

**Alaska Department of Environmental Conservation
Draft Waterbody Determination Paper
King Cove, Alaska
Residues Attainment**



Recommendation

Waterbody Name: King Cove

APDES Permit: AK0052388

Category recommendation: 4a to 2

Water Quality Standard Affected: Residues for Marine Water Uses

Designated Uses Affected: Growth and propagation of fish, shellfish, other aquatic life, and wildlife

Pollutant: Residues

Executive Summary

This document describes the data analysis and conclusions reached in evaluating King Cove residues for the 2020 Integrated Report (IR). King Cove was included in Category 5 in 1996 and a Total Maximum Daily Load (TMDL) was approved by EPA in 1998. Since then, the permit holder has instituted controls to reduce residues. King Cove has met the 1.0 acre zone of deposit (ZOD) for several years and is attaining the Residues standard for seafood discharge thus demonstrating that the controls are effective.¹ DEC recommends moving King Cove from Category 4a to Category 2 for Residues.

Basic Waterbody Information

Table 1. Basic Waterbody Information

| | |
|-----------------------------|--|
| Assessment Unit ID | AK_M_3010123_005 |
| Assessment Unit Name | King Cove, Sandman Reefs |
| Location description | King Cove Harbor; nearshore marine; HUC10 1903010123 |
| Water Type | Marine |
| Area attaining | 11 acres (original impaired area) |
| Time attaining | year-round |

¹ The DEC Listing Methodology for Determining Water Quality Impairments from Residues (2003) applies a 1.5 acre ZOD. Peter Pan Seafoods is authorized a 1.0 acre ZOD under APDES Permit AK0052388. A 1.0 acre ZOD was used in this attainment determination as required by the permit and by the EPA approved TMDL (1998).

Pollutant Status

Table 2. Alaska's Water Quality Standards at 18 AAC 70 (20) residues for marine water uses²

| Designated Use | Water Quality Criteria | Status |
|---|--|------------|
| (A) Water Supply (i) aquaculture | May not, alone or in combination with other substances or wastes, make the water unfit or unsafe for the use. May not cause detrimental effects on established water supply treatment levels. | Supporting |
| (A) Water Supply (ii) seafood processing | May not, alone or in combination with other substances or wastes, make the water unfit or unsafe for the use; cause a film, sheen, or discoloration on the surface of the water or adjoining shorelines; cause leaching of toxic or deleterious substances; or 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 upon adjoining shorelines. | Supporting |
| (A) Water Supply (iii) industrial | May not, alone or in combination with other substances or wastes, make the water unfit or unsafe for the use. | Supporting |
| (B) Water Recreation (i) contact recreation | Same as (20)(A)(ii) | Supporting |
| (B) Water Recreation (ii) secondary recreation | Same as (20)(A)(ii) | Supporting |
| (C) Growth and Propagation of Fish, Shellfish, Other Aquatic Life, and Wildlife | May not, alone or in combination with other substances or wastes, make the water unfit or unsafe for the use, or cause acute or chronic problem levels as determined by bioassay or other appropriate methods. May not, alone or in combination with other substances, cause a film, sheen, or discoloration on the surface of the water or adjoining shorelines; cause leaching of toxic or deleterious substances; or 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 upon adjoining shorelines. | Supporting |

² Alaska Department of Environmental Conservation (ADEC). 2003. *18 AAC 70 Water Quality Standards*. As amended through June 26, 2003. DEC adopted revised criteria for residues in 2011. DEC is awaiting final action from EPA prior to application of the revised criteria per CFR 131.5

| | | |
|--|---|------------|
| (D) Harvesting for Consumption of Raw Mollusks or Other Raw Aquatic Life | May not make the water unfit or unsafe for the use; cause a film, sheen, or discoloration on the surface of the water or adjoining shorelines; cause leaching of toxic or deleterious substances; or 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 upon adjoining shorelines. | Supporting |
|--|---|------------|

Attainment Evaluation

Background

King Cove is located adjacent to the City of King Cove, in the Aleutians East Borough on the Alaska Peninsula. The cove itself is approximately 1.5 square miles, or 800 acres in size. Commerical fishing and seafood processing are the primary drivers of the local economy. Peter Pan Seafoods, Inc. (PPSF) operates a seafood processing facility with Alaska Pollutant Discharge Elimination System (APDES) permit number AK0052388.

Historically PPSF discharged waste materials through a pipe in the northwest side of the cove which led to an impairment listing the 1996 Integrated Report with an 11 acre ZOD (Figure 1). A TMDL was approved by EPA in 1998. In spring 1998, PPSF installed a meal plant at the facility to reduce the seafood processing wastes being discharged to the King Cove receiving waters and later established a minimum standard of 0.5 mm screening for all fish processing wastewaters. This facility no longer produces or deposits any solid seafood wastes at this location and the existing historic pile has remained static since the meal plant was installed. At this time only high pressure screened seafood processing wastewater is discharged through the outfall line.

The outfall was replaced in spring 2018 and placed 130 feet west of the previous outfall terminus, but still within the ZOD footprint. The terminus depth decreased from -63 ft mean lower low water (MLLW) to -49 ft MLLW.

The current APDES permit requires annual seafloor monitoring (dive surveys) to evaluate the size, depth, and overall status of the seafloor residues pile surrounding the discharge point. Table 3 shows the past 5 years of ZOD measurements from the dive surveys. PPSF has been able to maintain a less than one-acre ZOD through operating their meal plant and using screening.

Table 3. Zone of Deposit (acres) measurements for King Cove from 2015-2019.

| Year | Zone of Deposit Estimate (acres) | Zone of Deposit Exceedance (acres) |
|-------|----------------------------------|------------------------------------|
| 2015 | 0.15 | 0.00 |
| 2016 | 0.16 | 0.00 |
| 2017 | 0.19 | 0.00 |
| 2018* | 0.30 | 0.00 |
| 2019* | 0.38 | 0.00 |

* 2018 and 2019 measurements include continuous and discontinuous coverage.

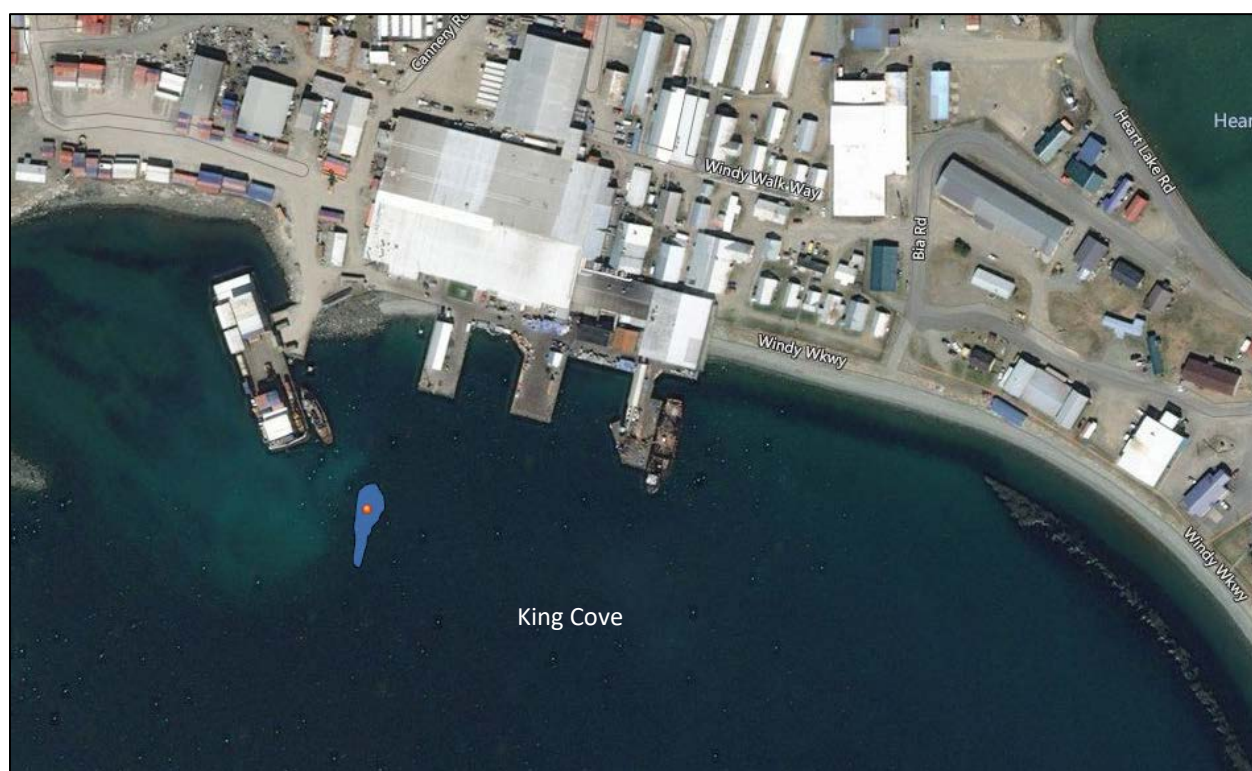


Figure 1. Impaired area (blue shaded) in King Cove, AK

Conclusion

DEC recommends moving King Cove from Category 4a to Category 2 in the 2020 Integrated Report as consistently meeting the Residues standard. The TMDL will remain in effect.