

Department of Environmental Conservation

Division of Water

**2012 Integrated Water Quality Monitoring and
Assessment Report**

Responsiveness Summary

December 24, 2013

Introduction

Summary of Project

Every two years the Alaska Department of Environmental Conservation (DEC) is required to report on the condition of Alaska's waters in accordance with the federal Clean Water Act (CWA). The Integrated Water Quality Monitoring and Assessment Report (Integrated Report) categorizes known waterbodies in Alaska and includes the 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.

In the Integrated Report, a waterbody can be assigned to one of five categories:

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

Among the changes from the 2010 Integrated Report, DEC proposed to change the waterbody category of a number of waterbodies. Specifically:

Three waters previously identified as impaired are now attaining some criteria and are in Category 2:

- East Port Frederick, near Hoonah, where the marine waterbody is meeting the residues criteria.
- Eyak Lake, Cordova, where the waterbody is meeting the petroleum hydrocarbons criteria.
- Fubar Creek on Prince of Wales Island, where the waterbody is meeting the sediment criteria.

Seven impaired waterbodies are now under a plan and are in Category 4:

- Big Lake, near Wasilla, is now in Category 4a, because a TMDL has been developed for petroleum hydrocarbons.
- Dutch Harbor, near Unalaska, is now in Category 4a, because a TMDL has been developed for petroleum hydrocarbons.
- Iliuliuk Harbor, near Unalaska, is now in Category 4a, because a TMDL has been developed for petroleum hydrocarbons.
- Noyes Slough, in Fairbanks, is now in Category 4a, because a TMDL has been developed for petroleum hydrocarbons.
- Red Lake/Anton Road Pond, are now in Category 4a, because a TMDL has been developed for iron and manganese.
- Skagway Harbor, at Skagway, is now in Category 4a, because a TMDL has been developed for petroleum hydrocarbons. Also, as part of the TMDL data collection efforts, the east harbor (small boat harbor area) was found to be attaining water quality criteria.
- Tongass Narrows, Ketchikan Harbor, is now in Category 4b, because a waterbody recovery plan (4b) has been developed for seafood residues.

Three new waterbodies are placed in Category 5/Section 303(d) impaired list:

- Hawk Inlet, NW Admiralty Island, where a small portion of the marine sediment is impaired from cadmium, copper, lead, mercury, and zinc.
- Kimshan Cove, west Chichagof Island, where the marine sediment is impaired from arsenic, copper, lead, and mercury.
- Stampede Creek, Denali National Park and Preserve, where the waterbody is impaired from antimony.

Four modifications of waterbodies with impairments are proposed:

- Akutan Harbor in the Aleutians – This waterbody is no longer impaired from dissolved gas (low dissolved oxygen) but remains in Category 4a as impaired for residues with a TMDL.
- Ship Creek in Anchorage – This waterbody is no longer impaired from petroleum hydrocarbons but remains in Category 4a as impaired from fecal coliform bacteria with a TMDL.
- Slate Creek in Denali National Park and Preserve – This waterbody is no longer impaired from turbidity but has been determined to be impaired from antimony and arsenic.
- Skagway Harbor in Skagway – This waterbody is no longer impaired from metals but has been determined to be impaired from petroleum hydrocarbons with a TMDL. As part of the TMDL data collection efforts, the east harbor (small boat harbor area) was found to be attaining water quality criteria.

Other broader changes reflected in the 2012 Integrated Report include the following:

- 21 new waterbodies are reported in Category 3 because waterbodies were added to the DEC water quality assessment database, which now identifies 326 waterbodies in Category 3.
- Narratives were updated based on existing and readily available information. Updates to Category 4a waterbody narratives were completed to describe development of TMDLs.
- Alaska Clean Water Actions waterbody priority rankings are included in Appendix H.
- Some descriptions of water quality management programs were updated in Appendix F.

Opportunities for Public Participation

To aid in development of the final 2012 Integrated Report, the Department issued a solicitation for existing and readily available water quality data and information from August 1, 2011 to September 14, 2011. The Department posted the notice online in accordance with state requirements; provided downloadable files of the Integrated Report on the Department website; and published the public notice in the Anchorage, Fairbanks, and Juneau newspapers.

The Department formally published a 30-day public notice of the draft 2012 Integrated Report on August 7, 2012. The Department posted the notice online in accordance with state requirements; provided downloadable files of the Integrated 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 nine interested parties on the draft 2012 Integrated Report. An additional comment was received after the deadline. The Department also consulted with the Department of Natural Resources (DNR), the Department of Fish and Game (DFG), and EPA regarding the information in the Integrated Report.

2012 Final Integrated Report

The final Integrated Report was submitted to EPA on December 24, 2013. Additional information on waterbodies, including the Cabin Creek demonstration showing that other pollution controls are expected to result in attainment in a reasonable amount of time (Category 4b), was also submitted separately.

Several changes were made to the final Integrated Report. The TMDL for Red Lake/Anton Road Pond was completed and the waterbody moved from Category 5 to Category 4a. Other changes included: providing additional information on specific waterbodies, providing updated information and correcting editorial mistakes.

Individuals/Organizations Commenting

The DEC received comments on Alaska's draft 2012 Integrated Report from nine members of the public:

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|----------------------|---|
| 1. Amber Every | A signed petition of "450 Concerned Citizens" |
| 2. Miyoko Sakashita | Center for Biological Diversity |
| 3. Gary Fandrei | Cook Inlet Aquaculture Association |
| 4. David Croxton | U.S. EPA |
| 5. Dwight Kramer | Kenai Area Fisherman's Coalition |
| 6. Kenneth E. Tarbox | self |
| 7. Robert Ruffner | Kenai Watershed Forum |
| 8. Guy Archibald | Southeast Alaska Conservation Council |
| 9. David Martin | United Cook Inlet Drift Association |

Comments

Waterbody Specific Comments Related to Integrated Report

1. Comment Summary

DEC received several comments on a number of specific waterbodies. Comments ranged from support of listing decisions to questioning reclassification.

Response:

DEC carefully reviewed data submitted to evaluate whether listing decisions were accurate. DEC used the thresholds described in the Integrated Report for each of the listings. As noted in the Integrated Report, sufficient and credible waterbody information is needed to evaluate if persistent exceedances exist. Data quality is imperative although DEC may use screening data to warrant more comprehensive evaluations. CWA Section 303(d) impaired waterbody listing decisions are parameter specific resulting in a given waterbody being considered impaired for one parameter while attaining criteria for other parameters. Delisting decisions require the same level of analysis as done for the initial listing.

2. Comment Summary

Multiple commenters urged the Department to list the Kenai River on the Section 303(d) list as impaired for turbidity.

Response:

DEC will be evaluating the Kenai River turbidity data in comparison to the criteria used to determine impairments (see Integrated Report, Appendix I). DEC anticipates the analysis to be completed prior to the publication of Alaska's Draft 2014 Integrated Report, currently scheduled to be public noticed in early 2014. The public notice of the Draft 2014 Integrated Report will provide opportunity to a broad spectrum of individuals to evaluate the data which is available and augment the data if possible.

3. Comment Summary

Multiple commenters urged the Department to list the Little Susitna River for turbidity and petroleum hydrocarbons.

Response:

DEC will be evaluating Little Susitna River turbidity data in comparison to the criteria used to determine impairments (see Integrated Report, Appendix I). DEC anticipates the analysis to be completed prior to the publication of Alaska's Draft 2014 Integrated Report. DEC is developing criteria for use in determining petroleum hydrocarbons impairments and will be evaluating whether the cumulative data supports listing the Little Susitna River as impaired for petroleum hydrocarbons in the draft 2014 Integrated Report. The draft 2014 Integrated Report is scheduled to be public noticed in early 2014.

4. Comment Summary

One commenter urged the Department to list Alaska's oceans on the Section 303(d) list as impaired for ocean acidification. A list of research papers was provided.

Response:

The Alaska-specific research papers on north Pacific marine waterbodies were reviewed. DEC determined there is quite a bit of variability in Alaska's oceans throughout the year and the information provided does not demonstrate persistent exceedances of water quality criteria. The information provided does not distinguish what changes could be attributed to anthropogenic sources versus natural environmental processes that affect ocean acidification. Furthermore, many of the research papers indicate that further long term studies are needed to illuminate conditions and any problems.

5. Comment Summary

One commenter suggested that the Big Lake TMDL should specify specific measures.

Response:

The TMDL (Table 7.1 Actions Items Identified by the Big Lake Community to Address Impairment in Big Lake) lists specific measures that are occurring. The community continues to work on implementing the actions described.

6. Comment Summary

One commenter noted that DEC placed Womens Bay (Kodiak Island Borough) in Category 3. The commenter questioned why available data from EPA's Resource Conservation Recovery Act program is insufficient to make a waterbody attainment/non-attainment decision.

Response:

DEC has not been provided any water quality data regarding Womens Bay. DEC has requested the information from EPA.

7. Comment Summary

One commenter noted that DEC placed Tongass Narrows 2 in Category 4b, citing the Trident Consent Decree as a recovery plan and TMDL alternative, while Tongass Narrows 1 remains in Category 2. Please provide further explanation of the geographic delineation between Tongass Narrows 1 and Tongass Narrows 2 and include this information in the waterbody descriptions.

Response:

The waterbody proposed as impaired in the draft 2012 Integrated Report was mistakenly identified as Tongass Narrow 2 when it should be Tongass Narrows 1. The name change was

made in the Final Integrated Report. The Tongass Narrows 1 waterbody area is associated with the discharge from the onshore Trident Seafood facility (permit # AKG520002). The Tongass Narrows 1/Trident Seafood facility is over 1,000 feet to the northwest of the Tongass Narrows 2 area, which is associated with the onshore Alaska General Seafoods facility (permit # AKG520090).

8. Comment Summary

One commenter questioned the extent of the Tongass Narrow impairment.

Response:

All readily available information was reviewed to determine the area of impairment (consistent with the residue impairment guidance). Seafloor surveys from 2008-2011 were reviewed to determine whether an impairment was present.

9. Comment Summary

One commenter is disappointed that the five Unnamed Creeks that apparently flow into Sweetheart Lake are not higher up on the TMDL Schedule and Factors (Appendix C).

Response:

Staff resources limit the number of TMDLs that can be completed each year. Appendix C details the list of factors considered when establishing the TMDL schedule. The factors include the likelihood that the proposed restoration efforts might occur in a reasonable amount of time making TMDL development unnecessary. DEC is working with the U.S. Forest Service to address the contamination in the five Unnamed Creeks. Monitoring results in 2011 suggest that the restoration efforts are returning the five creeks to previous levels of water quality. Expending limited staff resources for development of a TMDL at this time would be premature.

10. Comment Summary

One commenter recommends that Hawk Inlet be placed higher on the TMDL Completion Schedule than 2017 (Appendix C).

Response:

Staff resources limit the number of TMDLs that can be completed each year. The length of time a waterbody has been on the 303(d) list is considered when establishing the TMDL schedule. Hawk Inlet was recently added to the list in 2012.

11. Comment Summary

One commenter suggested that the proposed area of impairment for Hawk Inlet is too restricted.

Response:

DEC evaluated all waterbody and sediment data available. While DEC does not have a formal standard for sediment or tissue quality, DEC applies the National Oceanic and Atmospheric Administration (NOAA) Screening Quick Reference Table (SQuiRT) screening recommendations for marine sediment when making a 303(d) listing determination. Documentation associated with the Ore Dock operated by Hecla Mining indicated that an area of concern, using the previously mentioned criteria, was limited to the area affected by a historic ore transfer accident. Additional documentation associated with the marine tidelands demonstrates that exceedances for select metals do occur at isolated locations but do not correlate to a particular event or between constituents. The presence of contaminants does not appear to be associated with a particular action or be persistent at this site. In accordance with previous listing policy, the area of impairment must be limited to a known, persistent source.

12. Comment Summary

One commenter suggested that data for Lower Tributary Creek and its headwaters and Althea Creek (Hawk Inlet area) show impairment.

Response:

DEC evaluated the information provided and determined there was not a persistent exceedance of the water quality criteria.

13. Comment Summary

One commenter questioned how compliance with permit standard demonstrates “attainment”.

Response:

DEC issues permit authorizations to ensure compliance with Alaska’s water quality regulations. The limits and conditions are established in permits to ensure that the designated uses are protected (i.e., attainment) and that the discharge will not create persistent water quality exceedances.

General Comments**14. Comment Summary**

One commenter requested information on several waterbodies including information gathered under the under the Beaches Environmental Assessment and Coastal Health (BEACH) Program. They also requested updated information on waterbodies in Category 4b.

Response:

DEC provided requested information and data to the requestor under separate cover. BEACH data are also available on the EPA BEACH web page at <http://watersgeo.epa.gov/beacon2/>.

15. Comment Summary

One commenter noted that the Integrated Report states that “waterbodies that are under EPA compliance orders for seafood residue violations may also be considered for placement in Category 4b if compliance with the order ensures that the water will attain the water quality standard for the residues in a reasonable time period.” To be clear, for the waterbody to be removed from Category 5 and placed in Category 4b, the compliance order must include all of the facilities that are contributing to the impaired condition and/or must cover the entirety of the waterbody. If this is not the case, the appropriate portion, which is included in the compliance order, may be moved to 4b, while the remainder of the impaired waterbody will remain in Category 5 until such time that a recovery plan is devised for that area.

Response:

DEC agrees with this comment. The 2012 Integrated Report has been clarified in several sections. Language was changed in Chapter 2, Categories and Assessments, Criteria Used to Classify a Waterbody as Category 4b and Appendix G, Interpretation of the Residue Criteria to: “If the compliance order(s) include all the facilities impacting the waterbody and ensures that the water...”

16. Comment Summary (4)

One commenter noted that DEC discusses the term persistent and the use of best professional judgment. The commenter maintains that when methods such as the “10% exceedance” rule and clear standards and methodology indicating magnitude, duration and frequency are used, exceedances will be clear and there will be no need to rely on best professional judgment. EPA guidance should be added to the list of considerations.

Response:

DEC added EPA guidance to the list of considerations. There are instances when the water quality data may clearly show there are water quality exceedances. Alaska’s listing methodology and EPA guidance would then dictate listing the waterbody as impaired; however, even in those instances there is best professional judgment applied to the determination.

17. Comment Summary

One commenter noted that on page 21, in reference to delisting, the Integrated Report states that, “the level of data to support a determination and burden of proof are not required to be greater than were used in the initial listing determination.” The commenter asserts that good cause and data indicating with confidence the attainment of water quality standards should be used to make a delisting decision. The most advanced technology and methods should also be applied, despite the fact that they may provide better resolution than the original assessment methods.

Response:

DEC policy is that the level of data needed to “delist” shall be no greater than the amount of data to “list.” DEC disagrees with the position to require the most advanced technology in all instances if the impaired listing methodologies do not dictate the use of such technologies. Requiring the most advanced technology could put a very expensive burden on DEC or the party responsible for the water quality impairment, with no environmental benefit.

18. Comment Summary

One commenter requested updated information on the Alaska Monitoring and Assessment Program (AKMAP) including current field surveys.

Response:

The table associated with the AKMAP field surveys has been updated.

DEC’s statement in the draft Integrated Report: “results of these surveys are not yet available for inclusion in the 2012 report” and the status of several projects was inaccurate and has been corrected. The 2006-2007 Aleutians Island survey was a complex project involving multiple disciplines. The original timeline associated with this survey was overly ambitious. The final report was completed in July 2012 and is posted on the DEC website (http://dec.alaska.gov/water/wqsar/monitoring/documents/Aleutian_Condition_Summary_Final.pdf).

19. Comment Summary

One commenter provided numerous comments on the method for determining impairments from residues.

Response:

EPA has not approved DEC’s revised residue criteria which was submitted on May 3, 2011. DEC has identified the residue criteria as a high priority for the Water Quality Standards Triennial Review but does not want to revise implementing policy until final regulations have been approved by EPA.

20. Comment Summary

One commenter noted that DEC indicates for Category 2 waterbodies, “monitoring should be scheduled for these waters to determine whether the uses previously found to be in attainment remain in attainment and to determine the attainment status of those uses for which data and information were previously insufficient to make a determination.” The commenter requests that information about how this monitoring is prioritized and where the schedule can be found be included in the Integrated Report.

Response:

That phrase quoted is verbatim from EPA’s Integrated Report guidance and is a recommended approach for Category 2 waterbodies in regards to monitoring.

DEC deleted the phrase from the Integrated Report. Alaska has very limited water quality monitoring resources and has higher monitoring priorities, such as impaired waterbodies, than Category 2 waterbodies, which are waterbodies that are attaining water quality criteria.

21. Comment Summary

Two commenters requested actions or information pertaining to Water Quality Standards including developing thresholds for contaminant loading in fish and shellfish tissue.

Comments also noted that the draft Integrated Report explains that “Alaska WQS were most recently revised on May 26, 2011.” Please provide information on the nature of these revisions and when these revisions were approved by the EPA.

Response:

Comments are noted and communicated to DEC’s Water Quality Standards Section. The Integrated Report is not the correct venue to request changes to the water quality standards. Changes in water quality standards are conducted under separate regulatory process known as the Triennial Review. The Triennial Review outlines which standards are high priorities to address.

All information on recent revisions to Alaska’s WQS can be found here:

<http://dec.alaska.gov/water/wqsar/wqs/index.htm>.

22. Comment Summary

One commenter noted that the Integrated Report decisions fail to estimate economic and social costs and benefits needed to achieve the objectives of the CWA. The commenter suggested that DEC consider public health issues especially for customary and traditional users. The commenter requested DEC provide information on public health issues.

Response:

It is difficult to separate out the costs attributable to water quality pollution control efforts across state, regional, and local governments. DEC has no methods or methodologies that would truly capture the benefits of Clean Water Act implementation, including the public health benefits. Such an effort would be highly speculative, resource intensive, and result in little actual environmental benefit. DEC has never included such estimate costs and benefits in the Integrated Reports. Additionally, these analyses are not an EPA requirement but rather a recommendation. DEC does have a number of programs designed to protect public health. DEC’s Source Water Protection program and fish tissue monitoring are examples of these activities.

23. Comment Summary

Several comments were provided on the section in Appendix F which describes the APDES permitting program's priority setting and the level of review being conducted.

Response:

Additional information/clarification has been incorporated into the Integrated Report in Appendix F.

24. Comment Summary

One commenter suggested that the current monitoring program required by the APDES permit for Hawk Inlet is inadequate to detect impacts to designated uses from Outfall 002.

Response:

Comments on the permit requirements are addressed during the public notice and comment period for the permit.