

into air.

APPENDIX B.

Pre-rehabilitation Proposal and Post Rehabilitation Report

PRE-REHABILITATION FORM

1. Water Big Meadow Lake Location 7 N 43E Pend Oreille
(Sec) (Twp) (Rge) (County)
2. Surface Acres 72 Max. Depth 20ft Volume (Wt) 1,405,981,360 #
3. Date Last Rehabilitated None Toxicant Used None
4. Proposed Treatment Date 10/97 Est. Replant Date 4/98 Fry 10K
Legal 10,000 Species Rainbow
5. Propose Toxicant Rotenone Concentration 1ppm Amount (at 5% act. Ingrid.)
1,400# 20 gal liq. Method of Application tow sacks/spray Target Species yellow perch
Objective: Complete X Partial
6. Proposal for Salvage/Disposal None
7. Outlet: Permanent Intermittent X Dry Stream Miles/Flow
Measures to Protect Downstream Resources Outlet is dry in Oct.
If None, Why Type Detoxicant if Used
Duration of Beneficial Effects 10 yrs
8. Does Water Contain Rare, Endangered, or Endemic Species No
If So, Describe Measures for Protection
9. Public Access Yes Developed Yes Major Land Ownership (%) Public 100%,
Private
10. Established Resorts None
11. Is Water used for Domestic, Industrial, or Irrigation (Registered Water Right) No
12. Public Attitude (Pro/Con%) Shoreline Residents Non-Shoreline Resident
Sports.Clubs Public Meeting To be held
13. Human use of water Fishing
14. Does Lake suffer Algae Blooms No Winter or Summer Kills Yes
15. Justification for this Rehabilitation: Illegally introduced yellow perch have overpopulated the lake and trout growth has been stunted

Curt Vail 1/4/97
Biologist Date

Region Number 1

PRE-REHABILITATION PLAN

1. PROPOSAL:

A. Justification for proposed rehabilitation

1. Big Meadow Lake was contaminated with yellow perch in the early 1990s. Since then the trout have become stunted. Rainbow trout fry planted in the spring of 1995 were nine inches and robust in October of that year.
2. Rainbow planted in the spring of 1996 barely reached eight inches and the once large perch were stunted.
3. Big Meadow Lake is located approximately twenty miles North of Colville, Wa.

B. Physical Description

1. Name of water: Big Meadow Lake
2. Location: sec. 7 T34N R43E
3. Surface acres: 72
4. Maximum depth: 20 ft
5. Volume of water: 504 acre ft.
6. Outlet statistics: Intermittent. A trickle tube at a manmade dam stops flowing in the fall. An emergency overflow is active during spring runoff. These are normally dry in the fall.
7. Stream miles: NA
8. Number of developed access areas: One developed Forest Service campground and boat launch and one primitive boat launch.
9. Land ownership: 100% USFS
10. Resorts: None

C. Proposed Management Action

1. Date of last rehabilitation: None, although the lake has a history of winter kill. Wet weather in recent years has helped maintain fish through the last two winters. A lake aerator is used in all other years.
2. Toxicant used: None
3. Proposed treatment date: October 1997
4. Estimated replant date: April 1998
5. Species to restock: Rainbow
6. Number of fry, legals to stock: 10,000 fry and 10,000 legals.
7. Proposed toxicant name, concentration, and amount: Rotenone, 1ppm, 1,400 # and 20 gal. Liquid.
8. Method of application: Tow sacks and spray liquid.
9. Size of crew and number of crew members: Four boats and five crew members.

10. Name of licensed applicator: Bob Peck

II. PURPOSE

Big Meadow Lake has had extensive recreational development done to accommodate fishing, hunting, and appreciative wildlife users. It is a popular water and offers a quality fishing opportunity. The yellow perch have all but eliminated this opportunity.

III. INTENDED OUTCOME/MEASURE OF SUCCESS

A 100% removal of all fish/trout growth and quality returned to former high quality.

IV. RESOURCE IMPACTS

1. Target species: Yellow perch.

2. Detailed impacts to other wildlife: Due to the fall timing of the treatment, waterfowl use won't be affected, osprey will have migrated, and amphibians will be in adult lifestages.

3. Detailed potential impacts to human related uses of water or shoreline: Fishing season is over at the end of October and the campground is only used by hunters. No water activities occur.

4. Describe impacts to downstream resources: None

5. List any endemic species and or species which are rare, endangered or otherwise listed: None known.

V. MITIGATION FOR IMPACTS

1. Describe how impacts can be mitigated or softened: None.

2. Describe measures to protect downstream resources: None required.

3. Describe measures to protect endemic species, and/or species which are rare, endangered or threatened: None required.

4. Describe the safety precautions for pesticide applicators that will prevent health hazards: Respirators and protective clothing will be worn.

5. Describe how the area will be closed to the public during application: Boat launch and shoreline access points will be posted.

VI. RECREATIONAL IMPACT

Improved fishing opportunity.

VII. ECONOMIC IMPACT

Big Meadow Lake has had extensive recreational improvements done by the USFS. Hunting, fishing and appreciative fish and wildlife use have been encouraged. Economic benefits will accrue to the small communities of Ione, Metalline and Metalline Falls through increased use of recreational purchases, restaurants and gas.

VIII. 7,000 catchable rainbow will be stocked in April 1999 and 10,000 rainbow fry in May 1999.

IX. A public meeting will be held in June or July of 1998.

WATER MANAGEMENT PLAN

A. Water: Big Meadow Lake Mucode: 43LXE7 Wacode: Update
Management Area: NE Washington

B. STEWARDSHIP

Gamefish Foodfish Unclassified Fish Other

5. Management Objective _____

Escapement Objective _____

6. Management/Regulatory Strategy: _____

AND/OR

B. UTILIZATION

1. Target Species: Mixed Trout Only X Warmwater Carp/Crawfish Other

2. Fishery Objective: Production X Trophy Other

3. Catch Objective: OD/Sea

Spp. Rb Catag Fry Fish/Hr 1 # Fish/angler 5 Ave Size 10" OD

4. Angler Use Objective (#Anglers/Acre): Opening Day: 5 Season 5

Comments: This lake is a relatively high elevation lake and is rather cold opening days. Use at that time is low.

5. Production Strategy:

Spp. Rb #Fish/Acre 140 #Fish/Pound 80 Plant Month May

6. Regulation Strategy: Retain lowland lake trout season and statewide regulations.

7. Comments: _____

WATERS GENERAL INFORMATION SUMMARY

A. WATER:

Updated
1997

1. Name: Big Meadow Lake Alt. Name _____ County: Pend Oreille
2. Water Type: L. Lake X Alpine Lk___ Beaver Pd.__ Stream__ Reservoir__
3. Mucode: 43LXE7 Wacode: _____ WRIA# _____ Sec 7 Twp 37N Rge 43E

B. PHYSICAL INFORMATION:

1. Elev: 3450 Ave Depth/Width: 7 ft Max Depth: 20 ft Acres: 72
2. Physical Location: Twenty miles N of Colville WA
3. Land Ownership: Public 100% Private _____% Land Use: Agricultural _____% Residential _____%(No. Nearshore homes ___) Managed
Timberland 100% Other _____%
4. Public Access Types & Condition: Two developed camp grounds, boat launch and handicapped fishing dock. Resorts: None 1997
5. Inlets: One intermittent inlet
6. Outlet: ScreenY/N (Drains to): Screened, drains to Meadow Cr. and S. Deep Cr. 1997
7. Habitat Description (%Shoreline Vegetation, Trophic State, Secci Disk): 80%, Mesotrophic, 12 ft.
8. Water Chem: Alkalinity Ca pH & Specific Cond. (Micromhos)____. 1997
9. Comments: _____

C. GENERAL MANAGEMENT INFORMATION

1. Current Regulations: Lowland Lk. Season/statewide regs 1997
2. Stocking: Normally stocked with 7-10,000 trout fry
3. Fish known to be present: Include all Gamefish, Foodfish, Unclassified fish, Crawfish Rb, E br, yp 1997
4. Anadromous Fish Use: (Spawning, Rearing, Passage) None 1997
5. Management History Summary: Until the early 1980s the lake was privately Owned. It was then acquired by the Colville National forest and the Dept. of Game stocked it with trout. It was most recently stocked with rainbow trout. 1997
6. Management Issues Summary: This lake winterkills in most winters. It is maintained during the winter with a lake aerator. 1997
T&E Flora and Fauna: None known

POST REHABILITATION FORM

1. Lake or Stream Big Meadow County Pend Oreille
Section 7 Township 37N Range 43E
2. Lakes - surface acres 72 Miles of inlet/outlet dry of outlet
3. Maximum depth 20 ft. Average depth 10ft.
4. Weight(pounds) of water treated 1,405,981,360# toxicant Rotenone
5. Amount used 1,400 lbs. 20gal. Liquid; 7.0 % active ingredient
6. Concentration applied 1.0 P.P.M. Date treated 10/30/98
7. Man-hours expended in preparation, treatment & cleanup 32
8. Conditions in the lake on dat of treatment:

<u>Depth in ft.</u>	<u>Temperature</u>	<u>PH</u>	<u>Dissolved oxygen</u>
Surface	34F.	8	8.5
5ft.	40F.	8	8.4
10ft.	40F.	8	8.3
20ft.	40F.	8	2.5

9. Species of fish eradicated in order of relative abundance:

Yellow perch

Rainbow trout

10. Possibility of a complete kill: 100%

11. Detoxicant used None

12. Period of toxicity One month

13. Description of treatment and other comments: The treatment

began at 1000 on the 30th and was completed by 1800. Three boats
and a pumper were used with assistance from one additional
person. The weather was clear

Due to cold temperatures the perch were slow to appear but by 1800 they were stressing lake-wide.
Trout were few since the lake had not been stocked since 1997.

Curt Vail 11/10/97

Fishery Biologist Date

Region Number I