



City and Borough of Sitka

WATER AND WASTEWATER

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May 26, 2005

2004 WATERSHED CONTROL REPORT

This Watershed Control Report (WCR) addresses the requirements as follows:

- A) **IDENTIFY ANY SPECIAL CONCERNS ABOUT THE WATERSHED AND HOW THEY ARE BEING HANDLED**
- B) DESCRIBE ACTIVITIES IN THE WATERSHED THAT EFFECT WATER QUALITY
- C) PROJECT WHAT ADVERSE ACTIVITIES ARE EXPECTED TO OCCUR IN THE FUTURE AND DESCRIBE HOW THE PUBLIC WATER SYSTEM EXPECTS TO ADDRESS THEM.
- D) REPORT CERTIFICATION STATEMENT AND SIGNATURES

A) IDENTIFY ANY SPECIAL CONCERNS ABOUT THE WATERSHED AND HOW THEY ARE BEING HANDLED

RECREATION: The primary human activity in the watershed is parking at the vista point overlooking Blue Lake to view the awesome beauty of the lake and its surrounding mountain peaks, glassing for mountain goats, bear, deer and other animal activity. Most people do not even leave their cars for this activity. Some walk around their cars for the fresh air, even fewer people venture down the steep switch-back to the waters edge because the view is blocked by alder brush after leaving the vista point until the lower shore line is reached some 350 feet down the steep incline. Fishing, hunting, and hiking are other activities for the more hearty. Access, even for small boats, is difficult and therefore only the very serious venture onto the lake.

These recreational activities have not resulted in past or present "special Concern" for Blue Lake Water Quality.

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The watershed inspection log indicates normal or less than normal human activity in the watershed. In the past the City and Borough of Sitka (CBS) Water Department has encouraged public involvement in keeping the watershed clean by working with community groups. Due to increased public awareness and reduced littering it has not been necessary to have a group clean up the Blue Lake Vista area or road since 1999. The signs and increased public awareness are having a positive effect on reducing the amount of littering that occurs near the vista and shore line. There is no indication that fishing, hunting, hiking, or camping has increased. CBS will continue to monitor the use of the area by camping permit and inspection visits. **There are no indications that past, present or expected future levels of human activities in Blue Lake watershed are having or will have any effects on source water quality and only a minimal threat of contamination exists.**

VANDALISM: There have been no acts of vandalism in the past several years. New signs were installed on September, 2002 and were determined clean and readable by a neutral state certified inspector during the 2003 and 2004 annual inspections. Through the year 2004 there have been no deliberate or accidental activities that have impacted the water intake or water quality. CBS plans to maintain lake access at its 1992 to present condition. **Water quality monitoring continues to verify that we do not have any realistic "special concerns" with the Blue Lake Watershed or its water quality.**

DIOXIN: The community of Sitka requested the Agency for Toxic Substances and Disease Registry (ATSDR) to determine if the Blue Lake water supply is safe for consumption. ATSDR's findings, explanations and recommendations were discussed in the WCR 1998 report. There has been no new data or reason to continue searching for dioxin in the watershed. For more detail see the ATSDR report attached to WCR 1998. **The ATSDR concluded: "therefore, the potential exposure to dioxin in the water is not of public concern".**

CRYPTOSPORIDIUM: Is a nonregulated microscopic parasite that is scheduled for regulation in the near future. CBS has voluntarily tested for this waterborn pathogen in our raw water source in the years 1998 and 1999. The results (zero and 1.6 oocysts/100L, respectively) were published in the annual Consumer Confidence Reports (CCR) for those years. Our results are much lower than the average of 43 oocysts/100L found in a national study (EPA Dec., 1993). Future test results will be provided to the public in future Consumer Confidence Reports..

B) ACTIVITIES IN THE WATERSHED THAT EFFECT WATER QUALITY

LANDSLIDES AND AVALANCHES both occur and may effect water quality. At times Sitka experiences increases in turbidity, these higher than normal turbidity readings are not specifically related to known slides or avalanches and may have been caused by heavy rains on high rocky slopes not covered by snow. In September 2004 there was a turbidity spike above 5 NTU (8.7) which lasted only 2.4 hours. **To date, turbidity induced by slides has been considered to be unusual and unpredictable rather than recurring events.** Slides and avalanches are naturally occurring and are not affected by the limited human activity in the watershed. Slide control is considered unfeasible due to the steepness of the terrain and therefore, not recommended.

DEBRIS REMOVAL from the water intake area was conducted at periodic intervals until 1995 when CBS Electrical Department, in coordination with the Water Department, began an annual debris removal in the intake area. The clean up is generally on-shore only and occurring when the lake level has subsided enough to leave the debris high and dry. Some years, prior to removal, a small boat was used to gather floating debris from the water in the intake area. The debris are held in place against the shore with a log boom until it has gone dry and is accessible from the shore. The trend of decreasing amounts of debris continued in 2004. Decreasing debris coupled with the structured annual cleanup results in reduced potential water quality impact from the removal effort. This routine practice is in fact reducing the effort required to perform the clean up as well as preventing water quality degradation resulting from accumulating debris. These annual preventative maintenance projects have shown only slight effects in some years on turbidity and no noticeable effect on overall water quality.

The 2004 annual debris removal was determined to be unnecessary due to minimal debris accumulation and higher than normal water levels. The past nine annual debris removal projects ('95-2003) were completed without any disturbance to the water and no measurable effect on water quality. See previous reports for details of respective years clean up activity.

In the spring of 2000 a 3 foot high by 32 foot long concrete wall was constructed above the intake structure at est. elevation of 286 feet, to prevent future debris and erosion sediment from falling into the intake structure. The lake level has not been low enough since construction to allow inspection of the wall or to create significant shoreline erosion that the wall is designed to capture so no significant sediment build up is suspected to be behind the retainer wall. The additional supports added to the bypass gate control conduit in 2000 served their purpose and no repairs were required on the conduit. The ditches on the access road were cleaned and reestablished during the spring of 2004 to prevent washout of the road as well as preventing surface water from draining into the lake directly above the intake. **There was no 2004 debris removal operation and hence no noticeable effect on overall water quality.**

C. PROJECT WHAT ADVERSE ACTIVITIES ARE EXPECTED TO OCCUR IN THE FUTURE AND DESCRIBE HOW THE PUBLIC WATER SYSTEM WILL ADDRESS THEM

HUMAN ACTIVITIES: No land development has taken place within the watershed since the initial project construction and there are no future development plans. The Forest Plan for the Tongass National Forest became final in May 1997. The plan changed the federal land use designation of Blue Lake (and Indian River) watersheds to: "MUNICIPAL WATERSHEDS" which emphasizes protection of municipal water supplies and flows by assuring that watershed planning, maintenance, and activities comply with State of Alaska Drinking Water Regulations and Water Quality Standards for water supply.

Management prescriptions include the provision for the Forest Service to consult, coordinate, and seek concurrent approval from City and Borough of Sitka on various activities, and directs development of a written agreement consistent with 18 AAC 80.520 (c)(3). The "Municipal Watershed" designation itself provides commitment by the landowner to control human activities that may have an adverse impact on the microbiological quality of the water supply, which 18 AAC 80.520 (c)(3) seeks.

Pending written agreement and any modification of the Tongass National Forest Land Utilization Plan; the USFS has agreed to cooperate with the CBS and mutually control activities that could degrade water quality either directly or indirectly. To date, this cooperative approach has worked smoothly and is not expected to change. There are no projected improvements to enhance recreation inside the Blue Lake Watershed. The narrow, steep, hair-pin-curve road, and the unimproved steep beach line where small boats may be launched is prohibitive in nature.

Over night camping is by permit only and the CBS Watershed Ordinance (No. 92-1091) prohibits any act that would degrade water quality either directly or indirectly. **Overnight camping seldom occurs**, as is indicated by inspection log and camping permit data. Upgraded permit forms in 1998 were designed to provide more information to the campers about the watershed and the rules to follow. Campers register with the police department (24 hour/day); and a copy of the permit is immediately faxed to the Water Treatment Operator (WTO), so that timely inspections can be performed. Camping Permits and reports are kept on file at the WTO's office located at the new Corrosion Control Facility. The CBS Electrical Department also inspects the Blue Lake access road and the penstock closure facility on a regular basis, coordinating with the Water Department as it relates to watershed activities. The WTO keeps an inspection log of 9 parameters; data continues to indicate the primary use to be "VISTA" related (see previous discussion in Section A, Recreation). **The CBS Water Department does not foresee any present or future human activities within the Blue Lake Watershed that will adversely effect the water quality.**

FUTURE HUMAN ACTIVITIES: Public interest in drinking water continues to increase throughout the country and Sitka is no exception. CBS's water and wastewater operators continue to conduct facility tours. The citizens of Sitka have become more aware of the need to protect their drinking water source. Each year requires less effort to clean up after the public. CBS is also in the eighth year of a program mentoring college level students who are enrolled in Environmental Technology programs at University of Alaska Southeast. This involves short term training and student on-the-job-training.

USFS Camp Hosts at Blue Lake Campground and the Sitka Police Department routinely make random inspections at the Blue Lake area. Their presence at the campground and the vista point is also a deterrent to vandalism and improper use of the area. CBS is the owner of the access road from the campground, outside the watershed, to the lake and could, if deemed necessary, close the road to eliminate vehicular traffic into the Blue Lake Watershed. The

USFS prohibits access to motorized vehicles from the first snow until April the following year after all snow has melted off the road. **Future Human activities are not expected to have any significant adverse impact on Blue Lake water quality.**

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D. REPORT CERTIFICATION

The USFS and CBS are the owners of the Watershed. For water system and water quality related activities the operator is CBS.

I hereby certify the contents of this report to be true and correct to the best of my knowledge.

Signature: _____ date: _____, 2005

Mark Buggins, Environmental Superintendent