United States
Environmental Protection Agency
Region 10
1200 Sixth Avenue
Seattle, Washington 98101

Total Maximum Daily Load (TMDL) for Debris in the Waters of Duck Creek in Mendenhall Valley, Alaska

In compliance with the provisions of the Clean Water Act, 33 U.S.C. §1251 et seq., as amended by the Water Quality Act of 1987, Public Law 100-4, the Environmental Protection Agency is establishing a Total Maximum Daily Load (TMDL) that will significantly reduce the presence of anthropogenic debris in Duck Creek to comply with the designated use in Alaska's water quality standards.

This TMDL will become effective immediately. Subsequent actions must be consistent with this TMDL.

Signed this 25th day of September 2000.

Signed by Michael A Bussell for

Randall F. Smith
Director
Office of Water

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Debris

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TMDL AT A GLANCE:

Water Quality-limited?	Yes
Hydrologic Unit Code:	19010301
Standard of Concern:	Residues (debris)
Designated Use Affected:	Water supply; water recreation; growth and propagation of fish, shellfish, other aquatic life, and wildlife
Environmental Indicator:	Residue (solid waste debris, including wood, waste metals, abandoned oil tanks, and plastics)
Major Source(s):	Littering and urban runoff from residential and commercial development
Loading Capacity:	Zero (0); the standard for residues prohibits deposits on or in the streambeds and streambanks
Wasteload Allocation:	Zero (0); nonpoint sources only
Load Allocation:	Zero (0) residues above natural condition
Margin of Safety:	Zero (0)

Executive Summary

Duck Creek is listed on the 1998 303(d) list of impaired waters in Alaska for residues, in the form of debris. The primary source of debris in the watershed is littering, which delivers wood scraps, plastics, and other solid wastes directly to the creek and makes them available for transport to the creek by wind, storm water runoff, and snowmelt events. The water quality standard for residues prohibits any anthropogenic debris to Duck Creek in order to protect designated uses of water supply, water recreation, and growth and propagation of fish, shellfish, other aquatic life, and wildlife. It is recommended that local agencies, community groups and/or volunteers continue to conduct regular clean-ups of the stream and track and publicize the types and quantities of debris removed from the creek. Citizen education also will help to inform the public about the potential adverse effects of littering and to foster a sense of stewardship in Duck Creek watershed residents.

Overview

Section 303(d)(1)(C) of the Clean Water Act and the U.S. Environmental Protection Agency's (EPA) implementing regulations (40 CFR Part 130) require the establishment of a Total Maximum Daily Load (TMDL) to achieve state water quality standards when a waterbody is water quality-limited. A TMDL identifies the degree of pollution control needed to maintain compliance with standards and includes an appropriate margin of safety. The focus of the TMDL is reducing pollutant inputs to a level (or "load") that fully supports the designated uses of a given waterbody. The mechanisms used to address water quality problems after the TMDL is developed can include a combination of best management practices and/or effluent limits and monitoring required through National Pollutant Discharge Elimination System (NPDES) permits (USEPA, 1991).

The state of Alaska identified Duck Creek as being water quality-limited because of low dissolved oxygen, debris, metals, fecal coliform bacteria, and turbidity (ADEC, 1998). Although TMDLs will ultimately be developed for each of the pollutants, this document addresses only the impairment to the creek caused by excess debris (e.g., solid waste, metals, plastics). A TMDL for turbidity was developed on December 17, 1999.

The Duck Creek Advisory Group (DCAG), which was formed in 1993 to coordinate, plan, initiate, and carry out activities to restore water quality and anadromous fish habitat, has drafted the Duck Creek Watershed Management Plan (DCMP). The DCMP states that urban runoff and land use management practices are the two key problems leading to the water quality impairment of Duck Creek (Koski and Lorenz, 1999). The Mendenhall Watershed Partnership (MWP) was formed in 1998 to coordinate restoration projects, public education and outreach, and volunteer activities. The MWP plays an important role in remediating the debris impairment to Duck Creek through its public education and stream restoration projects.

Designated uses for Duck Creek include (1) water supply, (2) water recreation, and (3) growth and propagation of fish, shellfish, other aquatic life, and wildlife (Alaska Administrative Code [AAC] § 18.70.020).

Years of residential growth and associated commercial activity along Duck Creek and throughout its watershed have resulted in accumulations of debris, solid waste, metals, and plastics. The debris impairment observed in Duck Creek is attributable to runoff and litter from an expanding urban area and poor housekeeping by streamside residents.

This document details a debris TMDL for Duck Creek. Because of the nature of the impairment, the emphasis of this TMDL is on an implementation plan and not on technical data analysis and load allocation. The primary activity of the implementation plan is removal of debris from the watershed. The plan also suggests several best management practices (BMPs) that make up an ongoing program to prevent future impairment by debris. A watershed survey is recommended after the cleanups to certify that Duck Creek is no longer impaired by debris.

General Background

Duck Creek is located near Juneau, Alaska, in the Mendenhall Valley, a watershed that drains several streams into one of only a few major estuarine wetlands in Southeast Alaska (Figure 1). The Duck Creek watershed drains runoff and groundwater primarily from the floor of this large glacial valley. Duck Creek, a small stream of just over 3 miles in length, flows south through the middle of the heavily populated valley and enters the Mendenhall River and wetlands directly upstream of the Juneau International Airport runway. The creek is an anadromous fish stream (Alaska Department of Fish and Game Catalog No. 111-59-10500-2002) that historically supported runs of coho, pink, chum, and sockeye salmon. Based on descriptions from early residents, the creek originally had numerous beaver ponds and clear water that flowed year-round. Currently, the creek varies from about 5 to 15 feet in width and from a few inches to several feet in depth. Duck Creek has two main tributaries—East Fork and El Camino.

Land Use

Approximately 36 percent of Duck Creek's 1,080-acre watershed is covered with impervious surfaces such as roofs, roads, and parking lots (Lorenz, 1998). The remainder is a mix of cultivated landscaping, nonvegetated athletic fields, natural vegetation, and wetlands. Nearly half of the watershed provides space for residential housing, yards, and driveways. Most of the housing is single-family construction. Another third of the watershed is used for transportation and commercial interests. Based on this land use distribution, the Duck Creek watershed was divided into the following land use categories and areas: residential (540 acres), transportation and utilities (83 acres), commercial (282 acres), and recreation and wetland (175 acres.) Residential and commercial development has occurred right up to Duck Creek's banks.

Climate

Historical climate data are available from the Juneau International Airport (Station number 504100), which is adjacent to the lower reach of Duck Creek. Air temperatures range from a normal daily minimum temperature of 19 degrees Fahrenheit (^{o}F) in January and 48 ^{o}F in July to a normal daily maximum temperature of 29 ^{o}F in January and 64 ^{o}F in July. Rainfall averages 54 inches per year, ranging from less than 3 inches per month to well over 7 inches per month. Snowfall averages 99 inches per year, ranging from 0 to 26 inches per month. On a typical day, wind speed averages about 8 miles per hour (mph) (NOAA National Climate Data Center).

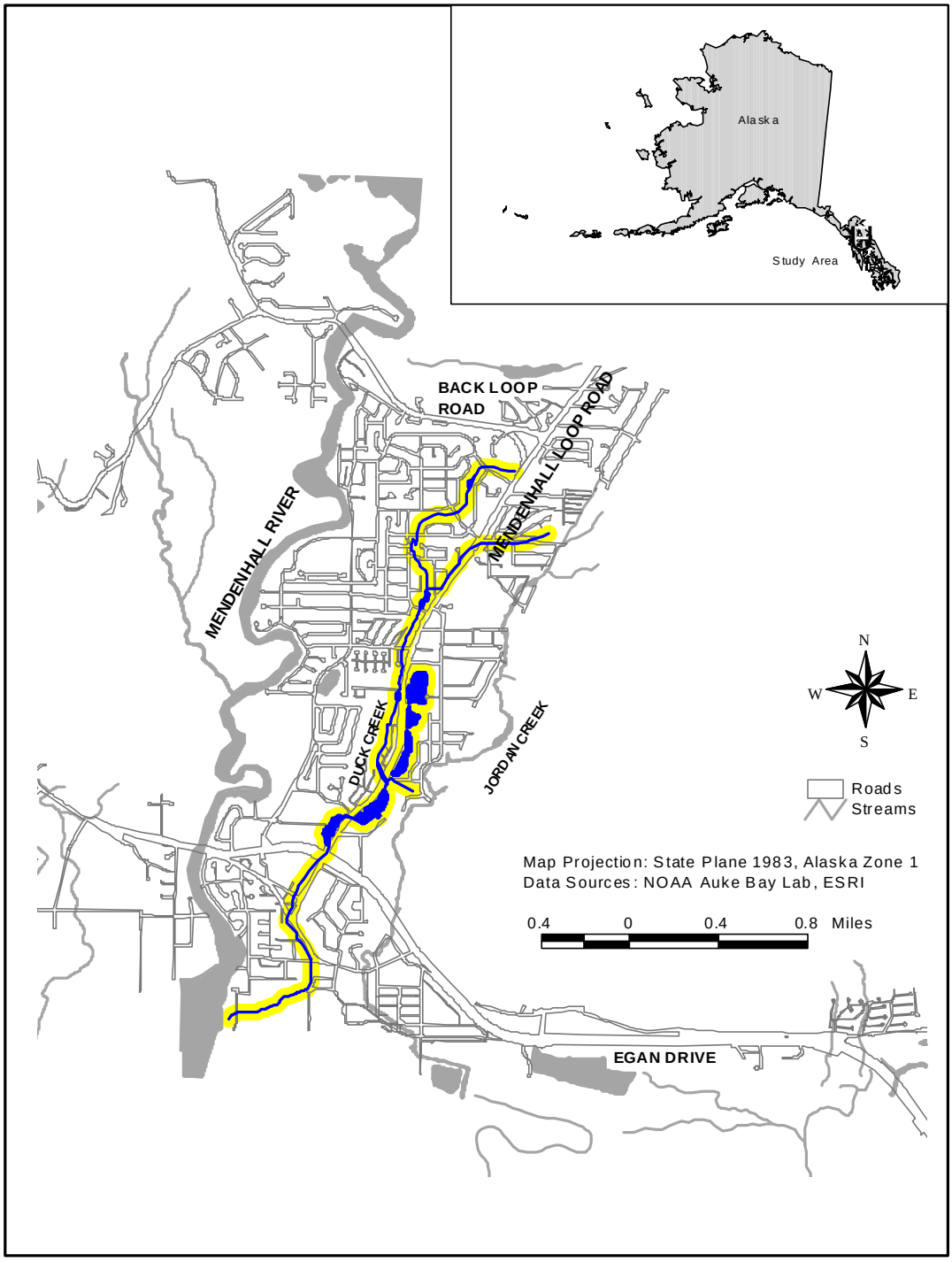

Figure 1. Location of Duck Creek

Applicable Water Quality Standards

TMDLs are developed to meet applicable water quality standards, including numeric and narrative standards for the support of designated uses. To develop a TMDL, it is necessary to establish a numeric target that identifies the specific goals or endpoints for the TMDL. The goal of the TMDL is attainment of the water quality standard. The numeric target may be equivalent to a numeric water quality standard where one exists, or it may represent a quantitative interpretation of a narrative standard. This section reviews the applicable water quality standards and identifies an appropriate indicator and associated numeric target level for calculating the TMDL.

Designated Uses

Designated uses for Alaska's waters are established by regulation and are specified in the State of Alaska Water Quality Standards (18 AAC 70). For fresh waters of the state, these designated uses include (1) water supply, (2) water recreation, and (3) growth and propagation of fish, shellfish, other aquatic life and wildlife. Duck Creek only partially supports these designated uses.

Parameters of Concern

The Alaska 1998 § 303(d) list of impaired waters identified Duck Creek as water quality-limited due to dissolved oxygen, debris, metals, fecal coliform bacteria, and turbidity. This TMDL addresses only the impairment caused by debris.

The major effects of debris and solid waste on uses of this waterbody are negative impacts on recreational uses, creation of nuisance conditions that may attract undesirable wildlife species, and potential adverse effects on resident fish populations and their habitat. The debris impairment to Duck Creek impacts the growth and propagation of fish and aquatic life mainly by clogging or blocking culverts and drainage grates. This clogging or blockage alters the flow pattern and can impede fish migration. The flow restrictions caused by debris also can cause flooding by slowing the transport of water downstream.

Applicable Water Quality Criteria and Numeric Target

Alaska's 1998 Section 303(d) list identifies Duck Creek as water quality-limited based on exceedance of the residue standard from the accumulation of wood, plastics, metals, and other debris from urban residential development along the stream. The Alaska water quality standards state that residues (debris and solid waste in this case) "[m]ay not ... cause a sludge, solid, or emulsion to be deposited beneath or upon the surface of the water, within the water column, on the bottom, or on adjoining shorelines" (18 AAC 70 (1)(C)). This indicates that the numeric target for Duck Creek's debris TMDL is zero, with no debris or solid waste allowed in Duck Creek or along its corridor.

Use of Best Professional Judgment (BPJ) to Determine Impairment

According to the guidelines used by the Alaska Department of Environmental Conservation (ADEC), the best professional judgment of a resource agency professional or other credible

source can be used to determine whether a waterbody persistently exceeds water quality standards or designated uses (e.g., fish habitat) are adversely affected. Direct monitoring data, photographs or videos, or written reports within the last 5 years are other guidelines ADEC uses to determine whether a waterbody is impaired or water quality-limited for 303(d) listing decisions.

Several agencies and organizations collected water quality data at a number of locations throughout Duck Creek during the 1990s. However, few records of debris and solid waste have been collected. The Alaska Water Watch volunteer monitoring program recorded bank conditions at nine locations along the creek between 1992 and 1993. Trash was frequently observed along the streambank, particularly at Taku and Mendenhall Boulevards, Kodzoff Acres, and Del Rae Road. A stream walk conducted in 1996 also mentioned trash along the banks of Duck Creek, and members of the DCAG have reported significant debris in the stream. The Spring 1999 Litter Free Clean-Up Day yielded over 17,500 pounds of trash with 27% plastics, 8% glass, 12% metals, 37% paper, 3% wood, 12% foamed plastic and 1% rubber ("Waterways" Spring 2000). Because qualitative analysis and best professional judgment were used in listing the creek as impaired due to debris, a technical analysis of data to support establishment of the debris TMDL for Duck Creek is not possible.

Critical Conditions

The load of debris and solid waste in and around Duck Creek is not associated with a particular flow regime or environmental conditions. Therefore, development of the TMDL for specific critical conditions in the creek is not necessary.

Pollutant Sources

The types of waste observed along Duck Creek primarily include scraps of wood and plywood, paper, plastics, glass, metals and car batteries. The debris and solid wastes are deposited directly into the creek; transported to the creek by wind, storm water runoff, and snowmelt, and bulldozed or snowplowed into the creek. Plastics pose a smothering hazard to aquatic life and wildlife, and car batteries can release acids and heavy metals. The primary sources of trash, debris and waste in the creek are littering and inadequate containment of wastes stored near the creek.

Cleanup events sponsored by organizations such as Landscape Alaska and the Mendenhall Watershed Partnership have removed truckloads of waste from the creek. It is recommended that the types and amounts of waste removed during future cleanups continue to be tracked and include field observations of the amount of debris and solid waste removed.

Point Sources

Point sources, identified as permitted dischargers, are not relevant to the debris problem in Duck Creek. ADEC does not issue permits to wastewater or industrial facilities to dump debris into waterways. Further, there are no point source dischargers in the Duck Creek watershed, as

specified in the DCAG reports (Koski and Lorenz, 1999; Lorenz, 1998) and in EPA's Permit Compliance System.

Nonpoint and Background Sources

The 1998 Alaska § 303(d) list identifies the primary source of impairment in Duck Creek as "urban development" and the pollutant as "solid waste," including wood, oil tanks, waste metals, and plastics (ADEC, 1998). These diffuse, nonpoint sources of pollution, and the best management practices that the people of Juneau can apply to control them, are the focus of this report. With no background or natural sources of debris and solid waste in the watershed, the main sources are likely to be residential and commercial land uses. Table 1 presents the estimated distribution of land uses in the watershed, which is clearly highly developed. Eighty-four percent of the 1,080-acre Duck Creek watershed is dedicated to residential, commercial, and transportation land uses, leaving only 16 percent for open space (recreational land and wetlands). Given the large volume of waste and debris likely produced in such a highly developed watershed, it is not surprising that inappropriate disposal methods are sometimes used, allowing delivery of debris to the stream.

Table 1. Land use distribution in the Duck Creek watershed

Land Use	Area (acres)[a]
Residential	540
Commercial	282
Transportation	83
Recreation/Wetland	175
Total	1,080

[a] Estimated from land uses and information presented in Lorenz, 1998.

Analytical Approach

The Duck Creek debris and solid waste problem is not amenable to the traditional TMDL loading capacity approach because debris is not easily measured or characterized quantitatively. However, because the water quality standard does not allow any debris to be delivered to the stream, the TMDL does not require the calculation of pollutant allocations. The loading capacity of Duck Creek for debris is zero, and the loading allocation of debris is therefore also zero. The main focus of the remainder of this document is on the implementation of controls that will result in conditions meeting the TMDL, allowing the creek to attain water quality standards.

Loading Capacity

Assimilative capacity is the ability of the receiving waters to accommodate a given pollutant, in this case debris and solid waste. In Duck Creek and along its banks, the larger debris stays in the system and is not flushed out. Although such wastes do not directly affect water quality, they do

negatively affect the recreational and habitat values of the watershed and can cause flow restrictions and flooding.

The debris loading capacity and TMDL for Duck Creek are derived directly from the water quality standards, which require that no debris be deposited in the stream or on its banks and that there be no continuing sources of solid waste. Because there are no natural or background sources of debris, the TMDL for debris and solid waste in Duck Creek is set to zero.

Wasteload Allocation

Because no point sources contribute to the debris impairment in Duck Creek, the wasteload allocation is set to zero.

Load Allocation

The load allocation for nonpoint sources of debris in the Duck Creek watershed is set to zero.

Margin of Safety

CWA section 303(d) requires that a TMDL incorporate a margin of safety (MOS) to account for any uncertainty or lack of knowledge concerning the relationship between pollutant loading and water quality. The MOS can be implicit (e.g., incorporated into the TMDL analysis through conservative assumptions) or explicit (e.g., expressed in the TMDL as a portion of the loadings) or a combination of both.

Because the loading capacity determined from the water quality standards allows no debris in the stream, there is no allocatable load of debris for Duck Creek, and the explicit margin of safety is set to zero.

Seasonal Variation

The impact of debris on Duck Creek varies seasonally, with the most severe problems encountered in the spring. Snowmelt occurs fairly quickly in Juneau, generating a large amount of runoff capable of carrying significant amounts of debris into and along the stream. Once snowmelt has occurred, however, the spring in Juneau is relatively dry and flows can drop to their lowest levels of the year. Low flows are more easily impeded by out-of-grade and debris-clogged culverts. Spring is also when fish are trying to migrate out of Duck Creek to the sea, and low flows and debris blockages can significantly hamper this out-migration. However, because the TMDL target for debris is zero at all times, there is no need for inclusion of seasonal variation in the TMDL analysis.

Monitoring

In addition to continued collection of data at the U.S. Geological Survey (USGS) stations, water quality monitoring by other involved state and federal agencies (e.g., ADEC, National Marine Fisheries Service [NMFS]) and volunteer groups (such as the DCAG and MWP) should continue

in a coordinated manner. Agencies or volunteers should be encouraged to actively observe and note the amount of trash in and around water quality monitoring sites when they are in the field. The collection of this information would facilitate an assessment of best management practice (BMP) implementation and effectiveness by providing concrete information on in-stream improvements and long-term trends. (Some suggested BMPs are presented in Table 2 in the Implementation Strategy section.)

In addition to collecting information on waste and debris near water quality sampling sites, specific monitoring of BMP implementation sites would ensure that identified management actions (such as specific BMPs or resource restoration or enhancement projects) are undertaken and are having the desired effect. BMP monitoring is often cited as the most cost-effective of the monitoring types because it provides information on whether BMPs are being implemented as intended and on the effectiveness of BMPs at controlling pollutants.

An annual Duck Creek Watershed Cleanup Report, based on the debris observations discussed above and creek surveys, could be used to document the results of debris cleanup activities and to determine whether compliance with water quality goals has been attained.

Implementation Strategy

The DCAG was formed in 1993 to coordinate, plan, initiate, and carry out activities to restore water quality and anadromous fish habitat in Duck Creek. The DCAG provides education and facilitates work with the City and Borough of Juneau, state and federal agencies, private businesses, conservation organizations, and homeowners in the design of restoration projects and pollution control throughout the watershed. The Mendenhall Watershed Partnership (MWP), formed in 1998, coordinates restoration projects, public education and outreach, and volunteer activities. Some of the activities sponsored by the MWP include:

- Adopt-a-stream: community groups volunteer to help keep streams in the Mendenhall watershed litter-free
- Storm drain stenciling: the message “Dump No Waste, Drains to Stream” is stenciled on storm drains to let residents know that waste dumped into storm drains is transported directly to streams without treatment
- Public education and events: field trips, community forums on important watershed issues, and technical workshops on erosion control and water pollution prevention
- Youth education: the MWP and Discovery Southeast host “Watershed Discovery Days” for youth to explore, do hands-on science, and help with a stewardship project in the watershed
- Restoration projects: wetland habitat restoration, stabilization of eroding stream banks
- Smart development: the MWP has worked with local builders and landowners to prepare user-friendly maps that will help them design their projects with better information about watershed resources

< Flood control: record flooding in 1998 demonstrated the need for hydrologic studies of the watershed. MWP funding supports the USGS hydrologic studies in the valley

Public attitude and perception toward the importance of Duck Creek are already changing as a result of the work done by the DCAG, MWP, and other community organizations. Public awareness of the impacts of habitat loss on small streams such as Duck Creek has immeasurable value in protecting and restoring salmonid habitat.

A continuing process of public outreach is vital to implement this debris and solid waste TMDL. Mailings or literature "drops," town meetings, public service announcements and press releases can be used to educate the local community about efforts to clean up the creek and its corridor. Annual or semiannual creek cleanups and subsequent publication of the kinds and volume of litter collected also would be effective stewardship tools. Institution of periodic garbage amnesty days on which larger waste items would be collected at the curbside free of charge might help alleviate littering in the watershed. Enforcement of current stream setback ordinances (and revision to these ordinances to provide further protection likely will reduce the proximity of debris to stream to prevent transport by wind, snowmelt and runoff. Further information on current and planned activities in the Mendenhall watershed is available on the MWP homepage (www.mendenhallwatershed.org).

A critical element for the success of this plan is hands-on community involvement in cleaning up debris in the watershed and in keeping the creek and adjoining shorelines free from debris in the future. A coordinated community watershed clean-up effort will remove debris metals, solid wastes, and plastics from the Duck Creek watershed. The MWP sponsors a Spring Clean-Up day in Juneau every year. Clean-up activities should be coordinated with the Alaska Department of Fish and Game (ADF&G) to ensure that the cleanup operations do not degrade fish habitat. Appendix A provides an example "Cleanup Kit," which would be useful for such clean-up efforts.

It is thought that most of the debris and solid waste impairment to Duck Creek is caused by debris and solid waste placed directly into the stream and delivered to the stream by runoff and wind from urbanized areas where trash accumulates. Table 2 presents some simple BMPs that can help limit the amount of debris throughout the watershed and thereby prevent its eventual deposit into the Duck Creek corridor.

Table 2. Potential BMPs for controlling debris and solid waste throughout the Duck Creek watershed

Best Management Practice	Potentially Responsible Entity	Goal(s)
Enforce local trash ordinances (such as fines for littering)	City and Borough of Juneau	Keep trash receptacles covered at all times. Collect trash and debris regularly.
Sweep streets	City and Borough of Juneau	Keep sidewalks and streets free of debris.
Encourage good housekeeping procedures by residents to keep storm water runoff free of debris	Mendenhall Watershed Partnership	Keep trash receptacles covered at all times. Collect trash and debris regularly. Limit amount of materials stored outdoors.
Enforce local ordinances to keep storm water runoff free of debris at local businesses and landfills	City and Borough of Juneau	Keep trash receptacles covered at all times. Collect trash and debris regularly. Limit amount of materials stored outdoors.
Install grating on storm runoff outfalls, if any exist, and schedule regular cleaning of the grates	City and Borough of Juneau	Prevent any debris transported by storm runoff from reaching the stream.
Conduct an annual trash clean-up	City and Borough of Juneau, Mendenhall Watershed Partnership	Reduce amount of debris accumulated and available for washoff in storm runoff.
Conduct public education about the importance of "good housekeeping" throughout the watershed	Mendenhall Watershed Partnership	Discourage dumping of materials into stream and on streambanks. Discourage throwing trash into the stream while walking, biking, or driving near the stream. Encourage citizens to pick up and properly deposit trash in a covered receptacle.
Enact stream setback ordinances	City and Borough of Juneau	Reduce likely proximity of debris to stream to prevent transport by wind, snowmelt and runoff
Hold adopt-a-stream clean-up days	Mendenhall Watershed Partnership	Clean up debris from stream and streambanks
Perform storm drain stenciling	Mendenhall Watershed Partnership	Prevent direct deposit of debris into storm drains

Public Participation Process

EPA published a public notice that this proposed TMDL was open for public comment from August 15, 2000 to September 15, 2000 in two newspapers in the Juneau area: Juneau Empire and the Capital City Weekly. This proposed TMDL was presented at the Duck Creek Advisory Group's meeting on August 16, 2000. In the public notice, EPA invited the public to attend this meeting. EPA developed a website, which included the public notice, a fact sheet and the draft TMDL and advertised the website address in the public notice. This website was posted on both EPA Region 10's website and linked from Alaska Department of Environmental Conservation's website. Additionally EPA directly sent and e-mailed copies of the public notice and draft TMDL to key federal, state and local agencies, environmental groups and other local organizations.

EPA received no comments on this specific TMDL; therefore, EPA did not need to develop a responsiveness summary.

References

ADEC. 1998. Final 1998 Alaska 303(d) List of Impaired Waters. Alaska Department of Environmental Conservation.

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Mendenhall Watershed Partnership, Winter 2000. *Water Ways*. Mendenhall Watershed Partnership, Juneau, AK.

USEPA. 1991. *Guidance for Water Quality-based Decisions: The TMDL Process*. EPA 440/4-91-001. U.S. Environmental Protection Agency, Washington, DC.

Appendix A: Watershed Cleanup Kit

Public Notice

The weekend of _____ has been designated by the Mendenhall Watershed Partnership (MWP) to remove debris and solid waste from Duck Creek. The MWP will lead this effort, which began with development of a strategy to clean up the watershed. The Duck Creek Watershed Recovery Strategy explains the details of the cleanup effort and is available for public review.

The goal of the strategy is to meet water quality standards and remove the watershed from the Alaska Department of Environmental Conservation's list of "impaired waterbodies." Its recommendations are intended to keep the watershed clean in the future.

The Duck Creek Watershed Recovery Strategy is being coordinated with the Alaska Department of Fish and Game to ensure the area's fish and wildlife habitat is protected.

The public is invited to review the Duck Creek Watershed Recovery Strategy available at _____. For more information, contact _____ at (xxx) xxx-xxxx.

A Telephone Script for Contacting Landowners Along Duck Creek

Hello, my name is _____ and I'm calling from the Juneau _____.

I'm calling you because some of our employees and a few volunteers will be working in your neighborhood during the weekend of _____ as part of a cleanup of Duck Creek. We wanted to let you know there will be some people in and around the creek during those days.

The project's goal is to remove debris, solid waste, metal, and plastics from the stream and its watershed to ensure that the creek can be used safely by people, as well as fish and wildlife.

Would you object to these volunteers removing debris they find along the banks that may be on your property?

___Yes, I object Notes: _____
___No, I don't object; you have my permission Notes: _____
___Maybe; here is my concern: _____

Comments:

Name of respondent: _____
Address: _____
Daytime phone: _____
Evening phone: _____

A Cleanup Data Card for Tracking Litter Collected

Duck Creek Watershed Partnership Cleanup Data Card

Litter degrades our environment. Thank you for participating in the Litter-Free Cleanup and completing this data card. Data collected will be used to publicize information about the type, amount, and location of litter collected to let Juneau know what is trashing our roadways, streams, and neighborhoods. When people become aware of the problem, we hope they will be more careful with their trash. Please complete the following information and return this card at the SPRING CLEANUP.

Safety Tips:

1. **Wear gloves and boots**
2. **Be careful with sharp objects**
3. **Do not damage stream banks**
4. **Do not lift anything too heavy**

Location cleaned: _____

Number of people working together: _____

Estimated distance cleaned: _____

Today's date: _____

Name: _____ Affiliation: _____ Age: ____

Address: _____

City: _____ State: _____ ZIP code: _____

Phone: _____

ITEMS COLLECTED

PLASTIC			
Bags	total	Bottles	total
Toys	total	Tires	total
Diapers	total	Rope	total
Utensils	total	6-pack holders	total
Lids	total	Tarps/visqueen	total
Straws	total	Strapping bands	total
Buckets	total	Pieces	total
Other (specify)			
RUBBER			
Tires	total	Balloons	total
Other (specify)			
GLASS			
Bottles/jars	total	Pieces	total
Light bulbs	total		
Other (specify)			
METAL			
Batteries	total	Lids/pull tabs	total
Car parts	total	Barrels/buckets	total
Other (specify)			
PAPER			
Bags	total	Cardboard	total
Newspaper/magazines	total	Cigarette butts	total
Other (specify)			
WOOD			
Plywood	total	Pallets	total
Lumber pieces	total		
Other (specify)			
FOAMED PLASTIC			
Packing material	total	Cups/plates	total
Fast food containers	total	Pieces	total
Other (specify)			