Sampling technique!**

### pH

Expiration date on bottom of bottle \_\_\_\_\_

check one - 4 \_\_\_ 5 \_\_\_ 6 \_\_\_ 7 \_\_\_ 8 \_\_\_ 9 \_\_\_

### Nitrite-N (mg/L)

Expiration date on bottom of bottle \_\_\_\_\_

check one - 0 \_\_\_ 0.15 \_\_\_ 0.3 \_\_\_ 1.0 \_\_\_ 1.5 \_\_\_ 3 \_\_\_

### Nitrate-N (mg/L)

Expiration date on bottom of bottle \_\_\_\_\_

check one - 0 \_\_\_ 1 \_\_\_ 2 \_\_\_ 5 \_\_\_ 10 \_\_\_ 20 \_\_\_ 50 \_\_\_

### Dissolved Oxygen (mg/L)

Expiration date on back of color comparator \_\_\_\_\_

check one - 1 \_\_\_ 2 \_\_\_ 3 \_\_\_ 4 \_\_\_ 5 \_\_\_ 6 \_\_\_ 8 \_\_\_ 10 \_\_\_ 12 \_\_\_

### Phosphate (mg/L)

Expiration date on back of color comparator \_\_\_\_\_

Expiration date on round color comparator \_\_\_\_\_

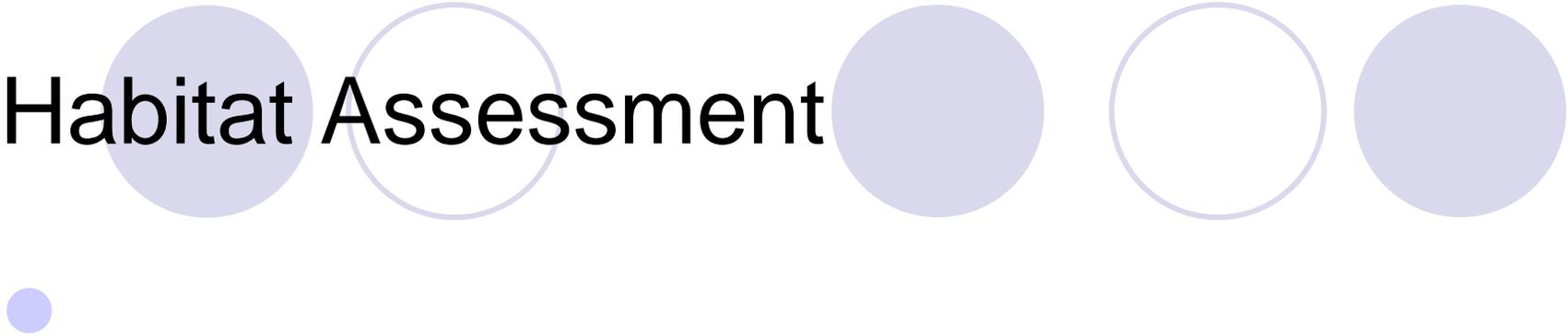
Expiration date on activator solution \_\_\_\_\_

check one - 0 \_\_\_ 0.1 \_\_\_ 0.2 \_\_\_ 0.3 \_\_\_ 0.4 \_\_\_ 0.6 \_\_\_ 0.8 \_\_\_  
1 \_\_\_ 2 \_\_\_ 3 \_\_\_ 4 \_\_\_ 5 \_\_\_ 6 \_\_\_ 7 \_\_\_ 8 \_\_\_ 10 \_\_\_

### Chloride

Expiration date on bottom of bottle \_\_\_\_\_

\_\_\_\_\_ mg/L - Convert Quantab Units to mg/L using the chart provided on the bottle



# Habitat Assessment

## Habitat Assessment

**Describe Lake Banks** Include distances and landmarks in your description

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**Describe Adjacent Land Use** Include distances and landmarks in your description

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