

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

1989 NONPOINT SOURCE WATER QUALITY ASSESSMENT

LONG FORM

\*\*\* WATERBODY \*\*\*

Name of Waterbody: Belly Flats (Near Kodiak, AK)

Location or Lat/Long: ~~Lower portion of Russian Sargent & Tamana Crs.~~  
Sec. 29, 30, 31, 32 T. 28 S., R 20 W, S. M. and Sec. 1, T. 29 S., R 21 W, S. M. and Sec. 6, T. 29 S., R 20 W., S. M.

<b>Waterbody Type:</b>	<b>Waterbody Size:</b>	<b>ADEC USE ONLY</b> 304: N L M S WQL: 0 - N 1 - PS 2 - NPS 3 - WQS 4 - Con/Ent ID#: _____
<input type="checkbox"/> River/Stream	_____ Miles	
<input type="checkbox"/> Lake	_____ Acres/Hectares	
<input checked="" type="checkbox"/> Fresh Wetland	<u>600</u> Acres/Hectares	
<input checked="" type="checkbox"/> Tidal Wetland	<u>700</u> Acres/Hectares	
<input type="checkbox"/> Estuary	_____ Square Miles	
<input type="checkbox"/> Coastal Shoreline	_____ Square Miles	
<input type="checkbox"/> Groundwater	_____ Square Miles	

Segment of Waterbody Addressed:  
 From: \_\_\_\_\_  
 To: \_\_\_\_\_  
 Other Description: lower portion of Russian, Sargent & Tamana riffs Crs.  
 Size of Segment: \_\_\_\_\_

USGS Hydrologic Unit #: AK 190 20701-701

\*\*\* ASSESSMENT \*\*\*

Describe Source of Pollution and Documentation Provided: Land Fill Activities, Septic Tank Failure From Surrounding Developed UPLANDS, Agricultural runoff, road runoff impacting wetlands.

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Type of Documentation (Attached If Possible):

<input type="checkbox"/> Water quality data	<input type="checkbox"/> Written report
<input type="checkbox"/> Documented oil spill	<input checked="" type="checkbox"/> Field notes
<input type="checkbox"/> Enforcement action	<input type="checkbox"/> Overflight
<input type="checkbox"/> Photos with documentation	<input type="checkbox"/> Observation
<input type="checkbox"/> Photos without documentation	<input type="checkbox"/> Other

Assessment type:

<input type="checkbox"/> Monitored
<input checked="" type="checkbox"/> Evaluated

Violation of Water Quality Standards:

<input type="checkbox"/> Past Violation Documented
<input type="checkbox"/> Current Violation Documented
<input checked="" type="checkbox"/> Current Violation Suspected
<input type="checkbox"/> Future Violation Projected

Waterbody Status:

<input type="checkbox"/> Impaired - Past
<input type="checkbox"/> Impaired - Current
<input checked="" type="checkbox"/> Suspected
<input type="checkbox"/> Unimpaired

Comments: Kodiak Island Borough has commented on problems.

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Author of This Assessment: CHRIS KENT Affiliation: ADEC Date: 89 09  
 YY/MM

**Meets Clean Water Act Goals:**

Fishable  
 Not Fishable  
 Fishable Not Attainable

Swimmable  
 Not Swimmable  
 Swimmable Not Attainable

*Suspected*  
**Impaired Uses:**

<b>FRESHWATER</b>	<b>MARINE</b>
<input checked="" type="checkbox"/> Drinking	<input type="checkbox"/> Aquaculture
<input type="checkbox"/> Agriculture	<input type="checkbox"/> Seafood Processing
<input type="checkbox"/> Aquaculture	<input type="checkbox"/> Industry
<input type="checkbox"/> Industry	<input type="checkbox"/> Recreation, Contact
<input type="checkbox"/> Recreation, Contact	<input type="checkbox"/> Recreation, Secondary
<input type="checkbox"/> Recreation, Secondary	<input checked="" type="checkbox"/> Fish, Shellfish, Wildlife
<input checked="" type="checkbox"/> Fish, Shellfish, Wildlife	<input type="checkbox"/> Harvest of Fish, Shellfish

**Support of Designated Uses:**

One or More Uses Not Supported (Impaired)  
 One or More Uses Partially Supported (Partially Impaired)  
 One or More Uses Suspected to Be Affected (Suspected)  
 One or More Uses Projected to Become Affected (Projected)  
 All Uses Fully Supported, sources present (Unimpaired)  
 All Uses Fully Supported, no sources present (Unimpaired)

<b>Trophic Status:</b>	<b>Trophic Trend</b>
<input type="checkbox"/> Oligatrophic	<input type="checkbox"/> Improving
<input type="checkbox"/> Mesatrophic	<input type="checkbox"/> Stable
<input type="checkbox"/> Eutrophic	<input type="checkbox"/> Deteriorating
<input type="checkbox"/> Hypereutrophic	
<input type="checkbox"/> Dystrophic	
<input checked="" type="checkbox"/> Unknown	

\*\*\* TOXICS \*\*\*

**Monitored for Toxics:**  Yes  No

**Type of Toxics Monitoring:**

<input type="checkbox"/> 1 Organics in water column	<input type="checkbox"/> 10 Metals in sediments
<input type="checkbox"/> 2 Organics in sediments	<input type="checkbox"/> 11 Metals in fish tissue
<input type="checkbox"/> 3 Organics in fish tissue	<input type="checkbox"/> 12 Metals in discharges
<input type="checkbox"/> 4 Organics in discharges	<input type="checkbox"/> 13 Other inorganics in water column
<input type="checkbox"/> 5 Pesticides in water column	<input type="checkbox"/> 99 Other inorganics in sediments
<input type="checkbox"/> 6 Pesticides in sediments	<input type="checkbox"/> 99 Other inorganics in fish tissue
<input type="checkbox"/> 7 Pesticides in fish tissue	<input type="checkbox"/> 14 Other inorganics in discharges
<input type="checkbox"/> 8 Pesticides in discharges	<input type="checkbox"/> 15 Toxicity testing of water column
<input type="checkbox"/> 9 Metals in water column	<input type="checkbox"/> 16 Toxicity testing of sediments
	<input type="checkbox"/> 17 Toxicity testing of discharges

**Fish and Shellfish Contamination:**

0 None detected  
 1 Contaminated fish  
 2 Fishing advisory  
 3 Fishing ban  
 4 Fish abnormalities  
 5 Shellfish restrictions due to pathogens  
 6 Fish kill

Pollutants: (H = High, M = Medium, S = Slight)

- |                                                 |                                                           |                                                             |
|-------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> 0 Cause Unknown        | Type _____                                                |                                                             |
| <input type="checkbox"/> 1 Unknown toxicity     | Type _____                                                |                                                             |
| <input type="checkbox"/> 2 Pesticides           | Type _____                                                |                                                             |
| <input type="checkbox"/> 3 Priority organics    | Type _____                                                |                                                             |
| <input type="checkbox"/> 4 Nonpriority organics | Type _____                                                |                                                             |
| <input type="checkbox"/> 5 Metals               | Type _____                                                |                                                             |
| <input type="checkbox"/> 6 Ammonia              | <input type="checkbox"/> 12 Organic enrichment            | <input type="checkbox"/> 18 Radiation                       |
| <input type="checkbox"/> 7 Chlorine             | <input type="checkbox"/> 13 Salinity/TDS/Chlorides        | <input checked="" type="checkbox"/> 19 Oil and Grease       |
| <input type="checkbox"/> 8 Other inorganics     | <input type="checkbox"/> 14 Thermal modifications         | <input type="checkbox"/> 20 Taste and Odor                  |
| <input type="checkbox"/> 9 Nutrients            | <input checked="" type="checkbox"/> 15 Flow alteration    | <input type="checkbox"/> 21 Suspended solids                |
| <input type="checkbox"/> 10 pH                  | <input checked="" type="checkbox"/> 16 Habitat alteration | <input type="checkbox"/> 22 Noxious aquatic plants          |
| <input type="checkbox"/> 11 Siltation           | <input type="checkbox"/> 17 Pathogens                     | <input checked="" type="checkbox"/> 23 Filling and draining |

Sources of Pollutants: (H = High, M = Medium, S = Slight)

Point Sources

- 1 Industrial
- 2 Municipal
- 3 Municipal pretreatment
- 4 Combined sewers
- 5 Storm sewers
- 6 Other dischargers

Resource extraction/exploration

- 51 Surface mining - *gravel*
- 52 Subsurface mining
- 53 Placer mining
- 54 Dredge mining
- 55 Petroleum activities
- 56 Mill tailings
- 57 Mine tailings

Nonpoint Sources

- 9 Unspecified

Land Disposal (Permitted Activities)

- 61 Sludge
- 62 Wastewater
- 63 Landfills
- 64 Industrial land treatment
- 65 Onsite wastewater systems
- 66 Hazardous waste
- 67 Septage disposal

Agriculture

- 11 Non-irrigated crop production
- 12 Irrigated crop production
- 13 Specialty crop production
- 14 Pasture land
- 15 Range land
- 16 Feedlots
- 17 Aquaculture
- 18 Animal holding areas
- 19 Manure lagoons

Hydrologic Modification

- 71 Channelization
- 72 Dredging
- 73 Dam construction
- 74 Flow regulation/modification
- 75 Bridge construction
- 76 Removal of riparian vegetation
- 77 Streambank modification
- 78 Draining/filling of wetlands

Silviculture

- 21 Harvest, restoration
- 22 Forest management
- 23 Road construction/maintenance

Other

- 81 Atmospheric deposition
- 82 Waste storage/storage tank leaks
- 83 Highway maintenance and runoff
- 84 Spills
- 85 In-place contaminants
- 86 Natural
- 87 Recreational activities
- 88 Upstream impoundment
- 89 Salt storage sites
- 99 Septic tank seepage

Construction

- 31 Highway/road/bridge
- 32 Land development

Urban Runoff

- 41 Storm sewers
- 42 Combined sewers
- 43 Surface runoff

Source Unknown

- 90 Source Unknown

DESCRIBE POLLUTANTS AND POLLUTANT SOURCES. THE BASIS FOR THE DETERMINATION THAT A WATERBODY IS IMPAIRED MUST BE EXPLAINED IN THIS SECTION. DESCRIBE THE NATURE OF THE VIOLATION OF WATER QUALITY STANDARDS, INCLUDING DATA OR OTHER DOCUMENTATION IN RELATION TO STANDARDS. ALSO DESCRIBE WHETHER THE VIOLATION IS CONSIDERED PAST OR CURRENT, AND OTHER RELEVANT INFORMATION.

Upland development is contributing to Roadrunners, sedimentation, habitat modification

**Point Sources:**

NPDES Permit Number: \_\_\_\_\_  
NPDES Permit Name: \_\_\_\_\_  
Causes Nonattainment:  Yes  No  
Pollutant: \_\_\_\_\_

NPDES Permit Number: \_\_\_\_\_  
NPDES Permit Name: \_\_\_\_\_  
Causes Nonattainment:  Yes  No  
Pollutant: \_\_\_\_\_

**Nonpoint Sources:**

Nonpoint Source Name: \_\_\_\_\_  
Nonpoint Source Type: \_\_\_\_\_  
Nonpoint Source Description: \_\_\_\_\_

Nonpoint Source Name: \_\_\_\_\_  
Nonpoint Source Type: \_\_\_\_\_  
Nonpoint Source Description: \_\_\_\_\_

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
1988 STATEWIDE WATER QUALITY ASSESSMENT

\*\*\* WATERBODY \*\*\*

Name of Waterbody: Bell Flats (lower portions of Tanana, Russian and Sargeant Creeks)  
Wetlands 701

Type/Size:  River/Stream \_\_\_\_\_ Miles 1300 acres  
 Lake \_\_\_\_\_ Acres/Hectares  
 Fresh Wetland 600 Acres/Hectares  
 Tidal Wetland 700 Acres/Hectares  
 Estuary \_\_\_\_\_ Square Miles  
 Coastal Shoreline \_\_\_\_\_ Miles  
 Groundwater \_\_\_\_\_

USGS Hydrological Unit #: 190- 020701

Location or Lat/Long: Sec. 29, 30, 31, 32, T. 28 S., R. 20 W., S.M. and  
Sec. 1, T. 29 S., R. 21 W., S.M. and Sec. 6, T. 29 S., R. 20 W., S.M.

Is the waterbody in a national or state park, monument, refuge, preserve, or similar area?:  Yes,  No, Name \_\_\_\_\_

AK 190  
ID#: 20701 701  
3041: N  M S  
WQL: 0 - N  
1 - PS  
2 - ~~NPS~~  
3 - WQS  
4 - Con/Enf  
Stat: I  U  
[ADEC Use Only]  
ST; RD; SM; SE; LF;  
GM; AG;

\*\*\* ASSESSMENT \*\*\*

Assessment Date: Yr 1986, Mo \_\_\_ / By US Army Corps of Engineers (COE) ADFC  
ANELL

Sampling: Begin Yr ?, Mo \_\_\_ / End Yr ?, Mo \_\_\_ / By COE

Reference for Data: Jack Ferrise 753-2720 wetland mapping effort by COE

Basis for Assessment:

<input checked="" type="checkbox"/> 1 Qualitative, land use/sources	<input type="checkbox"/> Monitored (Data)
<input type="checkbox"/> 1 Qualitative, complaints/2nd hand	<input checked="" type="checkbox"/> Evaluated (Judgement)
<input type="checkbox"/> 2 Predictive models, unverified	
<input type="checkbox"/> 3 Calibrated models	
<input type="checkbox"/> 4 Fixed station data, Bio or Chem	
<input type="checkbox"/> 5 Effluent toxicity testing	
<input checked="" type="checkbox"/> 6 Limited site visit	
<input type="checkbox"/> 7 Intensive field assessment	

Next Planned Assessment: Yr ?, Mo \_\_\_ / By \_\_\_\_\_

Comments: April 1988 - 2 new anadromous streams identified by  
ADFC in the area.

Size-A Size-M Support Partial Not-Sup Cause-% Size-10 Size-No Why?



\*\*\* USE STATUS \*\*\*

Meets Clean Water Act Goals:

- Fishable
- Not Fishable
- Fishable Not Attainable
- Swimmable
- Not Swimmable
- Swimmable Not Attainable

Impaired or Threatened Uses:

IMP THR - FRESHWATER

- Drinking
- Agriculture
- Aquaculture
- Industry
- Recreation, Contact
- Recreation, Secondary
- Fish, Shellfish, Wildlife

IMP THR - MARINE

- Aquaculture
- Seafood Processing
- Industry
- Recreation, Contact
- Recreation, Secondary
- Fish, Shellfish, Wildlife
- Harvest of Fish, Shellfish

Support of Designated Uses:

- All Uses Fully Supported, no sources present
- All Uses Fully Supported, sources present
- One or More Uses Threatened
- One or More Uses Partially Supported
- One or More Uses Not Supported

Trophic Status:

- Oligotrophic
- Mesotrophic
- Eutrophic
- Hypereutrophic
- Dystrophic
- Unknown - *in undisturbed areas is likely mesotrophic*

Trophic Trend:

- Improving
- Stable
- Deteriorating

\*\*\* TOXICS \*\*\*

Monitored for Toxics:  Yes ,  No

Type of Toxics Monitoring:

- 1 Organics in water column
- 2 Organics in sediments
- 3 Organics in fish tissue
- 4 Organics in discharges
- 5 Pesticides in water column
- 6 Pesticides in sediments
- 7 Pesticides in fish tissue
- 8 Pesticides in discharges
- 9 Metals in water column
- 10 Metals in sediments
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- 12 Metals in discharges
- 13 Other inorganics in water column
- 99 Other inorganics in sediments
- 99 Other inorganics in fish tissue
- 14 Other inorganics in discharges
- 15 Toxicity testing of water column
- 16 Toxicity testing of sediments
- 17 Toxicity testing of discharges



\*\*\* NONATTAINMENT CAUSES \*\*\*

Pollutants: (H = High, M = Medium, S = Slight)

- |                                                 |                                                           |                                                             |  |
|-------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------|--|
| <input type="checkbox"/> 1 Unknown toxicity     | Type _____                                                |                                                             |  |
| <input type="checkbox"/> 2 Pesticides           | Type _____                                                |                                                             |  |
| <input type="checkbox"/> 3 Priority organics    | Type _____                                                |                                                             |  |
| <input type="checkbox"/> 4 Nonpriority organics | Type _____                                                |                                                             |  |
| <input type="checkbox"/> 5 Metals               | Type _____                                                |                                                             |  |
| <input type="checkbox"/> 6 Ammonia              | <input type="checkbox"/> 12 Organic enrichment            | <input type="checkbox"/> 18 Radiation                       |  |
| <input type="checkbox"/> 7 Chlorine             | <input type="checkbox"/> 13 Salinity/TDS/Chlorine         | <input checked="" type="checkbox"/> 19 Oil and Grease       |  |
| <input type="checkbox"/> 8 Other inorganics     | <input type="checkbox"/> 14 Thermal modifications         | <input type="checkbox"/> 20 Taste and Odor                  |  |
| <input type="checkbox"/> 9 Nutrients            | <input checked="" type="checkbox"/> 15 Flow alteration    | <input type="checkbox"/> 21 Suspended solids                |  |
| <input type="checkbox"/> 10 pH                  | <input checked="" type="checkbox"/> 16 Habitat alteration | <input type="checkbox"/> 22 Noxious aquatic plants          |  |
| <input type="checkbox"/> 11 Siltation           | <input type="checkbox"/> 17 Pathogens                     | <input checked="" type="checkbox"/> 23 Filling and draining |  |

Sources of Pollutants: (H = High, M = Medium, S = Slight)

Point Sources

- 1 Industrial
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- 4 Combined sewers
- 5 Storm sewers

Nonpoint Sources

- 9 Unspecified

Agriculture

- 11 Non-irrigated crop production
- 12 Irrigated crop production
- 13 Specialty crop production
- 14 Pasture land
- M 15 Range land
- 16 Feedlots
- 17 Aquaculture
- H 18 Animal holding areas

Silviculture

- 21 Harvest, restoration
- 22 Forest management
- 23 Road construction/maintenance

Construction

- 31 Highway/road/bridge
- H 32 Land development

Urban Runoff

- 41 Storm sewers
- 42 Combined sewers
- H 43 Surface runoff

Source Unknown

- 90 Source Unknown

Resource extraction/exploration

- H 51 Surface mining - gravel
- 52 Subsurface mining
- 53 Placer mining
- 54 Dredge mining
- 55 Petroleum activities
- 56 Mill tailings
- 57 Mine tailings

Land Disposal (Permitted Activities)

- 61 Sludge
- H 62 Wastewater
- H 63 Landfills
- 64 Industrial land treatment
- H 65 Onsite wastewater systems
- 66 Hazardous waste

Hydrologic Modification

- 71 Channelization
- 72 Dredging
- 73 Dam construction
- 74 Flow regulation/modification
- 75 Bridge construction
- M 76 Removal of riparian vegetation
- M 77 Streambank modification

Other

- 81 Atmospheric deposition
- 82 Waste storage/storage tank leaks
- H 83 Highway maintenance and runoff
- 84 Spills
- 85 In-place contaminants
- 86 Natural
- 87 Recreational activities
- 88 Upstream impoundment
- H 89 Septic tank seepage



Fish and Shellfish Contamination:

- 0 None detected
- 1 Contaminated fish
- 2 Fishing advisory
- 3 Fishing ban
- 4 Fish abnormalities
- 5 Shellfish restrictions due to pathogens
- 6 Fish kill

\*\*\* POINT AND NONPOINT SOURCES \*\*\*

Point Sources:

- 1 NPDES Permit Number: \_\_\_\_\_  
 NPDES Permit Name: \_\_\_\_\_  
 Causes Nonattainment:  Yes ,  No , Pollutant \_\_\_\_\_
- 2 NPDES Permit Number: \_\_\_\_\_  
 NPDES Permit Name: \_\_\_\_\_  
 Causes Nonattainment:  Yes ,  No , Pollutant \_\_\_\_\_
- 3 NPDES Permit Number: \_\_\_\_\_  
 NPDES Permit Name: \_\_\_\_\_  
 Causes Nonattainment:  Yes ,  No , Pollutant \_\_\_\_\_

Nonpoint Sources:

- 1 Nonpoint Source Name: \_\_\_\_\_  
 Nonpoint Source Type: \_\_\_\_\_  
 Nonpoint Source Description: \_\_\_\_\_
- 2 Nonpoint Source Name: \_\_\_\_\_  
 Nonpoint Source Type: \_\_\_\_\_  
 Nonpoint Source Description: \_\_\_\_\_
- 3 Nonpoint Source Name: \_\_\_\_\_  
 Nonpoint Source Type: \_\_\_\_\_  
 Nonpoint Source Description: \_\_\_\_\_



[Including extent of impairment of uses; significance of impacts on public health and the environment; water quality trend; efforts to control pollutants; current priority for developing pollutant controls; and adequacy of data]

The wetlands of the Bell Flat area are increasingly exposed for development (i.e. placing solid fill of area for industrial development, storage areas). The area supports several anadromous waterbodies in which are found species of salmon that require a fresh water rearing period.

