

## Wisconsin Department of Natural Resources SWIMS Project Summary

### General Project Information

**Project ID:** LPL-1004-05

**Name:** SPIRIT RESERVOIR ASSOCIATION: Spirit Reservoir Water Quality Assessment, Phase III

**Type:** Lakes Grant

**Subtype:** Large Scale Lake Planning

**Status:** COMPLETE

**Start Date:** 4/1/2005

**End Date:** 12/31/2006

**Purpose:** The Spirit Reservoir Association will sponsor Phase III of the Water Quality Assessment Project in cooperation with UWSP (Nancy Turyk and students). Phase III includes a macrophyte survey, algal assessment and development of a final report and presentation. The macrophyte survey of Spirit Reservoir will be conducted using the WI-DNR point-intercept method to determine species present, distribution, and invasive species presence/absence. A phytoplankton assessment will be performed by taking volumetric samples and plankton tows at the mid-lake chemistry point and the "hot spot" of nuisance algae blooms and periphyton scrapes and grab samples near the boat landing and at the "hot spot." All algal samples will be collected seven times during the growing season (spring turnover, fall turnover and five evenly spaced times in between). In lab algal analysis will result in a taxonomic list of all species per site and date, as well as dominant species per sample.

The results of the macrophyte and phytoplankton surveys will be compiled with data collected during phases I and II to produce a final report describing the water quality and physical characteristics of Spirit Reservoir, a water and nutrient budget, interpretation of the data, and management recommendations. The final Spirit Reservoir Report will be disseminated to the appropriate management units, local libraries and will be presented at a citizen-oriented meeting.

Products: 1. Collect, map and analyze macrophyte survey data. 2. Sets of voucher specimens from the macrophyte survey given to the DNR/Herbarium and Spirit Reservoir Association. 3. Collect and analyze algal samples. 4. Complete final reports - Written and electronic disseminated to DNR, Lincoln County, WVIC and local libraries. 5. Present final results at local meeting hosted by Spirit Reservoir Association.

**Objective:****Comments:** Grantee is SPIRIT RESERVOIR ASSOCIATION**Outcome:****Study Design:****QA Measures:**

### People

| Name                          | Role            | Status | Start Date | End Date   | Organization                 | Comments |
|-------------------------------|-----------------|--------|------------|------------|------------------------------|----------|
| Spirit Reservoir Association, | GRANT_RECIPIENT | ACTIVE | 4/1/2005   | 12/31/2006 | Spirit Reservoir Association |          |

### Project Statuses

| Date | Reported By | Status | Comments |
|------|-------------|--------|----------|
|------|-------------|--------|----------|

### Actions

| Action                             | Detailed Description | Start Date | End Date   | Status   |
|------------------------------------|----------------------|------------|------------|----------|
| Aquatic Plant Monitoring or Survey |                      | 4/1/2005   | 12/31/2006 | PROPOSED |
| Project Deliverable                | Final Report         | 4/1/2005   | 12/31/2006 | PROPOSED |

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|                           |  |          |            |          |
|---------------------------|--|----------|------------|----------|
| Grant Awarded             | <p>The Spirit Reservoir Association will sponsor Phase III of the Water Quality Assessment Project in cooperation with UWSP (Nancy Turyk and students). Phase III includes a macrophyte survey, algal assessment and development of a final report and presentation. The macrophyte survey of Spirit Reservoir will be conducted using the WI-DNR point-intercept method to determine species present, distribution, and invasive species presence/absence. A phytoplankton assessment will be performed by taking volumetric samples and plankton tows at the mid-lake chemistry point and the "hot spot" of nuisance algae blooms and periphyton scrapes and grab samples near the boat landing and at the "hot spot." All algal samples will be collected seven times during the growing season (spring turnover, fall turnover and five evenly spaced times in between). In lab algal analysis will result in a taxonomic list of all species per site and date, as well as dominant species per sample.</p> <p>The results of the macrophyte and phytoplankton surveys will be compiled with data collected during phases I and II to produce a final report describing the water quality and physical characteristics of Spirit Reservoir, a water and nutrient budget, interpretation of the data, and management recommendations. The final Spirit Reservoir Report will be disseminated to the appropriate management units, local libraries and will be presented at a citizen-oriented meeting.</p> <p>Products: 1. Collect, map and analyze macrophyte survey data. 2. Sets of voucher specimens from the macrophyte survey given to the DNR/Herbarium and Spirit Reservoir Association. 3. Collect and analyze algal samples. 4. Complete final reports - Written and electronic disseminated to DNR, Lincoln County, WVIC and local libraries. 5. Present final results at local meeting hosted by Spirit Reservoir Association.</p> | 4/1/2005 |            | COMPLETE |
| Information and Education |  | 4/1/2005 | 12/31/2006 | PROPOSED |
| Informational Meetings    |  | 4/1/2005 | 12/31/2006 | PROPOSED |
| Lakes Planning Grant      |  | 4/1/2005 | 12/31/2006 | PROPOSED |

### Monitoring Stations

| Station ID | Name | Comments |
|------------|------|----------|
|------------|------|----------|

### Assessment Units

| WBIC    | Segment | Local Name           | Official Name        |
|---------|---------|----------------------|----------------------|
| 1506500 | 1       | Spirit River         | Spirit River         |
| 1506800 | 1       | Spirit River Flowage | Spirit River Flowage |

## Wisconsin Department of Natural Resources SWIMS Project Summary

### Lab Account Codes

| Account Code | Description | Start Date | End Date |
|--------------|-------------|------------|----------|
|--------------|-------------|------------|----------|

### Forms

| Form Code | Form Name |
|-----------|-----------|
|-----------|-----------|

### Methods

| Method Code | Method Description |
|-------------|--------------------|
|-------------|--------------------|

### Fieldwork Events

| Start Date | Status | Field ID | Station ID | Station Name |
|------------|--------|----------|------------|--------------|
|------------|--------|----------|------------|--------------|

### Documents

| Title  | Description           | Author   | Published  | Comments |
|--|-----------------------|--|------------|----------|
| SPIRIT RESERVOIR WATER QUALITY ASSESSMENT NORTHERN WISCONSIN | Lakes Planning Report | N. Turyk, P. Mcginley, R. Bell, M. Breunig, And J. Barrick | 12/31/2006 |          |

### Budget

#### Combined Budgets:

Combined WSLH:

Combined Total: \$0.00

### Funding

| Organization | Source | Type | Amount | Start Date | End Date |
|--------------|--------|------|--------|------------|----------|
|--------------|--------|------|--------|------------|----------|