

LAKE MANAGEMENT PLAN

| | | | | | |
|--------------------|------------------------------|------------------------------|----------------------------|---|-----------------------|
| Region 2 | Area F212 Brainerd | D.O.W Number 18-96 | County Crow Wing | D.O.W. Lake Name Upper South Long | Acreage 793 |
|--------------------|------------------------------|------------------------------|----------------------------|---|-----------------------|

Long Range Goal Increase walleye abundance to at least 5.5/gill net. Maintain northern pike abundance near the lake class first quartile value of 2.8/gill net, with an average size of at least 24 inches.

Operational Plan:

1. Stock walleye fingerlings every other (odd numbered) year at the rate of 2 lbs/littoral acre (566 lbs). This lake has been declared a core lake for walleye fingerling stocking, and as such will be stocked at a rate equivalent to 1lb/littoral acre/year.
2. Test net on a six-year rotation, with every second netting a full survey. The next netting should be a population assessment, in 2013.
3. Use lake as a control lake for class 27 northern pike special regulations lakes. As such the lake should be trap netted at ice out every third year, next in 2010.
4. Allow bullhead removal by contract fishermen when requested.

Midrange Objective: Monitor walleye abundance for response to changed stocking plan. Monitor lake's northern pike population size structure.

Potential Plan:

| | |
|--|-----------------|
| Creel survey in conjunction with lower lake. | 15,000. |
| Fall electrofishing to monitor walleyes | 1,000. |
| Winter fish house counts | 500. |
| AMA/aquatic easement purchase | 500,000. |
| TOTAL \$ | 516,000. |

NARRATIVE: (Historical perspectives - various surveys; past management; social considerations; present limiting factors; survey needs; land acquisition; habitat development and protection; commercial fishery; stocking plans; other management tools; and evaluation plans)

Check the appropriate boxes below:

- BWCAW**
- Superior National Forest**
- Chippewa National Forest**
- Leech Lake Indian Reservation**
- 1854 Ceded Territory**
- 1837 Ceded Territory**
- Fond du Lac Indian Reservation**
- Voyageurs National Park**

| | | |
|---|--|---|
| Primary Species Management: Walleye | Secondary Species Management: Northern pike, largemouth bass | |
| Area Supervisor Signature: | Date: | Date sent from DNR Area Fisheries to USFS District Ranger: |
| Regional Manager Signature: | Date: | Date sent from DNR Regional Fisheries to USFS Forest Supervisor: |

Draft Upper South Long LAKE MANAGEMENT PLAN

Various surveys: There is a 1941 lake management report. Subsequent nettings were done in 1969, 1979, 1984, 1989, 1994, 1999, 2004 and 2007. Spring electrofishing to sample bass was done in 1998, 1999, 2004 and 2007. Ice-out trap netting to sample northern pike was done in 2007. MPCA did a lake assessment report in 1998. There is a 1968 lake map.

Past management: Past management has primarily consisted of stocking. The majority of stocking has been of northern pike or walleye. Pike stocking stopped after 1968. Walleye stocking continues and has been done in alternate years since about 1982.

Social considerations: The lake is close to the City of Brainerd and residential development is high. It is a popular lake for walleye fishing. The lake association recently became active in a Nokassippi River watershed management organization.

Present limiting factors: Spawning habitat is limited for both walleye and northern pike. Macrophyte growth can be heavy in mid-summer.

Survey needs: Test netting should be done on a six-year rotation with every second netting a full survey. The next netting should be a population assessment in 2013.

Land acquisition: AMA/conservation easements should be acquired as opportunities arise.

Habitat development and protection: Habitat protection should be done using DOW, APM and WCA programs. Protection of aquatic plant communities is especially important on this highly developed and used lake.

Commercial fishery: Bullhead abundance is high enough to support a commercial fishery.

Stocking plans: Stock walleye fingerlings every other (odd numbered) year at the rate of 2 lbs per littoral acre (566 lbs.). The lake has been declared a core lake for walleye fingerling stocking and as such will be stocked at a rate equivalent to one pound per littoral acre per year. We have chosen to stock in alternate years.

Other management tools: Sample largemouth bass in spring of netting years. Objectives are to monitor bass abundance and to develop an index of abundance over time. Use ice-out trap netting to monitor northern pike abundance every third year, next in 2010. This lake is a control lake for lakes with northern pike special regulations. A creel survey would be useful to monitor fishing pressure and harvest. Fall electrofishing would be a useful tool to monitor natural reproduction or stocking success and should be used when workloads allow.

Evaluation plans: Summer nettings will be used to evaluate fish populations, including walleye. Spring electrofishing for bass and fall electrofishing for walleye (when possible) will be used to obtain better information on these species. Ice-out trap netting will be used to obtain better information on northern pike abundance and size structure.

| Netting summary for Upper South Long Lake. Catch is in numbers per net lift. | | | | | | | | | | | Lake Class = 27 |
|--|------|------------|-------|-------|-------|-------|-------|--------|-------|--------|-----------------|
| Species | Gear | Q1-Q3 | 1969 | 1979 | 1984 | 1989 | 1994 | 1998 | 1999 | 2004 | 2007 |
| NOP | GN | 2.76-9.00 | 4.80 | 0.30 | 0.60 | 3.10 | 1.00 | | 1.78 | 9.67 | 3.50 |
| WAE | GN | 3.25-8.81 | 1.60 | 0.90 | 4.10 | 2.90 | 4.60 | | 5.11 | 1.92 | 1.75 |
| TLC | GN | 0.77-6.18 | 7.20 | 7.38 | 1.22 | 0.33 | 1.33 | | 1.33 | 2.08 | 0.42 |
| YEP | GN | 7.00-46.33 | 12.10 | 50.20 | 5.9 | 1.80 | 20.80 | | 4.11 | 11.08 | 3.17 |
| LMB | TN | 0.33-1.25 | 1.20 | 0.1 | 3.30 | 1.60 | 1.10 | | 2.09 | 0.67 | 0.58 |
| LMB | EF | none | | | | | | 100.00 | 22.00 | 113.05 | 96.92 |
| BLG | TN | 4.39-48.97 | 15.60 | 16.10 | 20.80 | 38.90 | 40.00 | | 49.73 | 22.75 | 21.42 |
| BLC | TN | 0.36-2.32 | 7.9 | 2.90 | 0.80 | 1.1 | 1.7 | | 2.18 | 1.75 | 0.83 |

GN= gill net

TN=trap net

EF=electrofishing
(fish/hr.)