

**Department of Environmental Conservation**

**Division of Water**

**2010 Integrated Water Quality Monitoring and  
Assessment Report**

**Responsiveness Summary**

**Public Noticed**

**February 26, 2010 – March 30, 2010**

**DATE July 15, 2010  
Revised September 29, 2010**

## Introduction

### Summary of Project

Every two (2) years the Department of Environmental Conservation is required to report on the condition of Alaska's waters in accordance with the Clean Water Act. The Integrated Water Quality Monitoring and Assessment Report (Integrated Report) categorizes known waterbodies in Alaska and includes the federal Clean Water Act (CWA) reporting requirements for the 305(b) report and the 303(d) list of polluted or impaired waters. The Integrated Report also helps the State prioritize waters for data gathering, watershed protection and restoration of impaired waters.

There are five categories used in the report to which a waterbody can be assigned:

- **Category 1.** All the water quality standards for all designated uses are attained.
- **Category 2.** Some of the water quality standards for the designated uses are attained, but data and information to determine if the water quality standards for the remaining uses are attained are insufficient or absent.
- **Category 3.** Data or information is insufficient to determine that the water quality standards for any of the designated uses are attained.
- **Category 4.** The waterbody is determined to be impaired but does not need a Total Maximum Daily Load (TMDL).
  - **Category 4a.** Impaired waters with an established and EPA-approved TMDL.
  - **Category 4b.** Impaired waters with established "other pollution control requirements" to meet water quality standards.
  - **Category 4c.** Impaired waters that fail to meet a water quality standard which is not caused by a pollutant, but instead is caused by other types of pollution.
- **Category 5.** Water quality standards for one or more designated uses are not attained and the waterbody requires a TMDL or recovery plan. Category 5 waters are the Section 303(d) list of impaired waters.

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The 2010 Integrated Report documents the following water quality impairment changes from the 2008 Integrated Report:

Addition of nine new impairments to the Section 303(d) list of impaired waters (Category 5):

- Coffman Cove Creeks – consisting of five creeks, impaired from cadmium, copper, iron, manganese, nickel, and zinc
- Cottonwood Creek – 7 miles of the creek are being listed for fecal coliform bacteria.
- Kuskokwim River – impaired from antimony, arsenic, and mercury
- Red Devil Creek – impaired from antimony, arsenic, and mercury
- Salt Chuck Bay – impaired from copper

Waters now attaining WQS:

- Caribou Creek – The water is meeting the turbidity standard.
- Iliuliuk Bay – The bay is meeting the petroleum hydrocarbons standard.
- Jewel Lake – The water is meeting the fecal coliform bacteria standard.
- Kenai River – The river is meeting the petroleum hydrocarbons standard.
- Nakwasina River – The water is meeting the turbidity and sediment standards.

Impaired waters now under a plan:

- Jordan Creek – A TMDL has been developed for sediment and dissolved oxygen.
- Klag Bay – A TMDL has been developed for metals.
- Noyes Slough – A TMDL has been developed for residues; the waterbody remains impaired from sediment and petroleum hydrocarbons.
- Pullen Creek – A TMDL has been developed for metals.

Modification of waters with impairments:

- Cottonwood Creek – This water is no longer impaired from residues; however, 7 miles of the creek are being listed for fecal coliform bacteria.
- Chena River – This water is no longer impaired from petroleum hydrocarbons; it remains listed for sediment.

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- Chena Slough – This water is no longer impaired from petroleum hydrocarbons; it remains listed for sediment.
- Dutch Harbor – Most of the harbor has been found to be meeting WQS, but areas of impairment still exist.
- Hood/Spenard Lakes – This water is no longer impaired from fecal coliform bacteria; it remains impaired from low dissolved oxygen.
- Ward Cove – This water is no longer impaired from sediment toxicity; it remains impaired for residues.

### **Opportunities for Public Participation**

The Department formally requested a solicitation for existing and readily available water quality data and information from August 3 to September 18, 2009. The Department received information from three interested parties in response to this solicitation.

The Department formally published public notice of the proposed report on February 23, 2010. The Department posted the notice online in accordance with state requirements, provided downloadable files of the report on the Department website, and published the public notice in the Anchorage, Fairbanks, and Juneau newspapers. The notice was also published on a well known and used electronic newsletter of general circulation with environmental issues.

The Department received comments from four interested parties on the proposed 2010 report. The Department consulted externally with the Department of Natural Resources (DNR), and the Department of Fish and Game (DFG) regarding the information in the report. The Department also consulted internally with other sections, such as Drinking Water and Contaminated Sites Programs.

### **2010 Final Report**

The final report was submitted to the U.S. Environmental Protection Agency (USEPA) on July 19, 2010.

Several changes were made to the final report. Improvements were made to the Report to clarify language, indicate data limitations (e.g., when information was obtained), and provide more recent waterbody specific information. The draft Report proposed Kendrick Creek to be listed as impaired for gross alpha and gross beta from historic uranium mining operations. The Department re-evaluated the listing proposal based on public comment received and determined the water should not be listed. The final Report lists Kendrick Creek in Category 3.

## **Public Comments**

### **1. Information received during the formal request for information (August 3 – Sept. 18, 2009)**

#### **1.1 Summary**

Data submitted included extensive references and studies regarding ocean acidification; information was also submitted on Kendrick Bay/Kendrick Creek and several creeks in the Matanuska Susitna Borough.

#### **Response:**

The Department carefully reviewed data submitted to evaluate whether the information was specific to Alaska's waters. The Department also researched whether additional information was available to address the waterbodies of concern. DEC proposed in the draft report to Kendrick Creek list as impaired due to radioactivity as a result of public comment received during the formal request for information. No other waterbody specific changes were made as a result of the solicitation; DEC was aware of the information on the creeks in the Matanuska Susitna Borough; the ocean acidification information did not include sufficient data specific to Alaska's waters.

### **2. Comments received on the Draft Report (Feb. 23 – March 30, 2010)**

#### **Listing Methodology**

##### **Report Summary**

The report provides an overview of the approach and criteria for listing waterbodies as impaired. The term "persistent" is used as a key element in evaluating exceedances of Alaska's water quality standards and determining if a waterbody is impaired. Best professional judgment, ensuring credible data and other factors are used. The report also provided detailed description of the process used to make listing/delisting decisions for residues, turbidity and pathogens.

#### **2.1. Comment Summary**

A number of commenter's questioned the Department's listing methodology, particularly the methodology for residues. Commenter's questioned the current threshold being used and the need for more site-specific information.

**Response:**

A statement was added to the Report (under Criteria Used to Classify a Waterbody as Category 5) explaining that site specific information may be used to help determine impairment and may be used to justify variance from listing methodologies as long as the information provides a clear demonstration as to whether the waterbody is meeting the applicable water quality standard.

The listing methodology for residues was not changed from prior reports. No changes in waterbodies considered impaired from residues occurred in the 2010 report. Site specific information is used in conjunction with general guidance to evaluate the conditions at a given site and determine whether impairment exists.

The Department recognizes that EPA has not approved the state's standard for residue. Once a new standard is approved, the residues guidance for determining impaired waterbodies may change.

**2.2. Comment Summary**

Comments questioned the timeframe, number of samples and the presence of wildlife when evaluating impairments due to pathogens.

**Response:**

DEC believes it is important to show persistent exceedances, not merely a violation of the standard prior to determining a waterbody is impaired. The number of samples and timeframe recommended are designed to evaluate for persistence. Alaska's water quality standards state that "The water quality standards set by this chapter specify the degree of degradation that may not be exceeded in a waterbody as a result of human actions." (18 AAC 70.010. General.) Waters are only Section 303(d) listed as impaired if it is a result of human actions, water should not be listed as impaired if the fecals are from wildlife sources. The abundance of wildlife in Alaska warrants evaluating their impact before determining a water is impaired.

**2.3. Comment Summary**

Comments questioned the use of best professional judgment and the policy that only the data that was necessary to list is necessary to delist.

**Response:**

The Department believes that all listing decisions should incorporate best professional judgment in the final decision. The Department uses all available evidence in its decision whether to list or delist a waterbody. The Department must balance the need for additional data against available resources and other waterbody assessment needs.

**2.4. Comment Summary**

Comments questioned the data set required to make impairment decisions. Eliminating data from storm events was specifically questioned.

**Response:**

The report was modified to clarify the use of data related to storm events; the Department believes that water quality standards should be persistently violated prior to determining that a waterbody is impaired. This generally requires a number of sampling events over a given timeframe.

**Waterbody Specific Decisions**

**2.5. Comments Summary**

Comments were received on the decision to list Kendrick Creek. Commenter's specifically questioned whether the listing determination incorporated levels of radium-226 but excluded activity from radon and uranium to determine exceedance of the water quality standard.

**Response:**

The Department has re-examined the data and determined that the data available does not justify placing Kendrick Creek as impaired. The Department's initial evaluation did not exclude activity from radon and uranium in the initial determination. The Department has placed Kendrick Creek in Category 3 in the final report. The Department will continue to evaluate additional data being collected to determine if water quality standards have been persistently

exceeded. The public is welcome to provide data for evaluation in the 2012 report.

## **2.6. Comment Summary**

Comments were received recommending that the Coffman Cove Road clean-up site (Coffman Cove Creeks) , the Salt Chuck Mine clean-up site (Salt Chuck Bay) and the Bokan Mountain clean-up Site (Kendrick Creek) be placed into Category 4b (impaired with a plan).

### **Response:**

The Department agrees that these sites are strong candidates for Category 4b. The analysis supporting that water quality standards will be met and other documentation required to satisfy the 4b requirements are not completed prior to the deadline for the 2010 Integrated Report.

## **2.7. Comment Summary**

Commenter's requested listing Dry Creek as impaired.

### **Response:**

The Department does not have sufficient information to determine the waterbody status of Dry Creek.

## **3. Editorial corrections and non-applicable comments**

### **3.1. Comments Summary**

Additional information was requested.

### **Response:**

Information requested by the commenter has been submitted under separate cover. Information is available from the Department upon request.

### **3.2. Comment Summary**



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Clarification was requested in several areas of the report.

**Response:**

The Department has made editorial changes to the report for clarity.