

# NEWMAN LAKE SHORELINE SURVEY 2004 REPORT

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## Newman Lake Shoreline Survey 2004 Report

### **Purpose**

The goal of the survey was to document baseline information regarding current land uses and status of the Newman Lake shoreline in Newman Lake, Washington. It was also done to fulfill a part of a requirement of the NPDES permit for the NLFCZD's Alum Injection System to prepare a watershed scoping report. This mostly volunteer effort was supported by Washington State Department of Ecology Water Quality Grant #G0300201 for Newman Lake Watershed Monitoring and Education.

### **Scope**

The scope of the Newman Lake Shoreline Survey 2004 (survey) was limited to areas immediately adjacent to the waterline of Newman Lake. Observations of land use were documented, and photographs were compiled for the entire shoreline.

### **Project Design**

This survey was organized and carried out by a team of volunteers (the Team) from the Newman Lake area during the summer and fall of 2004. Standardized guidance was provided to the Team by the team leader for land use data collection, photographic documentation and information organization. Three (3) subteams worked independently in assigned geographic areas of the lake to collect the land use data and photographs. The three sets of data were compiled in electronic form by the team leader for presentation to the Spokane County Engineer for Newman Lake.

### **Survey Methods**

#### **General**

Newman Lake was preliminarily surveyed to establish thirty-three (33) Orientation Points that were documented with GPS coordinates and photographs. Spokane County developed an aerial scale map showing the Orientation Points identified by alphabetic labels. The labels' GPS coordinates are referenced in the "Newman Lake Shoreline Data Summary 2004, Part 1" file included with this report. The map is titled "Newman Lake Milfoil – 2004" and is not included in the files included with this report but is on file at Spokane County.

Linear distances for the shoreline were estimated using this scale map. Distances were measured on the map, and the measurements were converted to real linear shoreline distances applying the scale conversion of

one inch equals four hundred feet noted on the map. The total distance of the shoreline was estimated by this method to be 51,120 linear feet.

Segments of shoreline were “bracketed” between these points to provide a system of reference for data collection. These segments between the Orientation Points are described as Point Brackets. Land Use information and photographs are organized by thirty-three (33) Point Bracket subsets. The order of data collection from Orientation Point to Orientation Point is counter-clockwise.

## **Results of the Survey**

### **Shoreline Land Use Determinations**

Guidance for the categories of land use to be identified was provided by the Spokane County Engineer for Newman Lake. The land use data for each Point Bracket is presented in “Newman Lake Shoreline Data Summary 2004, Part 1.” The compilation of this data for entire Newman Lake shoreline is presented in “Newman Lake Data Summary 2004, Part 2.”

The Team was directed to categorize land use by one of six categories as described below. The land use was observed from the water or from the air, then estimated by percentage for each Point Bracket area by the Team members. The consolidated summary of land uses on the Newman Lake Shoreline by percentage is presented in Table 1.

| <b>TABLE 1<br/>NEWMAN LAKE SHORELINE LAND USE BY CATEGORY<br/>2004</b> |                |
|--|----------------|
| <b>LAND USE CATEGORY DESCRIPTION</b>                                   | <b>PERCENT</b> |
| Residential/ Predominantly Natural Shore                               | 22%            |
| Residential / Not Natural Vegetation at Shore                          | 26%            |
| Residential / Bulkheaded at Shore                                      | 16%            |
| Commercial (Resorts)   | 2%             |
| Public Access  | 1%             |
| Non-residential/ Natural/ Agricultural                                 | 33%            |

### **Photographic Documentation of Shoreline**

Photographs were taken from the water where it was possible to make accurate observations. In areas where visibility of the shoreline was limited by water plants aerial photographs were taken.

A total of 273 digital photographs stored in jpeg format are included in an electronic file presented with this report. The specific time and date each

photograph was taken is documented in each photo's file. The photographs are organized in folders according to the Point Bracket in which they were taken, and ordered in a counter-clockwise direction between the Orientation Points. Photographs taken at each Orientation Point are included in their own folder.

### **Organization of Information**

A directory of the data files referenced in this report are presented in the "File Directory, Newman Lakeshore Survey 2004" included as a separate file with this report. This file directory also includes a detailed map of the folder and file organization structure for the Newman Lakeshore Photos-2004.

Reference Documents and Files

1. File Directory Newman Lakeshore Survey 2004
2. Newman Lake Shoreline Data Summary 2004, Part 1
3. Newman Lake Shoreline Data Summary 2004, Part 2
4. Newman Lakeshore Photos-2004
5. Newman Lake Milfoil-July 2004, Spokane County Map