



November 1, 1996

Philip Millam, Acting Director
Office of Water
U.S. Environmental Protection Agency
1200 Sixth Avenue
Seattle, Washington 98101

Dear Mr. Millam:

Attached is Idaho's 1996 § 303(d) report of water quality limited water bodies and responsiveness summary. The report is being submitted for your review and approval. With the following exceptions, Idaho's 1996 § 303(d) report is identical to the 1994 § 303(d) list published by EPA as required by court order in Idaho Sportsmen's Coalition v. Browner, Case No. C93-943-WD (W.D. Wash.):

1. Five waterbodies were added based on a request from EPA. EPA erred by not including these waterbodies on the original 1994 list which formed the basis of the draft 1996 list;
2. Numerous technical corrections to segment boundaries in EPA's 1994 list were made based on comments submitted by IDEQ and EPA.

Idaho is in the process of preparing a comprehensive schedule to address all waterbodies identified in the 1994 § 303(d) list. That schedule will be submitted to the court for approval in the aforementioned action.

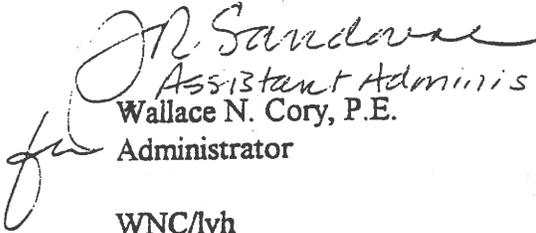
Idaho recognizes that there are significant questions regarding the validity of information and methods used by EPA to establish the 1994 list. IDEQ has monitored most of the waters on EPA's 1994 list and is finalizing regulations that will establish a scientifically based process to utilize that monitoring data to better identify whether waterbodies are achieving water quality standards. Until that process is in place under state law, and until all waterbodies are evaluated, Idaho has elected not to remove any waterbodies from EPA's 1994 list except as noted above. However, Idaho's identification of waterbodies in the enclosed 1996 § 303(d) report should not be construed as a determination by Idaho that such waterbodies are not in compliance with state Water Quality Standards.

Philip Millam
Page 2
November 1, 1996

It is expected that the listing process will be approved and in place by 1997. At that time, IDEQ may reevaluate the 1996 list, including information to add or remove waterbodies submitted during the 1996 § 303(d) public comment period, and publish a revised list.

Idaho will continue to develop TMDLs in accordance with the schedule to be submitted to the court. If you have any questions concerning the 1996 § 303(d) list or summary, please contact Michael McIntyre of my staff at (208)373-0502.

Sincerely,


Assistant Administrator
Wallace N. Cory, P.E.
Administrator

WNC/lvh

Enclosures

cc: Larry Koenig, Assistant Administrator, DEQ
Michael McIntyre, DEQ
Kevin J. Beaton, Deputy Attorney General



DIVISION OF ENVIRONMENTAL QUALITY
North Central Idaho Regional Office

MEMORANDUM

To: Mike McIntyre
From: Lisa Wertz and Daniel Stewart
Subject: NCIRO changes to the 1996 Idaho 303(d) list
Date: April 8, 1996

Attached are the changes that need to be made to the Clearwater and Salmon Basin sections of the 1996 Idaho 303(d) list. These changes include relisting streams in the appropriate basin, corrections with identification numbers, corrections with stream names, duplicate listing of streams, and more detailed boundary descriptions. These changes are further described below.

1. Streams which are highlighted belong in a different basin. Highlighted streams on the Salmon Basin list actually belong on the Clearwater Basin list. Highlighted streams on the Clearwater list belong in the Salmon.
2. Stream names with a portion of the name circled need to be renamed. For example, a stream listed as Canyon Creek, Little should actually read Little Canyon Creek. All of these stream names needing corrections were verified using the Idaho Geographic Names book.
3. The priority for the Cottonwood Creeks in the Clearwater Basin needs to be switched. Segment number 1160 should be low priority, segment 1288 should be high priority.
4. Two creeks, Adair and Rutledge, are listed incorrectly in the Panhandle Basin, they should be listed in the Clearwater Basin

ATTACHMENT E1

**NORTH CENTRAL IDAHO REGIONAL
OFFICE DEQ**

FROM: Wertz, Lisa

NCIRO

TO: McIntyre, Mike

DATE: 04-12-96

TIME: 08:58

CC: Cardwell, John NCIRO
Stewart, Daniel Grangevl NCIRO

SUBJECT: Another change on the 303(d) list
PRIORITY:
ATTACHMENTS:

Hello Michael,

In our continuing effort to make the 1996 303(d) list as accurate as possible, we have discovered another error. The stream is Corral Creek in the Clearwater Basin. Here is the correct information (to the best of our knowledge):

Waterbody name: Corral Cr

PNRS: 1315

HUC: 17060103 (currently listed in 17060303 - Lochsa River drainage)

Boundaries: Headwaters to Snake River (we previously listed in the Potlatch)

Pollutant: sediment

Priority: low

Comments: Unknown (current comment is exceeds Forest Plan sediment standard but only a small portion of the headwaters of this creek are in a forested area and we do not believe that it is in a national forest)

If you have any questions let us know. Lisa

FROM: Wertz, Lisa

NCIRO

TO: McIntyre, Mike

DATE: 04-04-96

TIME: 11:12

CC:

SUBJECT: 303(d) list changes

PRIORITY:

ATTACHMENTS:

Mike,

there are numerous mistakes in both the Clearwater and the Salmon Basin lists that need to be fixed. One of the most common being Clearwater streams listed in the Salmon Basin. Is it appropriate for us to address these changes during the public comment period or should we do this internally? What is our deadline for submitting these changes?

Lisa, Daniel, and John

ATTACHMENT A

DOCUMENTATION OF PUBLIC NOTICE FOR IDAHO 1996 303(d) LIST

March 27, 1996

MEMORANDUM

To: Regional Administrators

From: Mike Edmondson, Environmental Sciences Specialist *ME*
Monitoring and Watershed Analysis Bureau

Subject: Public Notification of 1996 Request for Public Comment on the Idaho Water Quality Limited Stream Segment List (303(d) list)

Enclosed is the final draft of the Request for Public Comment on the 1996 Idaho Water Quality Limited Stream Segment List. The request will be published on the dates provided in the following newspapers by region.

EIRO:	Post-Register	April 3, 10, and 17
	Challis Messenger	April 3, 10, and 17
	The Recorder-Herald	April 3, 10, and 17
SEIRO:	Idaho State Journal	April 3, 10, and 17
SCIRO:	The Times News	April 3, 10, and 17
	Wood River Journal	April 3, 10, and 17
	Southern Idaho Press	April 3, 10, and 17
SWIRO:	Idaho Statesman	April 3, 10, and 17
	Idaho Press Tribune	April 3, 10, and 17
	Star News	April 4, 11, and 18
	Mounrain Home News	April 3, 10, and 17
	Weiser Signal American	April 3, 10, and 17
NCIRO:	Lewiston Morning Tribune	April 3, 10, and 17
	Idaho Counry Free Press	April 3, 10, and 17
	Moscow-Pullamn Daily	March 30, April 6, and 13
NIRO:	Coeur d'Alene Press	April 3, 10, and 17
	Spokesman Review	April 3, 10, and 17

If you have any questions or concerns please contact me at (208) 373-0257.

Enclosure

MRE:lg a:\303drun.ras (960326MRE01)

cc: L. Koenig
M. McIntyre
K. Beaton
303(d) File

**REQUEST FOR PUBLIC COMMENT ON
THE IDAHO 1996 WATER QUALITY LIMITED
STREAM SEGMENT LIST**

The Idaho Department of Health and Welfare - Division of Environmental Quality (DEQ) requests your comments on water bodies considered for inclusion on Idaho's Water Quality Limited list. Section 303(d) of the Federal Clean Water Act requires the states to identify waters for which point source effluent limitations in National Pollutant Discharge Elimination System (NPDES) permits issued by the Environmental Protection Agency (EPA) are not stringent enough to meet applicable water quality standards.

EPA defines a Water Quality Limited segment to be any segment which may be affected by point and nonpoint source factors and is known that water quality does not meet applicable water quality standards, nor is expected to meet applicable water quality standards even after the application of point source controls and other required controls.

Idaho waters affected by point and/or nonpoint source pollution and not currently in compliance with or not expected to meet Idaho Water Quality Standards should be included in the list. DEQ seeks verifiable water quality data or information from individuals who may have knowledge of any waters that meet these criteria.

BACKGROUND

Every two years the state of Idaho is required by section 303(d) of the Federal Clean Water Act to identify water bodies that are not attaining water quality standards and submit the list to EPA for approval. Idaho's 1996 list must be submitted to EPA by April 30, 1996. As a result of a lawsuit brought against EPA, EPA disapproved Idaho's 1992 list and published a new list for Idaho that includes 962 water bodies. As required by the ongoing litigation, EPA and DEQ are in the process of developing a schedule to address all 962 water bodies through a combination of monitoring, evaluation of pollution controls and when necessary, development of total maximum daily loads (TMDLs) or other equivalent pollution control plans. Development of a TMDL involves an estimate of the amount of pollutants a water body can safely assimilate and a plan to reduce pollutants from all sources to achieve water quality standards. Idaho is in the process of implementing a water quality law passed by the Idaho Legislature in 1995 to comprehensively assess water quality problems throughout the state. Due to the ongoing litigation and the time required to implement Idaho's water quality law, DEQ intends to resubmit the EPA's 1992 list which includes 962 water bodies to EPA in April 1996. The 962 water bodies on the 1996 list do not necessarily require the development of a TMDL.

HOW TO REVIEW THE LIST

The proposed 1994 Water Quality Limited or 303(d) list and proposed TMDL schedule is available. This information can be reviewed at the DEQ regional offices and central office listed below. Copies can also be obtained from these offices. The list identifies water bodies as Water Quality Limited.

HOW TO COMMENT

Written comments must be submitted to Michael McIntyre, Watershed Monitoring and Analysis Bureau, DEQ, 1410 North Hilton, Boise, Idaho, 83706, by April 25, 1996. Supporting data and other information must accompany comments that suggest adding or deleting water bodies from the list. If possible, supporting data should be submitted on an MS-DOS compatible floppy disk (3.5") and hard copy.

To ensure that adequate quality assurance and quality control measures (QA/QC) were observed in collecting and analyzing additional data or information, the following conditions must be met:

- * Sampling and analysis must have been conducted and assessed under a written and approved QA/QC plan;
- * Laboratory samples must have been analyzed at a state accredited laboratory;
- * Field instruments must have been operated and calibrated according to the manufacturer's specifications;
- * Data must have been reviewed to assure that QA/QC objectives of the plan are met and that this review is documented and available for DEQ staff to review;
- * All pertinent statistical assumptions must have been met and documented.

LOCATION WHERE THE LIST MAY BE REVIEWED

Regional Office address goes here

1996 WATER QUALITY LIMITED SEGMENT LIST
DATA QUESTIONNAIRE

1. Name of project in which data was gathered: _____

2. Media sampled (water, sediment, fish, insects, etc.):

3. Parameters measured (temperature, pH, nitrate, etc.):

4. Was sampling and analysis conducted under a QA/QC plan?

5. Were samples analyzed at a state accredited laboratory?

6. Were field instruments operated and calibrated according to the manufacturer's recommendations? _____

7. Were data reviewed to assure that QA/QC objectives of the plan were met? _____
Has this review been documented? _____
Is this documentation available for DEQ staff to review?

Were the applicable statistical assumptions met? _____

8. Please provide an individual and phone number to contact for any questions on the provided data.

ATTACHMENT A1

TARGHEE NATIONAL FOREST



United States
Department of
Agriculture

Forest
Service

Targhee
National
Forest

P.O. Box 208
St. Anthony, ID 83445

2520

March 8, 1996

Michael McIntyre
Idaho Division of Environmental Quality
1410 N. Hilton
Boise, ID 83706

REC'D

MAR 11 1996

DIV. OF ENVIRONMENTAL QUALITY
COMMUNITY PROGRAMS

Dear Mr. McIntyre:

Enclosed is a report describing 1995 monitoring results on five Water Quality Limited (WQL) streams located on the Targhee National Forest (detailed results are listed at the end of the report). Streams were monitored for the pollutants specifically named on the 303(d) list. While the State of Idaho wishes to use Beneficial Use Reconnaissance Project (BURP) criteria to determine if streams belong on the list or not, it seems that repeated water quality monitoring is also needed to determine if water quality standards and criteria are being met.

Based on the 1995 results, it appears that Edie Creek, Irving Creek, and Warm Springs Creek are meeting water quality criteria. Please consider removing these streams from the WQL list, based on the information presented. If you feel that the information is inadequate, please let me know what data would be needed to support their removal. I look forward to your comments and hope that resolution on the question of data needs is reached by Spring, 1996.

Sincerely,

Ronna Simon Monte
Forest Hydrologist

Enclosure

Caring for the Land and Serving People



United States
Department of
Agriculture

Forest
Service

Targhee NF

Reply to: 2520

November 9, 1995

Subject: Water Quality Limited Segments-- 1995 Monitoring Results

To: Ric Rine, Ecosystem Branch Chief
Jerry Reese, Forest Supervisor
Pete Stender, Regional Hydrologist

I. Background

Under section 303(d) of the Clean Water Act, States must develop a list of waterbodies for which existing management is inadequate to provide for attainment and maintenance of water quality standards. These water bodies are known as Water Quality Limited (WQL). Once a waterbody appears on the list, Total Maximum Daily Loads of specified pollutants must be established for the waterbody unless monitoring proves that water quality standards are being met, allowing the waterbody to be removed from the list. In other words, once a waterbody is on the list, it is "guilty until proven innocent", which involves monitoring to prove that State water quality standards are being met.

There are fifteen WQL stream segments on the Targhee National Forest. Because of fund limitations, lack of personnel, and other pressing priorities (e.g., Forest Plan revision, Range NEPA), I was not able to begin monitoring on all streams on the Forest. Instead, I selected an area having a high concentration of WQL streams to begin the work: the Medicine Lodge area of the Dubois Ranger District. WQL streams in the area, and the pollutants of concern (or reasons for listing if not a specific pollutant) are as follows:

Stream segment	Pollutant/reason
Edie Cr. (headwater to Med. Lodge)	sediment, nutrients, habitat alteration
Irving Cr. (headwater to Med. Lodge)	sediment, nutrients, habitat alteration
Fritz Cr. (headwater to Med. Lodge)	nutrients, thermal
Warm Cr. (headwater to Med. Lodge)	nutrients, thermal
Warm Springs Creek (entire)	sediment, nutrients

that this would measure most of the nitrogen that is biologically available in surface waters. Ammonia was said to occur where a concentrated source of livestock wastes were present (e.g., feedlots). Because of these recommendations (and fund limitations), I had the lab analyze for NO₂ + NO₃, focusing on the combination because nitrite is rapidly oxidized to nitrate (EPA, 1986).

There are no standards for nitrate/nitrite. Idaho water quality standards dated June 30, 1995 have criteria for ammonia, but this is apparently not the appropriate form of nitrogen to examine. Where nitrate/nitrite criteria are recommended in literature, the emphasis is on nitrate because of nitrite's transient nature. While a maximum nitrate concentration of 10 mg/l is the accepted drinking water criterion (Brown and Binkley, 1994; MacDonald et al., 1991), the maximum recommended for streams to prevent nuisance algal growth is 0.3 mg/l (EPA, 1993; MacDonald et al., 1991).

Results

Fritz Creek had NO₂ + NO₃ less than 0.1 mg/l (the lab's lower limit of detection) on all dates except August 16, when it was 0.43 mg/l. It fell to less than 0.1 again by September 20. Field notes on August 16 state that the water was very turbid and that cows were on-site, but they were also there on September 20. Warm Creek had values less than 0.1 mg/l in June and September. There was an increase to 0.27 on July 26 and 0.44 on August 16, but these increases cannot be readily explained because sampling was conducted at the point where the creek/spring emerges from a hillside on August 16, and about 100 yards downstream on July 26. A major tributary of Warm Creek, Divide Creek, had NO₂ + NO₃ values that ranged from 0.49 to 0.73 mg/l in all samples. There was some kind of "algal slime" at the site, but no cattle were there during site visits. Only one sample on Irving Creek (and two of its tributaries) was over the 0.1 mg/l value, and that was one sample of 0.12 mg/l. Both samples on Warm Springs Creek were less than 0.1 mg/l. I couldn't reach the Forest boundary on Edie Creek, so I sampled about 4.5 miles downstream of the boundary. The July sample was 0.29 mg/l, and in September it was less than 0.1 mg/l.

Phosphorus

Recommendations/criteria

I called Idaho DEQ to ask what form of phosphorus to analyze, and they offered no recommendations. The U.S. Geological Survey in Boise recommended sampling for orthophosphate. MacDonald et al. (1991) state that, for project and trend monitoring, total phosphate will suffice. EPA (1993) recommends dissolved ortho-phosphate as a better measure of biologically available phosphorus than total phosphorus, also stating that phosphorus occurs in surface waters almost solely as phosphates. For these reasons, I had the lab analyze for dissolved orthophosphate.

There are no state water quality standards for phosphorus. All the literature I examined agreed with the recommendation of EPA (1986) that total phosphates should be less than 0.05 mg/l where a stream enters a lake or reservoir (at the point of entrance); where streams are not discharging directly to lakes or reservoirs, a criterion of 0.1 mg/l should be used. The latter criterion would hold for the Medicine Lodge streams.

REFERENCES

- Bauer, S.B. and T.A. Burton, 1993. Monitoring protocols to evaluate water quality effects of grazing management on western rangeland streams. USEPA/910/R-93-017, Region 10, Seattle. 179 pp.
- Brown, T.C. and D. Binkley, 1994. Effect of management on water quality in North American forests. General Technical Report RM-248, Fort Collins, CO: USDA Forest Service, Rocky Mountain Forest and Range Experiment Station. 27 pp.
- EPA, 1986. Quality criteria for water: 1986. U.S. Environmental Protection Agency, Off. Water Regulations and Standards. Washington, D.C. 398 pp.
- Idaho Department of Health and Welfare, Division of Environmental Quality, 1995. Water quality standards and wastewater treatment requirements. IDAPA 16, Title 01, Chapter 02. Updated June 30, 1995.
- MacDonald, L.H., A.W. Smart, and R.C. Wissmar, 1991. Monitoring guidelines to evaluate effects of forestry activities on streams in the Pacific Northwest and Alaska. USEPA/910/9/9-91-001, Region 10, Seattle. 166 pp.

ATTACHMENT A2

CLEARWATER NATIONAL FOREST



United States
Department of
Agriculture

Forest
Service

Clearwater
National
Forest

12730 Highway 12
Orofino, ID 83544
(208) 476-4541
FAX (208)476-8329

File Code: 2500

Date: April 22, 1996

RECEIVED

APR 25 1996

DIV. OF ENVIRONMENTAL QUALITY
COMMUNITY PROGRAMS

Michael McIntyre
Watershed Monitoring and Analysis Bureau, DEQ
1410 North Hilton
Boise, Idaho 83706

Dear Mr. McIntyre:

This is the Clearwater National Forest's comment regarding Idaho 1996 Water Quality Limited Stream Segment List published by your office.

The Idaho 1996 WQLS Segment List list proposes to identify all streams previously listed in the 1994 303(d) list as water quality limited streams regardless of any current data on streams that may show the streams as now meeting applicable water quality standards. The Clearwater National Forest believes that streams where data now shows that water quality standards are being met should not be listed on the proposed 1996 303(d) list. In particular, the Clearwater National Forest requests that those streams identified on the 1994 303(d) list as not meeting water quality standards due to non-compliance with Forest Plan standards, be removed from the Idaho 1996 WQLS Segment List where current data shows that Forest Plan standards are being met. The Clearwater National Forest requests that the following streams where current data shows that Forest Plan standards are being met be removed from the Idaho 1996 WQLS Segment List:

Walton Creek (Lochsa River)
Boulder Creek (Lochsa River - Powell)
Crooked Fork Creek (Lochsa River)
Post Office Creek (Lochsa River)
Shoot Creek (Lochsa River)
Hem Creek (North Fork of the Clearwater River)
Sylvan Creek (North Fork of the Clearwater River)
Middle Creek (North Fork of the Clearwater River)
Orogrande Creek (North Fork of the Clearwater River)

The Clearwater National Forest will provide you specific data regarding each of the streams identified under separate cover by May 3.

Regarding Walton Creek, we have the following summary of data readily available at this time:

In 1993, the lower 2.4 miles of Walton Creek were surveyed via contract by Clearwater BioStudies, Inc. (Clearwater BioStudies, Inc. 1994b). The stream survey methodology used was basically the "transect methodology" developed by Al Espinosa (1988 and revised 1990) with several updates between 1990-1993 (USDA Forest Service 1995). Fish habitat data was collected via transect lines every 30 meters for selected variables (ie. cobble embeddedness) or total counts within a specific reach (channel type). Cobble embeddedness was also measured on randomly selected transects; the cobbles for measurement were obtained along the transect line in lieu of the hoop method. The contractor adjusted the ocular cobble



embeddedness values using the regression developed from the measured values. Fish population data was also collected during the survey at randomly located stations. The survey also found that the stream bank erosion was less than one percent. The survey results show an average cobble embeddedness of 26.6 percent for the lower five stream reaches that were surveyed. Stream reaches were delineated using Rosgen (1993). Instream sediment of about 27 percent is lower than the 30-35 percent DFC and would class the stream as meeting Forest Plan standards.

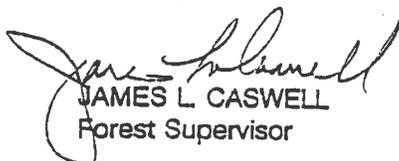
In 1993, the District completed monitoring within the Walton Creek drainage. As in 1991, Clearwater BioStudies, Inc. was the contractor. Four sites were monitored in 1993. The methodology was basically the same as in 1991. Overall cobble embeddedness in the undeveloped reaches was 32 percent and in the developed reaches was 35 percent. These figures meet the Forest DFC of 30-35 percent.

In 1995, the District completed monitoring within the Walton Creek drainage. As in 1991 and 1993, Clearwater BioStudies, Inc. was the contractor. The four sites that were monitored in 1993 were assessed in 1995. The methodology was basically the same as 1991 and 1993 with only the number of calibration transects being adjusted. Overall cobble embeddedness in the undeveloped reaches was 31 percent and in the developed reaches was 28 percent. These figures are at or below the Forest DFC of 30-35 percent.

In addition, DEQ BURP data indicates the percent fines from Wolman pebble counts are extremely low. DEQ Field crews measured percent fines in the lower reach at 2 percent; middle reach at 3 percent; and upper reach at 4 percent (State of Idaho, DEQ BURP data for Walton Creek). In a March 1, 1996 deposition for the United States District Court for the District of Idaho, Michael McIntyre testified that, *"based on that preliminary procedure, the output of macroinvertebrate data through the process indicated that cold water biota is an existing beneficial use in Walton Creek and that its support status is full"* (deposition upon written questions of Michael McIntyre taken on behalf of the defendant-intervenor at Boise, Idaho, March 1, 1996, page 7).

In conclusion, monitoring and data analysis by the State and Forest Service indicates that Walton Creek meets all Forest Plan Standards and maintains beneficial uses. We therefore conclude, it is inappropriately listed as a water quality limited segment and request it be removed from the Idaho 1996 WQLS Segment List. Thank you for the opportunity to comment.

Sincerely,


JAMES L. CASWELL
Forest Supervisor

Separate cover:
Specific Data

cc:
Chris Everett, RO
Ann Puffer, RO
Pat Murphy
Doug Gochnour
Daniel Stewart, Grangeville DEQ



COBBLE EMBEDDEDNESS FOR WQLS

Orogrande Creek	26%
Crooked Fork Creek	17.4%
Post Office Creek	20.5%
Shoot Creek	25.8%
Boulder Creek	Not Available
Hem Creek	34.6%
Sylvan Creek	34.3%

Gasket Effect (similar to Cobble Embeddeness)

Middle Creek (Gasket Effect)	25%
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COBBLE EMBEDDEDNESS FOR WQLS

Orogrande Creek	26%	1991
Crooked Fork Creek	17.4%	1994
Post Office Creek	20.5%	1992
Shoot Creek	25.8%	1994
Boulder Creek	Not Available	
Hem Creek	34.6%	1991
Sylvan Creek	34.3%	1989

Gasket Effect (similar to Cobble Embeddeness)

Middle Creek (Gasket Effect)	25%	1975
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ATTACHMENT B

PUBLIC COMMENTS RECEIVED

ATTACHMENT B1

PLUM CREEK TIMBER COMPANY

April 24, 1996

Michael McIntyre
Idaho DH&W, Division of Environmental Quality
Watershed Monitoring and Analysis Bureau
1410 North Hilton
Boise, Idaho 83706

Re: **Walton Creek**
1996 DEQ Recommendations for §303(d) List

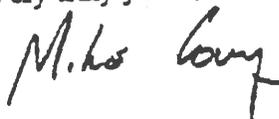
Dear Mr. McIntyre:

We call your attention to the comment letters you have received from Plum Creek Forest Hydrologist Brian Sugden and Dale McGreer of Western Watershed Analysts (enclosed with Mr. Sugden's letter). The data and analysis in those comment letters show it would be improper for DEQ to recommend to EPA that Walton Creek be included on the 1996 §303(d) List for the State of Idaho.

The data shows that water quality in Walton Creek is very good and meets the Idaho water quality standard of full support for beneficial uses, including salmonid spawning. Moreover, current data and data available in 1993 shows that the EPA listing of Walton Creek in 1994 was a mistake.

Plum Creek owns timberlands in the Walton Creek basin. We have incurred, and continue to incur, substantial damages because of the erroneous listing of Walton Creek in 1994. Given all the data that have been submitted to DEQ, DEQ should not perpetuate the error made by the EPA. DEQ should not recommend to the EPA that Walton Creek be included on the 1996 §303(d) List.

Very truly yours,



Mike Covey
General Manager, Rocky Mountain Timberlands



Plum Creek Timber Company, L.P.
P.O. Box 160
Columbia Falls, MT 59912
406/892-2141

April 24, 1996

Michael McIntyre
Idaho DH&W, Division of Environmental Quality
Watershed Monitoring and Analysis Bureau
1410 North Hilton
Boise, Idaho 83706

RECEIVED

APR 25 1996

DIV. OF ENVIRONMENTAL QUALITY
COMMUNITY PROGRAMS

Re: Comments on the 1996 §303(d) List for the State of Idaho

Dear Mr. McIntyre,

This letter constitutes comments by Plum Creek Timber Company, L.P. on the Idaho 1996 water quality limited stream segment list. Specifically, these comments are directed at DEQ's recommendation to list Walton Creek in the Clearwater Basin (PNRS ID#1249.01, Catalog Unit #1706303) as water quality limited given the large body of information which clearly indicates full support of the beneficial uses.

Fine Sediment Levels in Walton Creek

In 1994, EPA listed Walton Creek as impaired based on exceedence of the Clearwater National Forest Plan standard for cobble embeddedness. Though it is inappropriate to equate forest plan standards with Idaho water quality standards, cobble embeddedness is an index of the amount of sediment in a stream. In making their decision in 1994, EPA relied on monitoring data that was collected in Walton Creek in 1989 (Clearwater National Forest, 1992). As is explained below, we know that the 1994 EPA listing of Walton Creek was a mistake

Since 1989, there has been a significant amount of cobble embeddedness (and other sediment) data taken that give us a more informed understanding of the degree of sedimentation in Walton Creek (much of which was available to EPA in 1994). Table 1 summarizes monitoring results for cobble embeddedness (CE) in Walton Creek between 1989 and 1995 (Clearwater National Forest, 1992; Clearwater Biostudies, 1992; Clearwater Biostudies, 1993; Clearwater Biostudies, 1996). Though the 1993 data is most reliable because of the large number of transects sampled (113), it is evident that embeddedness levels have declined since 1989. Since 1993, CE values found in Walton Creek

Mr. Michael McIntyre

April 24, 1996

Page 4.

cutthroat, rainbow, and bull trout. We also believe that the salmonid spawning beneficial use is fully supported as evidenced by the presence of multiple age classes and fish species present.

Plum Creek is not alone in our opinion that Walton Creek is fully supporting all of its beneficial uses. In interpreting the BURP data, DEQ has previously stated that cold water biota is a beneficial use in Walton Creek and it is fully supported (McIntyre, 1996).

Dale McGreer, a hydrologist with Western Watershed Analysts, independently reviewed the biologic, physical, and chemical data available for Walton Creek and concluded that between 1989 and 1995, "Walton Creek cobble embeddedness has decreased," and that "these (current) levels meet the Forest Plan standard of not more than 30% cobble embeddedness in A type channels, and not more than 35% in B type channels. He also concluded that "physical habitat characteristics and macroinvertebrate population characteristics demonstrate that Walton Creek meets the Idaho water quality standard of full support of beneficial uses, including salmonid spawning."

And lastly, the Local Working Committee charged with evaluating the condition of several waters in the Upper Lochsa and developing site specific BMP's for them, stated that the goal for Walton Creek is to "maintain existing beneficial uses so that such benefits are fully protected." and that the "stream is near 100% biological protection [sic: should be potential]" (Fullman and Hawkins, 1991)."

We have attempted to provide DEQ with all the data available to evaluate the condition of Walton Creek (including numerous attachments). In light of all this information, placing Walton Creek on the 1996 Idaho §303(d) list is clearly improper.

Sincerely,



Brian D. Sugden
Forest Hydrologist

Attachments: A. List of References
B. Clearwater Biostudies, Inc. 1992.
(Attachments continued on next page)

Mr. Michael McIntyre

April 24, 1996

Page 5.

- C. Clearwater Biostudies, Inc. 1994.
- D. Clearwater Biostudies, Inc. 1995.
- E. Clearwater Biostudies, Inc. 1996.
- F. Clearwater National Forest. 1992.
- G. Plum Creek Timber, 1991.
- H. Plum Creek Timber, 1993.
- I. Fullman and Hawkins, 1991.
- J. Idaho DEQ, 1995a.
- K. Letter from D.J. McGreer, 1996
- L. Deposition of M. McIntyre, 1996
- M. Letter from B.D. Sugden to EPA, 1994



WESTERN WATERSHED ANALYSTS

313 D Street, Suite 203
Lewiston, Idaho 83501
(208) 743-1826 • FAX (208) 746-7468

April 23, 1996

Brian Sugden
P.O. Box 160
Columbia Falls, MT. 59912

RE: Walton Creek

You asked that I provide you with an opinion regarding Walton Creek in relation to the Clearwater National Forest Plan standards and the Idaho Department of Health and Welfare, Division of Environment (IDHW-DEQ) water quality standards, particularly in relation to beneficial use status. My qualifications for expressing these opinions are listed below in Section I. Documents that I have reviewed and upon which I form my opinion are listed in Section II. My opinions are provided in Section III.

I. Qualifications

1. I hold an M. S. in Forest Hydrology, with a minor in soils, from Oregon State University, Corvallis, Oregon, and a B. S. in Forest Management from Humboldt State College, Arcata California. My specialty is the analysis of forest management effects upon watersheds, and physical watershed processes, including processes within streams. Immediately upon completing my course work in hydrology at Oregon State in 1974, I spent over four years with the Weyerhaeuser Corporation as a Research Hydrologist, and as Hydrology Program Manager, where I supervised a staff of geologists and hydrologists. Our primary responsibility was to assess land management effects upon watersheds and streams, and to offer expert advice to the land managers responsible for Oregon and Washington timberlands. Upon leaving Weyerhaeuser in 1978, I joined the Potlatch Corporation in Lewiston Idaho as their Forest Water and Soils Scientist, where my responsibilities were similar to those at Weyerhaeuser. In February 1994, I left Potlatch to form my consulting firm, Western Watershed Analysts, where I am the President and Principal Hydrologist. Since forming Western Watershed Analysts, we have conducted assessments, including assessment of cumulative watershed effects in Alaska, Washington, Oregon, Idaho, Montana, Utah, Wyoming and Colorado.
2. With further regards to my experience and qualifications for determination of watershed effects, and in particular within Idaho and the Clearwater National Forest area, are a number of

Clearwater National Forest. 1995. WATBAL modeling run for Walton Creek dated 1/3/95.

EcoAnalysts. 1995. Report to Dale McGreer dated 2/14/96 regarding the interpretation of 1995 IDEQ Walton Creek Beneficial Use and Reconnaissance Project field data.

Idaho Division of Environmental Quality. 1995a. Beneficial Use Reconnaissance Project data for Walton Creek. Idaho Department of Health and Welfare.

Idaho Division of Environmental Quality. 1995b. Beneficial Use Reconnaissance Project Field Forms, and EPA Region 10 Habitat Assessment Field Data Sheet.

Idaho Division of Environmental Quality. 1996. Draft Water Body Assessment Guidance, dated January 24, 1996. Idaho Department of Health and Welfare, 97 pp.

III. Opinion: Walton Creek should not be included within the 303(d) list.

1. Walton Creek currently meets the Forest Plan standards for cobble embeddedness.

Walton Creek was initially included on the 303(d) list based on Clearwater National Forest (CNF) 1989 cobble embeddedness data. This 1989 data was reported within a 1992 CNF preliminary summary report (CNF, 1992). The 1989 data indicated that cobble embeddedness was 39 percent, and therefore did not meet the Forest Plan standard for fisheries habitat condition. However, subsequent routine monitoring surveys conducted by the CNF and its contractors in 1993 and 1995 clearly reveals that Walton Creek cobble embeddedness has decreased. In A type channels, cobble embeddedness was 24.2 and 27.2 percent in 1993 and 1995, respectively. In B type channels, cobble embeddedness was 30.3 and 29.2 percent in 1993 and 1995, respectively. These levels meet the Forest Plan standard of not more than 30% cobble embeddedness in A type channels, and not more than 35% in B type channels.

2. The beneficial uses of the waters of Walton Creek are fully supported.

A. Physical habitat characteristics and macroinvertebrate population characteristics demonstrate that Walton Creek meets the Idaho water quality standard of full support of beneficial uses, including salmonid spawning. Furthermore, the physical habitat characteristics of Walton Creek are superior to those found in the majority of totally roadless and wilderness watersheds of the Clearwater National Forest. See: EPA Region 10 Habitat Assessment Field Data Sheet; Idaho Division of Environmental Quality 1995 Beneficial Use Reconnaissance Project Field Forms; EcoAnalysts, Inc., report to Dale McGreer dated 2/14/96; Clearwater Biostudies, 1995.

B. Sediment is not accumulating in Walton Creek. Sediment yield within the watershed of Walton Creek has decreased, continues to decrease, and will continue to decrease according to

ATTACHMENT C

RESPONSE MATRIX FOR 1996 303(d) LIST

Response Matrix for 1996 303(d) List Comments

Comment Number	Waterbody Name	Boundaries	Pollutants	Comment	Response	Action
A1	Eddie Creek	Headwaters to Medicine Lodge Creek	sediment, habitat	Remove segment due to supporting data	Process to de-list segments not yet implemented; data does not adequately address all listed pollutants	Keep listed
A1	Ivings Creek	Headwaters to Medicine Lodge Creek	nutrients, sediment, habitat later.	Remove segment due to supporting data	Process to de-list segments not yet implemented; data does not adequately address all listed pollutants	Keep listed
A1	Fritz Creek	Headwaters to Medicine Lodge Creek	nutrients, thermal	Remove segment due to supporting data	Process to de-list segments not yet implemented; data does not adequately address all listed pollutants	Keep listed
A1	Warm Creek	Headwaters to Medicine Lodge Creek	nutrients, thermal	Remove segment due to supporting data	Process to de-list segments not yet implemented	Keep listed
A1	Warm Springs Creek	Headwaters to Birch Creek	nutrients, sediment	Remove segment due to supporting data	Process to de-list segments not yet implemented; data does not adequately address all listed pollutants	Keep listed
A2	Walton Creek	Headwaters to Lochsa River	sediment	Remove segment due to supporting data	Process to de-list segments not yet implemented; data does not adequately address all listed pollutants	Keep listed
A2	Boulder Creek	Headwaters to Lochsa	sediment	Remove segment due to supporting data	Process to de-list segments not yet implemented; data does not adequately address all listed pollutants	Keep listed
A2	Crooked Fork	Headwaters to Lochsa River	sediment	Remove segment due to supporting data	Process to de-list segments not yet implemented; data does not adequately address all listed pollutants	Keep listed
A2	Post Office Creek	Headwaters to Lochsa River	sediment	Remove segment due to supporting data	Process to de-list segments not yet implemented; data does not adequately address all listed pollutants	Keep listed
A2	Shoot Creek	Headwaters to Spruce Cr	sediment	Remove segment due to supporting data	Process to de-list segments not yet implemented; data does not adequately address all listed pollutants	Keep listed

Response Matrix for 1996 303(d) List Comments

Comment Number	Waterbody Name	Boundaries	Pollutants	Comment	Response	Action
A2	Hem Creek	Headwaters to Syvan Cr	sediment	Remove segment due to supporting data	Process to de-list segments not yet implemented; data does not adequately address all listed pollutants	Keep listed
A2	Syvan Creek	Headwaters to French Cr	sediment	Remove segment due to supporting data	Process to de-list segments not yet implemented; data does not adequately address all listed pollutants	Keep listed
A2	Middle Creek	Headwaters to Wellas Cr	sediment	Remove segment due to supporting data	Process to de-list segments not yet implemented; data does not adequately address all listed pollutants	Keep listed
A2	Orogrande Creek	Headwaters to NF Clearwater River	sediment	Remove segment due to supporting data	Process to de-list segments not yet implemented; data does not adequately address all listed pollutants	Keep listed
A2, B1, E1	Walton Creek	Headwaters to Lochsa River	sediment	Remove segment due to supporting data	Process to de-list segments not yet implemented; refine boundaries	Keep listed
C1	Lake Lowell	Entire Lake	nutrients, bacteria	Add segment due to supporting data	Do not add; process to list segments not yet implemented	Do NOT Add
D1	Bruneau River, East Fork	Headwaters to Bruneau River	sediment	Add segment. Inadvertently omitted by EPA in 1994. See comment on page 14 of the Appendix B, "Responsiveness Document" 1994 303(d) list. PNRs# 558	Made requested change	Add
D1	Beaver Creek		sediment	Add segment. Inadvertently omitted by EPA in 1994. See comment on page 13 of the Appendix B, "Responsiveness Document" 1994 303(d) list. PNRs# 892	Made requested change	Add
D1	Deadwood River	Headwaters to Deadwood reservoir	sediment	Add segment. Inadvertently omitted by EPA in 1994. See comment on page 18 of the Appendix B, "Responsiveness Document" 1994 303(d) list. PNRs# 715	Made requested change	Add

Response Matrix for 1996 303(d) List Comments

Comment Number	Waterbody Name	Boundaries	Pollutants	Comment	Response	Action
D1	Lime Creek	Headwaters to Anderson ranch reservoir	sediment	Add segment. Inadvertently omitted by EPA in 1994. See comment on page 19 of the Appendix B, "Responsiveness Document" 1994 303(d) list. PNRS #588. HUC# 17050113	Made requested change	Add
D1	Pine Creek	Payette National Forest	sediment	Change Boundary to Payette National Forest rather than Boise National Forest	Made requested change	Keep listed
D1	Brushy Fork Creek	Headwaters to Crooked River	sediment	Add segment. Inadvertently omitted by EPA in 1994. See comment on page 37 of the Appendix B, "Responsiveness Document" 1994 303(d) list. PNRS# 1256	Made requested change	Add
E1	Adair Creek	Headwaters to Little NF Clearwater	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Allison Creek	Nez Perce National Forest	sediment	Change to correct basin	Made requested change	Keep listed
E1	American River	Headwaters to SF Clearwater	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Badger Creek	Headwaters to Lochsa	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Baldy Creek	Headwaters to Newsome Cr	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Bastion Creek	Headwaters to Red River	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Bear Creek	Headwaters to Newsome Cr	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Beaver Creek	Headwaters to Newsome Cr	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Beaver Creek	Headwaters to NF Clearwater	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Bertha Creek	Headwaters to Beaver Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Big Creek	Headwaters to Little Salmon	nutrients, sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Big Creek	Nez Perce Forest	sediment	Change to correct basin	Made requested change	Keep listed
E1	Big Elk Creek	Headwaters to Elk Cr	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed

Response Matrix for 1996 303(d) List Comments

Comment Number	Waterbody Name	Boundaries	Pollutants	Comment	Response	Action
E1	Big Mallard Creek	Nez Perce Forest	sediment	Change to correct basin	Made requested change	Keep listed
E1	Bingo Creek	Headwaters to Beaver Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Blakes Fork	Headwaters to Meadow Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Bonami Creek	Headwaters to Little Sand Cr; Crooked FK	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Boulder Creek	Headwaters to Lochsa	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Boyd Creek	Headwaters to Selway	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Breakfast Creek	Headwaters to Dworshack	sediment, DO, flow, habitat alterations	Refine Boundaries	Made requested change	Keep listed
E1	Bridge Creek	Headwaters to Red River	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Brown Spring Creek	Headwaters to Clear Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Buckhorn Creek	Headwaters to SF Clearwater	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Bullalo Gulch	Headwaters to American River	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Butcher Creek	Headwaters to SF Clearwater	sediment, DO, the	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Camp Creek	Headwaters to Yoosa Creek	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Canyon Creek	Headwaters to Lochsa	sediment	Refine Boundaries; delete duplicate	Made requested change	Keep listed
E1	Catholic River	Headwaters to Clearwater River	nutrients, sediment, DO, thermal mod, flow, habitat all, pathogens, pesticides, synthetic organics, ammonia	Delete duplicate	Made requested change	Keep listed
E1	Cedar Creek	Headwaters to Pollach River	nutrients, sediment	Refine Boundaries; delete duplicate	Made requested change	Keep listed
E1	Chamook Creek	Headwaters to Yoosa Cr	sediment	Refine Boundaries	Made requested change	Keep listed

Response Matrix for 1996 303(d) List Comments

Comment Number	Waterbody Name	Boundaries	Pollutants	Comment	Response	Action
E1	China Creek	Nez Perce Forest	sediment	Refine Boundaries	Made requested change	Keep listed
E1	China Creek	Headwaters to Salmon River	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Clear Creek	Headwaters to MF Clearwater	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Cold Springs Creek	Headwaters to NF Clearwater	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Cool Creek	Headwaters to Cold Springs Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Corral Creek	Headwaters to Pollatch River	sediment	Refine Boundaries; correct HUC#; delete incorrect PNRs#	Made requested change	Keep listed
E1	Cottonwood Creek	Headwaters to SF Clearwater River	nutrients, sediment, DO, thermal mod., flow, habitat alt., pathogens, ammonia	Correct priority (switched with Cottonwood Creek below); Refine Boundaries	Made requested change	Keep listed
E1	Cottonwood Creek	Headwaters to Clearwater River	nutrients, sediment, DO, flow, habitat alterations, pathogens, ammonia, thermal mod.	Correct priority (switched with Cottonwood Creek above)	Made requested change	Keep listed
E1	Cottonwood Creek, SF	Headwaters to Cottonwood Creek	nutrients, thermal mod., habitat alt., pathogens	Refine Boundaries	Made requested change	Keep listed
E1	Cougar Creek	Headwaters to SF Clearwater	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Cougar Creek	Headwaters to Quartz Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Low Creek	Nez Perce Forest	sediment	Change to correct basin	Made requested change	Keep listed
E1	Crooked River, Lower	Nez Perce National Forest	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Dawson Creek	Headwaters to Red River	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Deadman Creek	Headwaters to Lochusa	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Deadman Creek W. Fork	Headwaters to Deadman	sediment	Refine Boundaries	Made requested change	Keep listed

Response Matrix for 1996 303(d) List Comments

Comment Number	Waterbody Name	Boundaries	Pollutants	Comment	Response	Action
E1	Deadwood Creek	Headwaters to Red River	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Deception Gulch	Headwaters to NF Clearwater	sediment	Refine Boundaries; correct name	Made requested change	Keep listed
E1	Deep Creek	Headwaters to Snake River	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Ditch Creek	Headwaters to Red River	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Doe Creek	Headwaters to Squaw Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Dog Creek	Headwaters to Isabella Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Dollar Creek	Headwaters to EI Dorado Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Dry Fork	Headwaters to Strychnine Cr	sediment	Refine Boundaries; correct HUC#	Made requested change	Keep listed
E1	Elk City Creek	Headwaters to Selway	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	E. F. Pollatch River	Headwaters to Pollatch River	nitrates, sediment, thermal mod., flow, habitat alt., pathogens	Correct names	Made requested change	Keep listed
E1	E. F. Meadow Creek	Headwaters to Meadow Cr	exceeds geomorphic threshold or bank stability rating of two	Refine Boundaries	Made requested change	Keep listed
E1	Fall Creek	Headwaters to SF Clearwater	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Falls Creek	Headwaters to Selway	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Feather Creek	Headwaters to WF Pollatch River	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Flint Creek	Headwaters to EF American River	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Glade Creek	Headwaters to Lochsa River	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Glover Creek	Headwaters to Selway	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Goddard Creek	Headwaters to Selway	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed

Response Matrix for 1996 303(d) List Comments

Comment Number	Waterbody Name	Boundaries	Pollutants	Comment	Response	Action
E1	Gold Creek	Headwaters to Musselshell Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Green Creek	Headwaters to SF Clearwater	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Grizzly Creek	Headwaters to Quartz Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Hamby Creek	Headwaters to Ohara Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Haysfork Creek	Headwaters to Newsome Cr	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Hem Creek	Headwaters to Sylvan Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Isabella Creek	Headwaters to NF Clearwater	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Island Creek	Headwaters to Selway	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Jerome Creek	Headwaters to Palouse River	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Jersey Creek	Nez Perce Forest	sediment	Change to correct basin	Made requested change	Keep listed
E1	Kessler Creek	Nez Perce Forest	sediment	Change to correct basin	Made requested change	Keep listed
E1	Kirks Fork	Headwaters to American River	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Laundry Creek	Headwaters to Osler	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Leggett Creek	Headwaters to SF Clearwater	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Lick Creek	Headwaters to American River	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Lightning Creek	Headwater to SF Clearwater River	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Little Canyon Creek	Headwaters to Big Canyon Creek	pesticides, synthetic organics, ammonia, nutrients, sediment, DO, flow, habitat alterations, pathogens	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Little Mallard Creek	Nez Perce Forest	sediment	Change to correct basin	Made requested change	Keep listed
E1	Little Pollatch Creek	Headwaters to IR Boundary	nutrients, sediment	Correct name	Made requested change	Keep listed

Response Matrix for 1996 303(d) List Comments

Comment Number	Waterbody Name	Boundaries	Pollutants	Comment	Response	Action
E1	Little Tinker Creek	Headwaters to MF Clearwater River	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Lodge Creek	Headwaters to MF Clearwater River	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Maggie Creek	Headwaters to MF Clearwater	sediment	Refine Boundaries; correct HUC#	Made requested change	Keep listed
E1	Manning Creek	Headwaters to EF Meadow Cr	exceeds geomorp	Refine Boundaries	Made requested change	Keep listed
E1	Marten Creek	Headwaters to Gravelly Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Meadow Creek, North	Headwaters to SF Clearwater	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Middle Creek	Headwaters to Wellas Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Middle Pollatch Creek	Headwaters to Pollatch River	nutrients, sediment, flow, habitat alterations, pathogens, thermal mod.	Correct name	Made requested change	Keep listed
E1	Moose Butte Creek	Headwaters to Red River	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Moose Creek	Headwaters to SF Clearwater	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Mud Creek	Headwaters to Mud Creek	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Mystery Creek	Headwaters to Canyon Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Newsome Creek	Headwaters to SF Clearwater	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Nineteenmile Creek	Headwaters to Selway	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Nugget Creek	Headwaters to Newsome Cr	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Nut Creek	Headwaters to Pete King Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	O'Hara Creek	Headwaters to Selway River	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Orogrande Creek	Headwaters to NF Clearwater River	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Papoose Creek	Headwaters to Lochisa River	sediment	Refine Boundaries	Made requested change	Keep listed

Response Matrix for 1996 303(d) List Comments

Comment Number	Waterbody Name	Boundaries	Pollutants	Comment	Response	Action
E1	Parachule Creek	Headwaters to Pappoose Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Partridge Creek	Headwaters to Elk Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Peasley Creek	Headwaters to SF Clearwater	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Pete King Creek	Headwaters to Lochsa River	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Pete King Creek, W. F.	Headwaters to Peter King Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Pilot Creek	Headwaters to Newsome Cr	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Pine Creek		exceeds geomorphic threshold or bank stability rating of two	Change to correct basin; delete duplicate	Made requested change	Keep listed
E1	Pine Knob Creek	Headwaters to Clear Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Placer Creek	Headwaters to Pete King Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Porcupine Creek	Headwaters to Polatch River	sediment	Refine Boundaries; correct HUC#	Made requested change	Keep listed
E1	Post Office Creek	Headwaters to Lochsa River	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Rackliff Creek	Headwaters to Selway	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Red Horse Creek	Headwaters to Red River	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Red River, Lower, Upp	Nez Perce National Forest	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Red River, M. F.	Nez Perce National Forest	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Red River, S. F.	Nez Perce National Forest	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Red River, W. F.	Nez Perce National Forest	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Relief Creek	Headwaters to Cooked River	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed

Response Matrix for 1996 303(d) List Comments

Comment Number	Waterbody Name	Boundaries	Pollutants	Comment	Response	Action
E1	Rutledge Creek	Headwaters to Little North Fork Clearwater		Change to correct basin	Made requested change	Keep listed
E1	Sanlam Creek	Headwaters to Clearwater		Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Schnoorer Creek	Headwaters to Red River		Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Sears Creek	Headwaters to Clearwater		Refine Boundaries	Made requested change	Keep listed
E1	Shool Creek	Headwaters to Spruce Cr		Refine Boundaries	Made requested change	Keep listed
E1	Shotgun Creek	Headwaters to Crooked Fk Lochsa		Refine Boundaries	Made requested change	Keep listed
E1	Siegel Creek	Headwaters to Red River		Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Sing Lee Creek	Headwaters to Newsome Cr		Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Sixmile Creek	Headwaters to Ten Mile Cr		Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Slide Creek	Headwaters to Selway		Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Sneak Creek	Headwaters to NF Clearwater	exceeds geomorp	Refine Boundaries	Made requested change	Keep listed
E1	Soda Creek	Headwaters to Red River		Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Solo Creek	Headwaters to MF Clear		Refine Boundaries	Made requested change	Keep listed
E1	Sourdough Creek	Headwaters to Beaver Cr		Refine Boundaries	Made requested change	Keep listed
E1	Spruce Creek	Headwaters to Brushy Fork		Refine Boundaries	Made requested change	Keep listed
E1	Squaw Creek	Headwaters to Lochsa River		Refine Boundaries; add THUC#	Made requested change	Keep listed
E1	Sugar Creek	Headwaters to Swamp River		Refine Boundaries	Made requested change	Keep listed
E1	Swamp Creek	Headwaters to Oster Cr		Refine Boundaries	Made requested change	Keep listed
E1	Sylvan Creek	Headwaters to French Cr		Refine Boundaries	Made requested change	Keep listed

Response Matrix for 1996 303(d) List Comments

Comment Number	Waterbody Name	Boundaries	Pollutants	Comment	Response	Action
E1	S. Fk. Beaver Creek	Headwaters to Beaver Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	S. Fk. Canyon Creek	Headwaters to Canyon Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Tamarack Creek	Headwaters to Orogrande Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Tammany Creek	Headwaters to Snake River	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Threemile Creek	Headwaters to SF Clearwater	nutrients, sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Trail Creek	Headwaters to Red River	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Trail Creek	Soulin Fork Salmon River Drainage	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Trapper Creek	Headwaters to Red River	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	Tumble Creek	Headwaters to Washington Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	TwentyThreemile Cree	Headwaters to Selway	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	W. Fk. Pollatch River	Headwaters to Pollatch River	sediment	Correct names	Made requested change	Keep listed
E1	Waide Creek	Headwaters to Pete King Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Wart Creek	Headwaters to Ohara Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Wepain Creek	Headwaters to EF Meadow Cr	sediment	Refine Boundaries; correct HUC#	Made requested change	Keep listed
E1	Whiskey Creek	Headwaters to SF Clearwater	sediment	Refine Boundaries; change to correct basin	Made requested change	Keep listed
E1	W. Fk. Elk Creek	Headwaters to Elk Cr	sediment	Refine Boundaries	Made requested change	Keep listed
E1	Yakus Creek	Headwaters to Lolo Creek	sediment	Refine Boundaries	Made requested change	Keep listed

ATTACHMENT C1

**DENNIS p. UDLINEK/IDAHO
DEPARTMENT FISH & GAME/SOUTHWEST
IDAHO REGIONAL OFFICE DEQ**

Wallace N. Cory, P.E.
Administrator
IDHW-Division of Environmental Quality
1410 North Hilton Street
Boise, ID. 83706-1255

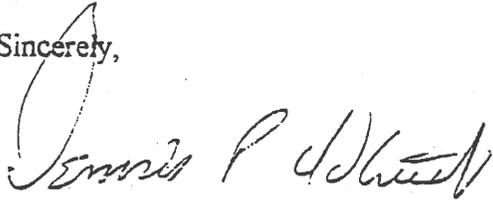
RECEIVED
JUN 10 1996
DIV OF ENVIRONMENTAL
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Dear Mr. Cory,

In response to your letter of April 12, 1996, the Idaho B.A.S.S. Federation would like to formally submit Lake Lowell as a nominee to be added to the **1996 Water Quality Limited Stream Segment 303 (d) List**. We strongly believe our previous submittal of water quality data to your office substantiates such a recommendation based on documented violations of the fecal coliform standard (primary contact recreation) and the dissolved oxygen standard (warm-water biota). As you mentioned, there were also elevated concentrations of phosphorus in Lake Lowell which exceeded the recommended criteria for lakes and impoundment's.

We understand that once Lake Lowell is on the 303 (d) list, the Southwest Basin Advisory Group must establish a priority for the lake in conjunction with other water quality limited sites in the basin. We believe such a listing is warranted and the Idaho B.A.S.S. Federation appreciates your consideration of our request. We look forward to a prompt response from the Division of Environmental Quality. If you have any questions, please contact me at 208-939-0321.

Sincerely,



Dennis P. Udlinek
Conservation/Natural Resource Director
Idaho B.A.S.S. Federation
8425 Spring Creek Way
Boise, ID. 83703

cc: Joy Palmer, IDHW-DEQ-SWIRO
Tracy Trent, IDFG-Region 3 Nampa
EPA- Boise Office

All other affected parties as a courtesy (Boise Project Board of Control, Bureau of Reclamation, City of Nampa, Lake Lowell Homeowners Association, Eagle High School)



IDAHO FISH & GAME
SOUTHWEST REGION
3101 South Powerline Road
Nampa, Idaho 83686

Philip E. Batt / Governor
Jerry M. Conley / Director

RECEIVED

MAY 10 1996

DIV. OF ENVIRONMENTAL QUALITY
COMMUNITY PROGRAMS

RECEIVED

May 20, 1996

MAY 24 1996

DIVISION OF
ENVIRONMENTAL QUALITY
SWIRC

Don Lee
Division of Environmental Quality
1445 N. Orchard
Boise, ID 83706

Dear Don:

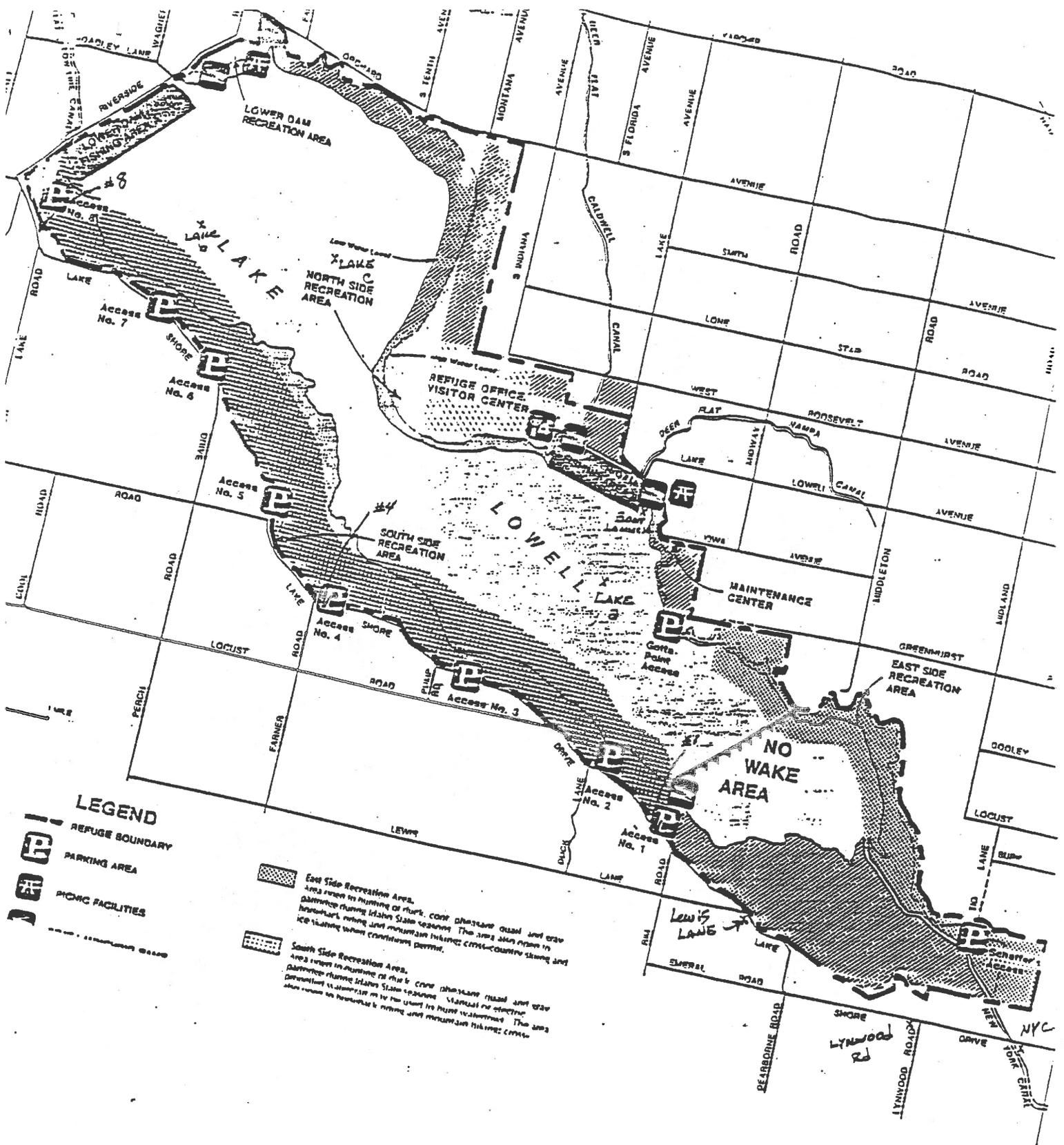
Enclosed are the Bureau of Reclamation's lab results for water samples from Lake Lowell from May 1995 through April 1996. Sampled sites are identified on the map I have included. If you have any questions, let me know.

I appreciate your efforts to get out with us for water sample collection. I will provide you with results from our May 22, 1996 samples when they are available.

Regards,

Steve Yundt
Regional Fish Manager

CC: Bill Stroud, U. S. Bureau of Reclamation
Bob Beckwith, Eagle High School
Dennis Udlinek, Idaho Bass Federation
Kevin Ryan, U. S. F. W. S. Deer Flat National Wildlife Refuge
Jerry Gregg, U. S. Bureau of Reclamation



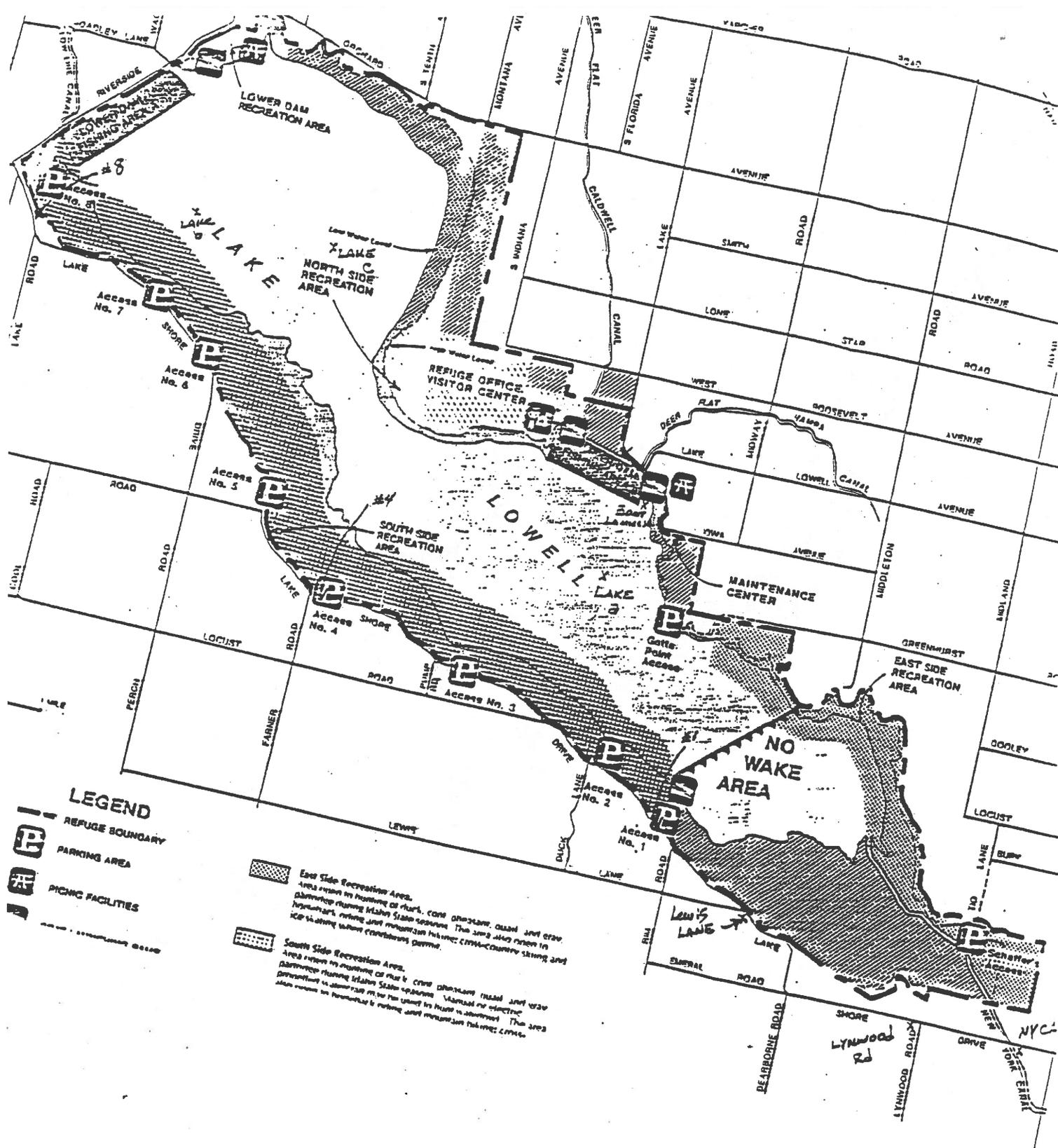
LEGEND

-  REFUGE BOUNDARY
-  PARKING AREA
-  PICNIC FACILITIES

 East Side Recreation Area. Area open to hunting or sport, with pleasure boat and trap permits during Idaho State seasons. The area also open to trout fishing and mountain and lake cross-country skiing and ice skating when conditions permit.

 South Side Recreation Area. Area open to hunting or sport, with pleasure boat and trap permits during Idaho State seasons. The area also open to trout fishing and mountain and lake cross-country skiing and ice skating when conditions permit.

NYC



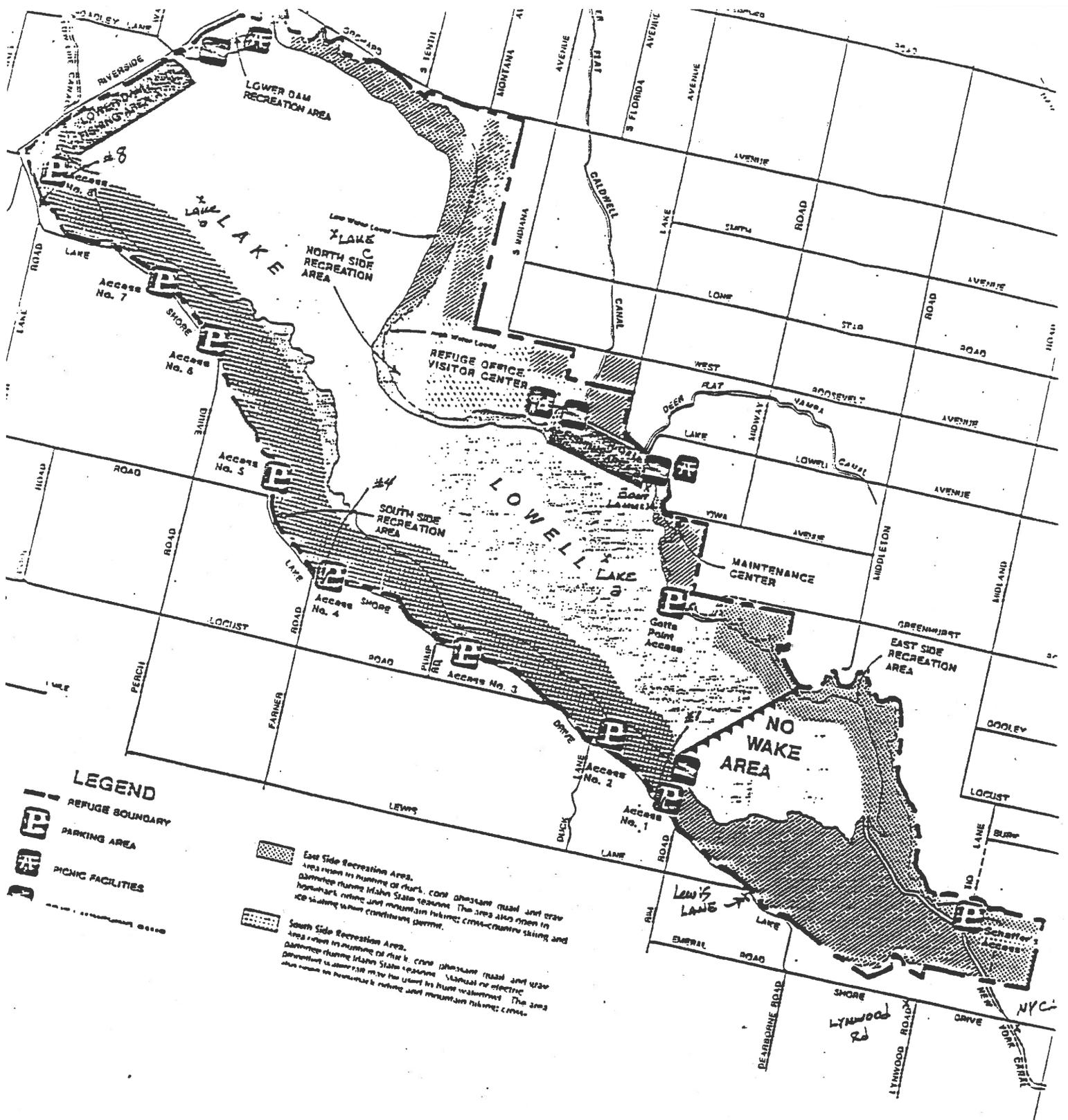
LEGEND

- REFUGE BOUNDARY
- PARKING AREA
- PICNIC FACILITIES
- UNIMPROVED ROAD

East Side Recreation Area.
 Area reserved for fishing of trout, catfish, bass and other panfish during Idaho State seasons. This area also serves as a habitat for nesting and migration of waterfowl. This area also serves as a habitat for nesting and migration of waterfowl.

South Side Recreation Area.
 Area reserved for fishing of trout & catfish during trout and bass panfish during Idaho State seasons. Minimal or no electric power is available for the use of fish in summer. This area also serves as a habitat for nesting and migration of waterfowl.

NYC



LEGEND

- REFUGE BOUNDARY
- PARKING AREA
- PICNIC FACILITIES

East Side Recreation Area.
 Area open to hunting of ducks, cottontail rabbit and trap game during Idaho State seasons. The area also open to housewreck, netting and muskrat trapping; cross-country skiing and ice skating when conditions permit.

South Side Recreation Area.
 Area open to hunting of ducks, cottontail rabbit and trap game during Idaho State seasons. Skating or ice skating permitted to other than the land is here restricted. The area also open to housewreck, netting and muskrat trapping; cross-

NYC

6/23/95

BUREAU OF RECLAMATION PN REGIONAL LAB
WATER QUALITY ANALYSIS

Project: Fish & Game / Centennial High

LAKE A off upper DAM

SITE:	#4	Lake A	Access 1	Lynwood A*	Boatland
SAMPLE DATE:	06/23/95	06/23/95	06/23/95	06/23/95	06/23/95
Fecal Coliform (ct/100mL)	20	10	15	2700	20

SITE:	Lynwood B*	Lynwood C*	NY Canal	#8	Lewis Lane
SAMPLE DATE:	06/23/95	06/23/95	06/23/95	06/23/95	06/23/95
Fecal Coliform (ct/100mL)	3000	2400	48	180	1200

* Note: Samples don't correspond to logged samples (samples in cubitainers).
Used A, B, C to differentiate the Lynwood sites.

where are the other 2 open water LAKE samples

3 samples @ Lynwood on this DATE

Project: Fish & Game/Centennial High

Report Date: 07/05/95

Steve Yundt
Idaho Department of Fish and Game
3101 S Powerline Road
Nampa, ID 83686
Phone: (208) 465-8465

Sampled By: Bob Beckwith

Lab ID: 95-A399

Site: Lake Lowell # 1 off Upper Dam ~~Boat Launch~~ LAKEA
Date Sampled: 06/23/95 Time Sampled:

Test	Results	Units	Method
Nitrate as N	< 0.01	mg/L	353.2
Total Phosphorus as P	0.036	mg/L	365.3
Ammonia, Total as N	0.18	mg/L	350.3
BOD - 5Day	2.5	mg/L	405.1
Suspended Solids	3	mg/L	160.2
Turbidity	3	FTU	180.1

Site: Lake Lowell # 2 off Lower Dam Lab ID: 95-A400
Date Sampled: 06/23/95 Time Sampled: LAKE 3

Test	Results	Units	Method
Nitrate as N	< 0.01	mg/L	353.2
Total Phosphorus as P	0.026	mg/L	365.3
Ammonia, Total as N	0.07	mg/L	350.3
BOD - 5Day	1.2	mg/L	405.1
Suspended Solids	1	mg/L	160.2
Turbidity	4	FTU	180.1

Site: Lake Lowell #3 *LAKE*
Date Sampled: 06/23/95 Time Sampled:

Lab ID: 95-A401

Test	Results	Units	Method
Nitrate as N	< 0.01	mg/L	353.2
Total Phosphorus as P	0.025	mg/L	365.3
Ammonia, Total as N	0.06	mg/L	350.3
BOD - 5Day	1.2	mg/L	405.1
Suspended Solids	< 1	mg/L	160.2
Turbidity	4	FTU	180.1

Site: Lake Lowell at Upper Dam *BOATLAUNCH* Lab ID: 95-A402
 Date Sampled: 06/23/95 Time Sampled:

Test	Results	Units	Method
Nitrate as N	0.07	mg/L	353.2
Total Phosphorus as P	0.035	mg/L	365.3
Ammonia, Total as N	0.17	mg/L	350.3
BOD - 5Day	2.4	mg/L	405.1
Suspended Solids	4	mg/L	160.2
Turbidity	5	FTU	180.1

Lab ID: 95-A403

Site: New York Canal

Date Sampled: 06/23/95

Time Sampled:

Test	Results	Units	Method
Nitrate as N	0.15	mg/L	353.2
Total Phosphorus as P	0.037	mg/L	365.3
Ammonia, Total as N	0.02	mg/L	350.3
BOD - 5Day	1.0	mg/L	405.1
Suspended Solids	5	mg/L	160.2
Turbidity	4	FTU	180.1

Site: #2 ^{Access}

Lab ID: 95-A404

Date Sampled: 06/23/95

Time Sampled:

Test	Results	Units	Method
Nitrate as N	< 0.01	mg/L	353.2
Total Phosphorus as P	0.228	mg/L	365.3
Ammonia, Total as N	0.42	mg/L	350.3
BOD - 5Day	35.0	mg/L	405.1
Suspended Solids	406	mg/L	160.2
Turbidity	9	FTU	180.1

Lab ID: 95-A405

Site: #4

Date Sampled: 06/23/95

Time Sampled:

Test	Results	Units	Method
Nitrate as N	0.01	mg/L	353.2
Total Phosphorus as P	0.270	mg/L	365.3
Ammonia, Total as N	0.29	mg/L	350.3
BOD - 5Day	5.0	mg/L	405.1
Suspended Solids	144	mg/L	160.2
Turbidity	16	FTU	180.1

Site: Access #8

Lab ID: 95-A406

Date Sampled: 06/23/95

Time Sampled: 0908

Test	Results	Units	Method
Nitrate as N	0.15	mg/L	353.2
Total Phosphorus as P	0.089	mg/L	365.3
Ammonia, Total as N	0.08	mg/L	350.3
BOD - 5Day	2.8	mg/L	405.1
Suspended Solids	57	mg/L	160.2
Turbidity	13	FTU	180.1

Lab ID: 95-A407

Site: Lynwood

Date Sampled: 06/23/95

Time Sampled:

Test	Results	Units	Method
Nitrate as N	0.15	mg/L	353.2
Total Phosphorus as P	0.611	mg/L	365.3
Ammonia, Total as N	0.14	mg/L	350.3
BOD - 5Day	3.0	mg/L	405.1
Suspended Solids	408	mg/L	160.2
Turbidity	129	FTU	180.1

Site: Lewis Lane

Lab ID: 95-A408

Date Sampled: 06/23/95

Time Sampled:

Test	Results	Units	Method
Nitrate as N	0.66	mg/L	353.2
Total Phosphorus as P	2.09	mg/L	365.3
Ammonia, Total as N	0.38	mg/L	350.3
BOD - 5Day	4.0	mg/L	405.1
Suspended Solids	2030	mg/L	160.2
Turbidity	470	FTU	180.1

Project: Fish & Game/Centennial High

Date: 10/06/95

Steve Yundt
Idaho Department of Fish and Game
3101 S Powerline Road
Nampa, ID 83686
Phone: (208) 465-8465

Sampled By: Bob Beckwith

3 LAKE B

Lab ID: 95-A1754

Site: ~~A~~, L.L. @ Lower Dam SS Dock Surf
Date Sampled: 09/27/95 Time Sampled:
Comments: Cubitainer not marked "A"

Test	Results	Units	Method
Nitrate + Nitrite as N	0.02	mg/L	353.2
Nitrate as N	0.01	mg/L	353.2
Nitrite as N	0.01	mg/L	353.2
Total Phosphorus as P	0.103	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	133	mg/L	160.1
Fecal Coliforms	10	ct/100mL	909C
BOD - 5Day	3.7	mg/L	405.1
Suspended Solids	15	mg/L	160.2
Turbidity	17	FTU	180.1

A LAKE A

Lab ID: 95-A1755

Site: ~~B~~, L.L. @ ^{UPPER} Lower Dam N.S. Surface
Date Sampled: 09/27/95 Time Sampled:
Comments: Cubitainer not marked "B"

Test	Results	Units	Method
Nitrate + Nitrite as N	0.12	mg/L	353.2
Nitrate as N	0.10	mg/L	353.2
Nitrite as N	0.02	mg/L	353.2
Total Phosphorus as P	0.083	mg/L	365.3
Ammonia, Total as N	0.02	mg/L	350.3
Total Dissolved Solids	127	mg/L	160.1
Fecal Coliforms	10	ct/100mL	909C
BOD - 5Day	2.9	mg/L	405.1
Suspended Solids	12	mg/L	160.2
Turbidity	13	FTU	180.1

Site: C, L.L. ^{Lake C Lower} ~~Upper~~ Dam off Equal Surf
 Date Sampled: 09/27/95 Time Sampled:
 Comments: Cubtnr not mrk C, fcl-plstc bag

Lab ID: 95-A1756

Test	Results	Units	Method
Nitrate + Nitrite as N	0.03	mg/L	353.2
Nitrate as N	0.02	mg/L	353.2
Nitrite as N	0.01	mg/L	353.2
Total Phosphorus as P	0.098	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	134	mg/L	160.1
Fecal Coliforms	80	ct/100mL	909C
BOD - 5Day	2.9	mg/L	405.1
Suspended Solids	12	mg/L	160.2
Turbidity	17	FTU	180.1

Site: D, Access #8
 Date Sampled: 09/27/95 Time Sampled:

Lab ID: 95-A1757

Test	Results	Units	Method
Nitrate + Nitrite as N	0.12	mg/L	353.2
Nitrate as N	0.11	mg/L	353.2
Nitrite as N	0.01	mg/L	353.2
Total Phosphorus as P	0.051	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	63	mg/L	160.1
Fecal Coliforms	190	ct/100mL	909C
BOD - 5Day	1.5	mg/L	405.1
Suspended Solids	20	mg/L	160.2
Turbidity	9	FTU	180.1

Lab ID: 95-A1758

Site: E, Access #4

Date Sampled: 09/27/95

Time Sampled:

Test	Results	Units	Method
Nitrate + Nitrite as N	0.44	mg/L	353.2
Nitrate as N	0.40	mg/L	353.2
Nitrite as N	0.04	mg/L	353.2
Total Phosphorus as P	0.334	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	215	mg/L	160.1
Fecal Coliforms	23000	ct/100mL	909C
BOD - 5Day	6.2	mg/L	405.1
Suspended Solids	16	mg/L	160.2
Turbidity	7	FTU	180.1

Lab ID: 95-A1759

Site: F, Access #1

Date Sampled: 09/27/95

Time Sampled:

Test	Results	Units	Method
Nitrate + Nitrite as N	0.22	mg/L	353.2
Nitrate as N	0.21	mg/L	353.2
Nitrite as N	0.01	mg/L	353.2
Total Phosphorus as P	0.076	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	56	mg/L	160.1
Fecal Coliforms	170	ct/100mL	909C
BOD - 5Day	1.4	mg/L	405.1
Suspended Solids	31	mg/L	160.2
Turbidity	12	FTU	180.1

Site: G, Lewis

Lab ID: 95-A1760

Date Sampled: 09/27/95

Time Sampled:

Test	Results	Units	Method
Nitrate + Nitrite as N	0.00	mg/L	353.2
Nitrate as N	< 0.01	mg/L	353.2
Nitrite as N	0.00	mg/L	353.2
Total Phosphorus as P	0.436	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	158	mg/L	160.1
Fecal Coliforms	4000	ct/100mL	909C
BOD - 5Day	13.0	mg/L	405.1
Suspended Solids	101	mg/L	160.2
Turbidity	52	FTU	180.1

Site: H, Lynnwood

Lab ID: 95-A1761

Date Sampled: 09/27/95

Time Sampled:

Test	Results	Units	Method
Nitrate + Nitrite as N	1.65	mg/L	353.2
Nitrate as N	1.63	mg/L	353.2
Nitrite as N	0.02	mg/L	353.2
Total Phosphorus as P	0.325	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	159	mg/L	160.1
Fecal Coliforms	2200	ct/100mL	909C
BOD - 5Day	3.2	mg/L	405.1
Suspended Solids	198	mg/L	160.2
Turbidity	38	FTU	180.1

Lab ID: 95-A1762

Site: I, New York Canal
 Date Sampled: 09/27/95 Time Sampled:

Test	Results	Units	Method
Nitrate + Nitrite as N	0.26	mg/L	353.2
Nitrate as N	0.25	mg/L	353.2
Nitrite as N	0.01	mg/L	353.2
Total Phosphorus as P	0.047	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	71	mg/L	160.1
Fecal Coliforms	110	ct/100mL	909C
BOD - 5Day	1.0	mg/L	405.1
Suspended Solids	12	mg/L	160.2
Turbidity	8	FTU	180.1

Lab ID: 95-A1763

Site: J, Above Dam *BOATLAUNCH*
 Date Sampled: 09/27/95 Time Sampled:

Test	Results	Units	Method
Nitrate + Nitrite as N	0.12	mg/L	353.2
Nitrate as N	0.11	mg/L	353.2
Nitrite as N	0.01	mg/L	353.2
Total Phosphorus as P	0.068	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	133	mg/L	160.1
Fecal Coliforms	20	ct/100mL	909C
BOD - 5Day	2.2	mg/L	405.1
Suspended Solids	12	mg/L	160.2
Turbidity	13	FTU	180.1

Steve Yundt
 Idaho Department of Fish and Game
 3101 S Powerline Road
 Nampa, ID 83686
 Phone: (208) 465-8465

Sampled By: Steve Yundt

Site: SITE A
 Date Sampled: 12/20/95

Time Sampled: 1030

Lab ID: 95-A2218

Test	Results	Units	Method
Nitrate + Nitrite as N	0.07	mg/L	353.2
Nitrate as N	0.07	mg/L	353.2
Nitrite as N	0.00	mg/L	353.2
Ortho Phosphorus as P	0.006	mg/L	365.3
Total Phosphorus as P	0.037	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	116	mg/L	160.1
Fecal Coliforms	4	ct/100mL	909C
Total Coliforms	Value is an estimate		
Chlorophyll-A	410	ct/100mL	909A
BOD - 5Day	42.3	mg/m3	1002 G
Suspended Solids	1.8	mg/L	405.1
Turbidity	12	mg/L	160.2
	6	FTU	180.1

Lab ID: 95-A2219

Site: SITE B

Date Sampled: 12/20/95

Time Sampled:

Test	Results	Units	Method
Nitrate + Nitrite as N	0.00	mg/L	353.2
Nitrate as N	< 0.01	mg/L	353.2
Nitrite as N	0.00	mg/L	353.2
Ortho Phosphorus as P	0.013	mg/L	365.3
Total Phosphorus as P	0.045	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	127	mg/L	160.1
Fecal Coliforms	6	ct/100mL	909C
	Value is an estimate		
Total Coliforms	280	ct/100mL	909A
Chlorophyll-A	24.8	mg/m3	1002 G
BOD - 5Day	2.5	mg/L	405.1
Suspended Solids	11	mg/L	160.2
Turbidity	7	FTU	180.1

Lab ID: 95-A2220

Site: SITE C

Date Sampled: 12/20/95

Time Sampled:

Test	Results	Units	Method
Nitrate + Nitrite as N	0.00	mg/L	353.2
Nitrate as N	< 0.01	mg/L	353.2
Nitrite as N	0.00	mg/L	353.2
Ortho Phosphorus as P	0.009	mg/L	365.3
Total Phosphorus as P	0.034	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	131	mg/L	160.1
Fecal Coliforms	2	ct/100mL	909C
	K (known to be less than)		
Total Coliforms	80	ct/100mL	909A
Chlorophyll-A	29.3	mg/m3	1002 G
BOD - 5Day	1.7	mg/L	405.1
Suspended Solids	11	mg/L	160.2
Turbidity	7	FTU	180.1

Site: SITE E #4

Lab ID: 95-A2221

Date Sampled: 12/20/95

Time Sampled:

Test	Results	Units	Method
Nitrate + Nitrite as N	2.19	mg/L	353.2
Nitrate as N	2.13	mg/L	353.2
Nitrite as N	0.06	mg/L	353.2
Ortho Phosphorus as P	0.088	mg/L	365.3
Total Phosphorus as P	0.123	mg/L	365.3
Ammonia, Total as N	0.15	mg/L	350.3
Total Dissolved Solids	456	mg/L	160.1
Fecal Coliforms	80	ct/100mL	909C
	Value is an estimate		
Total Coliforms	2450	ct/100mL	909A
Chlorophyll-A	8.7	mg/m3	1002 G
BOD - 5Day	1.2	mg/L	405.1
Suspended Solids	3	mg/L	160.2
Turbidity	3	FTU	180.1

Site: SITE I NYCANAL

Lab ID: 95-A2222

Date Sampled: 12/20/95

Time Sampled:

Test	Results	Units	Method
Nitrate + Nitrite as N	0.18	mg/L	353.2
Nitrate as N	0.18	mg/L	353.2
Nitrite as N	0.00	mg/L	353.2
Ortho Phosphorus as P	0.015	mg/L	365.3
Total Phosphorus as P	0.036	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	55	mg/L	160.1
Fecal Coliforms	90	ct/100mL	909C
	Value is an estimate		
Total Coliforms	470	ct/100mL	909A
Chlorophyll-A	4.3	mg/m3	1002 G
BOD - 5Day	0.7	mg/L	405.1
Suspended Solids	9	mg/L	160.2
Turbidity	6	FTU	180.1

Site: SITE J *Boat Launch*
 Date Sampled: 12/20/95 Time Sampled:

Lab ID: 95-A2223

Test	Results	Units	Method
Nitrate + Nitrite as N	0.05	mg/L	353.2
Nitrate as N	0.05	mg/L	353.2
Nitrite as N	0.00	mg/L	353.2
Ortho Phosphorus as P	0.007	mg/L	365.3
Total Phosphorus as P	0.036	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	127	mg/L	160.1
Fecal Coliforms	2	ct/100mL	909C
Total Coliforms	K (known to be less than)		
Chlorophyll-A	500	ct/100mL	909A
BOD - 5Day	40.9	mg/m3	1002 G
Suspended Solids	1.8	mg/L	405.1
Turbidity	12	mg/L	160.2
	6	FTU	180.1

Site: SITE J REP
 Date Sampled: 12/20/95 Time Sampled:

Lab ID: 95-A2224

Test	Results	Units	Method
Nitrate + Nitrite as N	0.05	mg/L	353.2
Nitrate as N	0.05	mg/L	353.2
Nitrite as N	0.00	mg/L	353.2
Ortho Phosphorus as P	0.011	mg/L	365.3
Total Phosphorus as P	0.038	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	125	mg/L	160.1
Fecal Coliforms	2	ct/100mL	909C
Total Coliforms	500	ct/100mL	909A
	Value is an estimate.		
Chlorophyll-A	31.9	mg/m3	1002 G
BOD - 5Day	2.0	mg/L	405.1
Suspended Solids	11	mg/L	160.2
Turbidity	6	FTU	180.1

Project: Fish & Game/Centennial High

Date: 02/12/96

Steve Yundt
Idaho Department of Fish and Game
3101 S Powerline Road
Nampa, ID 83686
Phone: (208) 465-8465

Sampled By: Steve Yundt

Lab ID: 96-A315

Site: UPPER /

Date Sampled: 01/30/96

Time Sampled: 1330

Test	Results	Units	Method
Nitrate + Nitrite as N	0.00	mg/L	353.2
Nitrate as N	< 0.01	mg/L	353.2
Nitrite as N	0.00	mg/L	353.2
Ortho Phosphorus as P	0.007	mg/L	365.3
Total Phosphorus as P	0.074	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	128	mg/L	160.1
Fecal Coliforms	2	ct/100mL	909C
	K		
Total Coliforms	20	ct/100mL	909A
Chlorophyll-A	20.9	mg/m3	1002 G
BOD - 2Day	2.4	mg/L	405.1
BOD - 5Day	5.0	mg/L	405.1
Suspended Solids	31	mg/L	160.2
Turbidity	7	FTU	180.1

Site: J Boat Launch

Lab ID: 96-A316

Date Sampled: 01/30/96

Time Sampled: 1330

Test	Results	Units	Method
Nitrate + Nitrite as N	0.00	mg/L	353.2
Nitrate as N	< 0.01	mg/L	353.2
Nitrite as N	0.00	mg/L	353.2
Ortho Phosphorus as P	0.004	mg/L	365.3
Total Phosphorus as P	0.030	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	104	mg/L	160.1
Fecal Coliforms	2	ct/100mL	909C
	Estimate - colony spread		
Total Coliforms	300	ct/100mL	909A
Chlorophyll-A	21.6	mg/m3	1002 G
BOD - 2Day	1.0	mg/L	405.1
BOD - 5Day	2.0	mg/L	405.1
Suspended Solids	11	mg/L	160.2
Turbidity	4	FTU	180.1

Lab ID: 96-A317

Site: VISITOR

Date Sampled: 01/30/96

Time Sampled: 1330

Test	Results	Units	Method
Nitrate + Nitrite as N	0.02	mg/L	353.2
Nitrate as N	0.02	mg/L	353.2
Nitrite as N	0.00	mg/L	353.2
Ortho Phosphorus as P	0.005	mg/L	365.3
Total Phosphorus as P	0.034	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	101	mg/L	160.1
Fecal Coliforms	2	ct/100mL	909C
	Estimate - colony spread		
Total Coliforms	40	ct/100mL	909A
Chlorophyll-A	21.4	mg/m3	1002 G
BOD - 2Day	0.8	mg/L	405.1
BOD - 5Day	1.8	mg/L	405.1
Suspended Solids	9	mg/L	160.2
Turbidity	4	FTU	180.1

Project: Fish & Game/Eagle High School

Report Date: 03/22/96

Steve Yundt
Idaho Department of Fish and Game
3101 S Powerline Road
Nampa, ID 83686
Phone: (208) 465-8465

Sampled By: Steve Yundt

Site: Site A
Date Sampled: 03/14/96 Time Sampled:

Lab ID: 96-A424

Test	Results	Units	Method
Nitrate as N	< 0.01	mg/L	353.2
Total Phosphorus as P	0.034	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	94	mg/L	160.1
Fecal Coliforms	10	ct/100mL	909C
Total Coliforms	20	ct/100mL	909A
Chlorophyll-A	4.8	mg/m3	1002 G
BOD - 5Day	1.2	mg/L	405.1
Suspended Solids	7	mg/L	160.2
Laboratory pH	7.5	SU	150.1
Turbidity	4	FTU	180.1

Site: Site B
Date Sampled: 03/14/96 Time Sampled:

Lab ID: 96-A425

Test	Results	Units	Method
Nitrate as N	< 0.01	mg/L	353.2
Total Phosphorus as P	0.033	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	106	mg/L	160.1
Fecal Coliforms	6	ct/100mL	909C
Total Coliforms	10	ct/100mL	909A
Chlorophyll-A	5.6	mg/m3	1002 G
BOD - 5Day	1.9	mg/L	405.1
Suspended Solids	8	mg/L	160.2
Laboratory pH	7.4	SU	150.1
Turbidity	5	FTU	180.1

Lab ID: 96-A426

Site: Site C

Date Sampled: 03/14/96 Time Sampled:

Test	Results	Units	Method
Nitrate as N	< 0.01	mg/L	353.2
Total Phosphorus as P	0.028	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	107	mg/L	160.1
Fecal Coliforms	2	ct/100mL	909C
Total Coliforms	k 10	ct/100mL	909A
Chlorophyll-A	4.1	mg/m3	1002 G
BOD - 5Day	1.3	mg/L	405.1
Suspended Solids	6	mg/L	160.2
Laboratory pH	7.6	SU	150.1
Turbidity	5	FTU	180.1

Lab ID: 96-A427

Site: Site D ~~428~~

Date Sampled: 03/14/96 Time Sampled:

Test	Results	Units	Method
Nitrate as N	< 0.1	mg/L	353.2
Total Phosphorus as P	0.031	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	110	mg/L	160.1
Fecal Coliforms	2	ct/100mL	909C
Total Coliforms	k 10	ct/100mL	909A
Chlorophyll-A	k Comment Insufficient amt of samp.		
BOD - 5Day	1.4	mg/L	405.1
Suspended Solids	6	mg/L	160.2
Laboratory pH	7.7	SU	150.1
Turbidity	4	FTU	180.1

Site: Site E #4
 Date Sampled: 03/14/96 Time Sampled:
 Comments: Bacteria leaked in transit

Lab ID: 96-A428

Test	Results	Units	Method
Nitrate as N	0.16	mg/L	353.2
Total Phosphorus as P	0.215	mg/L	365.3
Ammonia, Total as N	0.08	mg/L	350.3
Total Dissolved Solids	217	mg/L	160.1
Fecal Coliforms	20	ct/100mL	909C
Total Coliforms	300	ct/100mL	909A
Chlorophyll-A	29.1	mg/m3	1002 G
BOD - 5Day	6.9	mg/L	405.1
Suspended Solids	51	mg/L	160.2
Laboratory pH	7.7	SU	150.1
Turbidity	28	FTU	180.1

Site: Site F #/
 Date Sampled: 03/14/96 Time Sampled:

Lab ID: 96-A429

Test	Results	Units	Method
Nitrate as N	0.03	mg/L	353.2
Total Phosphorus as P	0.081	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	100	mg/L	160.1
Fecal Coliforms	10	ct/100mL	909C
Total Coliforms	100	ct/100mL	909A
Chlorophyll-A	7.3	mg/m3	1002 G
BOD - 5Day	3.3	mg/L	405.1
Suspended Solids	12	mg/L	160.2
Laboratory pH	7.7	SU	150.1
Turbidity	8	FTU	180.1

Site: Site G
 Date Sampled: 03/14/96 Time Sampled:

Lab ID: 96-A430

Test	Results	Units	Method
Fecal Coliforms	4	ct/100mL	909C
Total Coliforms	200	ct/100mL	909A

Lab ID: 96-A431

Site: Site I *NYCANAL*
Date Sampled: 03/14/96 Time Sampled:
Comments: Bacteria only-no cubitainer

Test	Results	Units	Method
Fecal Coliforms	2	ct/100mL	909C
Total Coliforms	60	ct/100mL	909A

Lab ID: 96-A432

Site: Site J *BOAT Launch*
Date Sampled: 03/14/96 Time Sampled:
Comments: Bacteria only-no cubitainer

Test	Results	Units	Method
Fecal Coliforms	6	ct/100mL	909C
Total Coliforms	100	ct/100mL	909A

Lab ID: 96-A433

Site: Site G Field Replicate
Date Sampled: 03/14/96 Time Sampled:
Comments: Bag leaking and submersed

Test	Results	Units	Method
Fecal Coliforms	Comment bag leaking; rcd submersed		
Total Coliforms	Comment bag leaking; rcd submersed		

Steve Yundt
 Idaho Department of Fish and Game
 3101 S Powerline Road
 Nampa, ID 83686
 Phone: (208) 465-8465

Sampled By: Eagle High

Site: Site D #8
 Date Sampled: 04/18/96 Time Sampled:

Lab ID: 96-A618

Test	Results	Units	Method
Nitrate as N	0.13	mg/L	353.2
Total Phosphorus as P	0.305	mg/L	365.3
Ammonia, Total as N	0.02	mg/L	350.3
Total Dissolved Solids	75	mg/L	160.1
Fecal Coliforms	400	ct/100mL	909C
Total Coliforms	1200	ct/100mL	909A
Chlorophyll-A	10.7	mg/m3	1002 G
BOD - 5Day	1.8	mg/L	405.1
Suspended Solids	257	mg/L	160.2
Turbidity	78	FTU	180.1

Site: Site E #4
 Date Sampled: 04/18/96 Time Sampled:

Lab ID: 96-A619

Test	Results	Units	Method
Nitrate as N	0.09	mg/L	353.2
Total Phosphorus as P	0.287	mg/L	365.3
Ammonia, Total as N	0.08	mg/L	350.3
Total Dissolved Solids	378	mg/L	160.1
Fecal Coliforms	80	ct/100mL	909C
Total Coliforms	1300	ct/100mL	909A
Chlorophyll-A	99.5	mg/m3	1002 G
BOD - 5Day	12.8	mg/L	405.1
Suspended Solids	40	mg/L	160.2
Turbidity	12	FTU	180.1

Lab ID: 96-A620

Site: Site F #1

Date Sampled: 04/18/96 Time Sampled:

Test	Results	Units	Method
Nitrate as N	0.08	mg/L	353.2
Total Phosphorus as P	0.205	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	68	mg/L	160.1
Fecal Coliforms	900	ct/100mL	909C
Total Coliforms	1900	ct/100mL	909A
Chlorophyll-A	46.5	mg/m3	1002 G
BOD - 5Day	5.1	mg/L	405.1
Suspended Solids	140	mg/L	160.2
Turbidity	32	FTU	180.1

Lab ID: 96-A621

Site: Site H *Lynwood*

Date Sampled: 04/18/96 Time Sampled:

Test	Results	Units	Method
Nitrate as N	0.28	mg/L	353.2
Total Phosphorus as P	0.772	mg/L	365.3
Ammonia, Total as N	0.03	mg/L	350.3
Total Dissolved Solids	102	mg/L	160.1
Fecal Coliforms	2800	ct/100mL	909C
Total Coliforms	24000	ct/100mL	909A
Chlorophyll-A	7.9	mg/m3	1002 G
BOD - 5Day	2.8	mg/L	405.1
Suspended Solids	320	mg/L	160.2
Turbidity	250	FTU	180.1

Lab ID: 96-A622

Site: Site J *Boat Launch*

Date Sampled: 04/18/96 Time Sampled:

Test	Results	Units	Method
Nitrate as N	< 0.01	mg/L	353.2
Total Phosphorus as P	0.071	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	115	mg/L	160.1
Fecal Coliforms	10	ct/100mL	909C
Total Coliforms	1000	ct/100mL	909A
Chlorophyll-A	14.9	mg/m3	1002 G
BOD - 5Day	2.1	mg/L	405.1
Suspended Solids	37	mg/L	160.2
Turbidity	11	FTU	180.1

Lab ID: 96-A623

Site: Lewis Lane

Date Sampled: 04/18/96 Time Sampled:

Test	Results	Units	Method
Nitrate as N	0.95	mg/L	353.2
Total Phosphorus as P	5.29	mg/L	365.3
Ammonia, Total as N	0.31	mg/L	350.3
Total Dissolved Solids	122	mg/L	160.1
Fecal Coliforms	1500	ct/100mL	909C
Total Coliforms	8000	ct/100mL	909A
Chlorophyll-A	38.9	mg/m3	1002 G
BOD - 5Day	9.6	mg/L	405.1
Suspended Solids	6483	mg/L	160.2
Turbidity	2980	FTU	180.1

Lab ID: 96-A624

Site: New York

Date Sampled: 04/18/96 Time Sampled:

Test	Results	Units	Method
Nitrate as N	0.08	mg/L	353.2
Total Phosphorus as P	0.107	mg/L	365.3
Ammonia, Total as N	< 0.01	mg/L	350.3
Total Dissolved Solids	80	mg/L	160.1
Fecal Coliforms	130	ct/100mL	909C
Total Coliforms	210	ct/100mL	909A
Chlorophyll-A	6.7	mg/m3	1002 G
BOD - 5Day	3.4	mg/L	405.1
Suspended Solids	24	mg/L	160.2
Turbidity	10	FTU	180.1

Lake Lowell



BH and I sampled Lake Lowell on Tuesday, March 12th, 1996. We planned and prepared containers for sampling seven (7) sites around the lake and three (3) sites in the lake.

Upon arrival at Lake Lowell, we spoke with Deputy Refuge Manager and Refuge Officer, Mr. Todd A. Fenzl. He allowed us access to their, the U.S. Fish and Wildlife Service's, dock/boat put-in, as the Lake is closed for access by public boats until April 15th. He also relayed that three of the seven sites around the lake were currently slack water and the other four were dry.

- Site A We sampled site A (lake 1 upper middle) in the lake, taking samples from the surface and the bottom. We located this site via GPS coordinated supplied to me by Callie Weiss. We also collected a Secchi depth reading and a depth integrated dissolved oxygen profile taken at one meter intervals. (See attachment)
- Site B We were unable to locate site B (lake 2 dock), as the coordinates did not relate to a site in the lake.
- Site C We sampled site C (lake 3 lower). (same sampling parameters as site A)
- Site D As per Todd A. Fenzl, Deputy Refuge Manager, this sampling site is slack water, due to the fullness of the lake. No samples or data collected.
- Site E As per Todd A. Fenzl, Deputy Refuge Manager, this sampling site is slack water, due to the fullness of the lake. No samples or data collected.
- Site F As per Todd A. Fenzl, Deputy Refuge Manager, this sampling site is currently dry. No samples or data collected.
- Site G As per Todd A. Fenzl, Deputy Refuge Manager, this sampling site is currently dry. No samples or data collected.
- Site H As per Todd A. Fenzl, Deputy Refuge Manager, this sampling site is currently dry. No samples or data collected.
- Site I As per Todd A. Fenzl, Deputy Refuge Manager, this sampling site is slack water, due to the fullness of the lake. No samples or data collected.

page 2/2 attachments 1

Site J No samples or data collected.

All samples that were collected were transported to the Idaho State Lab within 24 hours and analyzed for the following parameters: BOD, Total Nitrite + Nitrate, Total Phosphorus as P, Turbidity, Total Residue, and Non-filterable residue (105°C)(Suspended Solids).

Weather

The weather was partly cloudy and cool ~10°C. The winds were from the west ~10 mph.

Other

This was the first field use of the new starter for the boat. We experienced no problems in that area.

This report completed by Don J. Lee at 11:30 on Wednesday March 13th 1996.

Lake Lowell Sampling 96/03/12 Site A

Line #	Temp. °C	pH	Conductivity Microseims	DO %sat	DO (ppm)	Depth (m) Below Surf.	Battery
312	5.39	7.87	180	97.6	12.30	11.0	11.3
420	5.42	7.91	178	98.2	12.37	10.5	11.3
506	5.44	7.91	187	98.2	12.36	10.0	11.3
545	5.49	7.91	193	98.5	12.38	9.0	11.3
624	5.50	7.93	176	98.4	12.37	8.0	11.3
707	5.60	7.95	183	98.9	12.40	7.0	11.3
754	5.80	7.96	167	99.6	12.43	6.0	11.2
836	5.88	7.97	189	100.0	12.45	5.0	11.2
911	5.83	7.99	184	100.0	12.46	4.1	11.3
1005	5.88	7.99	178	100.0	12.45	3.0	11.3
1041	5.88	7.99	179	100.0	12.45	2.0	11.2
1117	5.92	8.00	178	100.1	12.45	1.0	11.3
1155	5.93	8.02	176	100.2	12.46	0.5	11.3
1239	5.93	8.02	177	100.2	12.46	0.0	11.3

Secchi depth = 1.5 m

Lake Lowell sampling 93/03/12 Site C

Line #	Temp. °C	pH	Conductivity Microseims	DO %sat	DO (ppm)	Depth (m) Below Surf.	Battery
310	5.82	7.97	200	99.5	12.40	7.8	11.2
406	6.02	8.01	201	100.2	12.43	7.0	11.3
456	6.06	8.01	198	99.8	12.37	6.0	11.2
537	6.06	8.02	200	99.6	12.33	5.0	11.2
622	6.08	8.01	197	99.4	12.31	4.0	11.3
655	6.06	8.04	203	99.3	12.30	3.0	11.2
721	6.08	8.02	197	99.3	12.29	2.0	11.2
748	6.11	8.04	201	99.1	12.26	1.0	11.3
838	6.10	8.04	199	99.0	12.25	0.5	11.3
1238	5.93	8.03	177	100.2	12.46	0.0	11.3

Secchi depth = 1.4 m

Lake Lowell Inlake/Inflow Water Quality Data

	BOD (mg/L)	T. NO2+NO3 as N, (mg/L)	T. Phosphorus as P, (mg/L)	Turbidity (NTU)	Total Residue (mg/L)	Suspended Solids (mg/L)	Bacteria	
96/03/12								
Site A (Top)	2	0.026	0.033	2.6	113	<1	**	
Site A (Bottom)	2	0.006	0.039	3.7	118	8	**	
Site B (Top)	*	*	*	*	*	*	**	
Site B (Bottom)	*	*	*	*	*	*	**	
Site C (Top)	2	0.008	0.036	3.6	126	6	**	
Site C (Bottom)	2	<0.005	0.044	3.8	132	6	**	
Site D	*	*	*	*	*	*	**	
Site E	*	*	*	*	*	*	**	
Site F	*	*	*	*	*	*	**	
Site G	*	*	*	*	*	*	**	
Site H	*	*	*	*	*	*	**	
Site I	*	*	*	*	*	*	**	
Site J	*	*	*	*	*	*	**	
QA/QC								
Blanks	<1	<0.005	<0.005	0.1	<1	<1	**	
Spikes	NO SPIKES PREPARED, AS THIS WAS AN INITIAL RECONNAISSANCE OF LAKE LOWELL							**
Duplicates	NO DUPLICATES PREPARED, AS THIS WAS AN INITIAL RECONNAISSANCE OF LAKE LOWELL							**
* no samples collected, see Sampling Summary Narrative								
** no bacteria samples collected, as no primary contact during this season								

*** ACTIVITY REPORT ***

TRANSMISSION OK

TX/RX NO.	7006
CONNECTION TEL	912089221026
CONNECTION ID	
START TIME	04/12 14:58
USAGE TIME	05'11
PAGES	5
RESULT	OK

FROM: Lee, Donald

SWIRO

TO: Callie Weiss
Callie Weiss (family)

DATE: 04-26-96

TIME: 14:26

CC: Horsburgh, Brian
Lee, Donald

SWIRO
SWIRO

SUBJECT: lake Lowell data
PRIORITY:
ATTACHMENTS:

I was uncertain which address it was easier to reach you at so I am sending this to both places to be sure that you will receive it.
I just received these the other day they are as follows:

NY Canal- Total Coliform >2000/100ml
- E. Coli 150/100ml

Access road 4- total coliform 2100/100ml
- e. coli 20/100ml

Access road 8- total coliform >20000/100ml
- e. coli 660/100ml

Boat Launch- total coliform 200/100ml
- e.coli 10/100ml

That is all I have received from the lab, when I have chemistry sheets back in my hand I will send you a summary, similar to the one that I sent before.

Thanks

Don

ATTACHMENT D

IDAHO 1996 303(d) LIST