

ALASKA LEGISLATURE COMMITTEE FILES, 2000-2000 86/2

11579 HOUSE RESOURCES

FISCAL NOTE

STATE OF ALASKA
2006 LEGISLATIVE SESSION

Fiscal Note Number: _____
 Bill Version: CSHB 328(FSH)
 () Publish Date: _____

Revision Date/Time (Note if correction): _____ Dept. Affected: Dept of Environmental Conservation
 Title Ban Mixing Zones in Spawning Areas RDU Division of Water
 Component Water Quality
 Sponsor Seaton, Olson, Galto, Ledoux, Kerttula & Gara
 Requester House Resources Committee Component No. 2062

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Personal Services	31.9					
Travel	11.0					
Contractual	8.1					
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	51.0	0.0	0.0	0.0	0.0	0.0

CAPITAL EXPENDITURES						
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CHANGE IN REVENUES ()						
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FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	51.0					
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
TOTAL	51.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2006) cost: 0.0
 Check this box (X) if funding for this bill is included in the Governor's FY 2007 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

This legislation prohibits mixing zones in spawning areas even when no spawning fish, eggs or alevins are present. This new policy will require that the Department revoke and reissue authorizations to 32 placer mines where current permits authorize mixing zones during timing windows when spawning fish, eggs and alevins are not present. This would be a one-time effort in FY 07.

This legislation conflicts with current Department regulations which will need to be revised to conform with the new policy. Because the regulations are part of the state's Water Quality Standards under the federal Clean Water Act, some federal requirements apply, including a mandatory public hearing on the proposed regulations changes. The Department must provide the regulations and documentation to the
 (cont.)

Prepared by: Lynn J. Tomich Kent Phone 907-269-7599
 Division: Director Date/Time 3/31/06 11:00 AM
 Approved by: Kurt Fredriksson Date 3/31/2006
 Agency: Department of Environmental Conservation

FISCAL NOTE

**STATE OF ALASKA
2006 LEGISLATIVE SESSION**

BILL NO. CSHB 328(FSH)

ANALYSIS CONTINUATION

(Continued from page 1)

Environmental Protection Agency (EPA) who must review and approve the new regulations before they can be used for Clean Water Act purposes such as wastewater discharge permitting. It is a one-time effort in FY 07 to revise the regulations and seek EPA approval of them.

Personal services (\$31.9) for a seven-month nonperm Env. Program Specialist III to notify mine operators, process new authorizations including public notice and comment, provide technical and field assistance to mine operators in planning for and complying with the new authorizations, and to draft regulations changes, take them through the public review process, and justify the changes to the Environmental Protection Agency.

Travel (\$11.0) for four field trips to provide technical/compliance assistance in Interior and Western Alaska, scheduled to reach multiple remote mine sites per trip; public meetings and hearings on the authorizations and proposed regulations changes.

Contractual (\$8.1) for public notice newspaper advertisements of proposed authorizations and regulations, hearing stenographer, meeting rooms for public meetings and hearing.

FISCAL NOTE

STATE OF ALASKA
2006 LEGISLATIVE SESSION

Fiscal Note Number: _____
 Bill Version: HB328-DNR-OHMP-01-2
 () Publish Date: _____

Revision Date/Time (Note if correction): _____ Dept. Affected: Natural Resources
 Title Prohibiting mixing zones in freshwater spawning RDU Resource Development
areas Component Office of Habitat Management &
 Sponsor Seaton, Olson, Galto, Ledoux, Kerttula, and Gara Permitting
 Requester House Special Committee on Fisheries Component No. 2682

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0

CAPITAL EXPENDITURES						
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CHANGE IN REVENUES ()						
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FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2006) cost: 0.0

Mark this box (X) if funding for this bill is included in the Governor's FY 2007 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

There is no fiscal impact associated with implementation of this legislation.

Prepared by: Kerry M. Howard, Executive Director
 Division: Office of Habitat Management & Permitting
 Approved by: Michael Menge, Commissioner
 Agency: Natural Resources

Phone 907-465-3176
 Date/Time 1/24/2006 - 8:30:00 AM
 Date 1/24/2006

FISCAL NOTE

STATE OF ALASKA
2006 LEGISLATIVE SESSION

Fiscal Note Number: 1
 Bill Version: CSHB 328(FSH)
 (H) Publish Date: 1/30/06

Revision Date/Time (Note if correction): _____ Dept. Affected: Dept of Environmental Conservation
 Title: Prohibiting mixing zones in freshwater spawning areas RDU: Division of Water
 Component: Water Quality
 Sponsor: Seaton, Olson, Gatto, Ledoux, Kerttula, and Gara
 Requester: House Special Committee on Fisheries Component No.: 2062

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0

CAPITAL EXPENDITURES						
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CHANGE IN REVENUES ()						
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FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2006) cost: 0.0

Mark this box (X) if funding for this bill is included in the Governor's FY 2007 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

This bill has no effect on DEC resources.

Prepared by: Lynn J. Tomich Kent
 Division: Director
 Approved by: Kurt Fredriksson
 Agency: Department of Environmental Conservation

Phone: 907 269-7599
 Date/Time: 1/18/06 3:15 PM
 Date: 1/18/2006

**Department of Environmental Conservation
CSHB 328 Testimony
House Special Committee on Fisheries
January 27, 2006**

The Department of Environmental Conservation appreciates the opportunity to provide its position and comments on the CS for HB 328.

The Department is opposed to CSHB 328 for the following reasons:

- 1. CSHB 328 is not necessary to protect anadromous salmon from either a scientific or a perception basis.**

The Department of Environmental Conservation's regulations prohibit mixing zones in anadromous salmon spawning areas. CSHB 328 would put in statute the same protections for the five species of anadromous salmon that have been part of DEC's regulations since 1975.

While these protections are not necessary from a scientific perspective, they go beyond science to address the need to protect salmon marketing and the public perception that Alaska's salmon are clean and healthy.

- 2. There is no justification for extending the mixing zone prohibition to protect the salmon marketing effort to protect "non-salmon" fish species.**

CSHB 328 would prevent DEC from authorizing a mixing zone in a non-salmon fish spawning area (Sec. 46.03.063(b)(2)) even in cases where science can show the mixing zone will have no adverse effect on spawning. There is no justification for extending the mixing zone prohibition which is intended to protect salmon marketing efforts to non-salmon fish species. Alaska needs to encourage and support responsible community growth and development of its natural resources.

DEC's regulations allow exceptions to the prohibition of a mixing zone in "non-salmon" spawning areas when site specific conditions show that the fish species will be protected or any adverse impacts will be mitigated as determined by habitat and fisheries biologists with the Departments of Fish and Game, and Natural Resources.

Alaska's communities and businesses should be allowed to use mixing zones if fish are protected. There is no justification for restricting responsible community growth and resource development that can comply with the state's requirements for the growth and propagation of fish.

3. CSHB 328 would prohibit mixing zones in spawning areas for lampreys and smelts.

DEC would be prevented from authorizing a mixing zone in all anadromous fish spawning areas. Lampreys and smelts are fish species included in the definition of anadromous fish. Unlike the importance of salmon to Alaska's social and economic wellbeing, DEC does not believe non-salmon fish species justify an absolute prohibition on mixing zones that can comply with the scientifically based water quality standards for growth and propagation of fish.

4. CSHB 328 would prohibit mixing zones that have become a fish spawning area unless the discharge was from a municipal wastewater facility.

It is possible for mixing zones to become spawning areas even though spawning was not occurring when the mixing zone was first authorized. DFG has discovered fish spawning in a mixing zone previously authorized for a drinking water utility, and in some cases for domestic wastewater facilities. Successful fish spawning in a mixing zone is evidence that the water quality in the mixing zone is not harmful to fish. Allowing mixing zones in areas that have become successful spawning areas should be allowed for any facility type, not just municipal wastewater facilities. Businesses and communities should not lose their mixing zones just because they are doing such a good job treating their wastewater that fish start spawning in them.

5. CSHB 328 includes a definition of "area" that is counter to both past and current practices by the Departments of Fish and Game and Natural Resources when determining spawning areas on both a spatial and temporal basis.

The relative sensitivity of Alaska's fish resources is seasonal. Impacts from responsible community and resource development can be avoided by limiting uses and activities to times of the year when the fish resources are not there or other seasonal conditions eliminate adverse impacts to the fish resources. Alaska's resource agencies have traditionally employed "seasonal restrictions" to control development impacts to the environment.

There are 32 currently permitted facilities with discharges that do not have an adverse effect on fish, in part due to timing restrictions imposed on their discharge via permit conditions. CSHB 328 would require the Department to cancel those permits and limit future permitting in similar situations without any net environmental benefit to the fish.

6. CSHB 328 relies upon a new undefined term, "useful life" when referring to renewal of a mixing zone authorization for a municipal wastewater facility.

As many facilities age, they are upgraded to varying degrees from minor modifications to almost complete reconstruction. DEC knows of no standard or criteria for determining a facility's "useful life."

The "useful life" of a facility is also irrelevant to the properties and effects of a mixing zone or the methods necessary to protect fish.

7. **CSHB 328 is inconsistent with the current statute for protection of fish and game (AS 41.14.870), interference with salmon spawning streams and waters (AS 16.10.010), or submission of plans and specifications (AS 16.20.060).**

Alaska's legislature has enacted a protective legal framework for all waters important to fish with additional protection for rivers, lakes and streams that are important for salmon spawning, rearing, or migration. State approval must be received from DEC, DNR, or DFG prior to the construction in, or use of waters important to fish spawning, rearing or migration.

CSHB 328 prohibits all mixing zones in all anadromous fish and other specifically listed fish spawning areas. However, CSHB 328 does not amend or repeal the provisions in other state law that permit the use of fish spawning areas if there are no adverse impacts from that use. CSHB 328 conflicts with current legislative policy not specifically amended or repealed by CSHB 328.

8. **DEC is responsible for, and must be accountable for, setting and enforcing standards for environmental protection.**

DEC has a duty under state statute to set and enforce standards for the prevention of pollution and protection of Alaska's environment (AS 44.46.020). The legislature has also directed DEC to "determine what qualities and properties of water indicate a polluted condition actually or potentially deleterious, harmful, detrimental, or injurious to . . . aquatic life or their growth and propagation" (AS 46.03.070).

It is appropriate that the legislature hold DEC accountable for carrying out the duties and responsibilities spelled out in statute. However, we do not believe it is appropriate for the legislature to assume responsibility for carrying out the duties and responsibilities assigned to the executive branch by statute.

STATE OF ALASKA

FRANK H. MURKOWSKI, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF WATER
OFFICE OF THE DIRECTOR

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January 20, 2006

Representative Gabrielle Ledoux
Co-Chair, House Special Committee on Fisheries
State Capitol, Room 403
Juneau, AK 99801-1182

Representative William Thomas, Jr.
Co-Chair, House Special Committee on Fisheries
State Capitol, Room 428
Juneau, AK 99801-1182

Dear Representatives Ledoux and Thomas,

Thank you for providing an opportunity for the Department of Environmental Conservation and other members of the administration to testify on House Bill 328 at the January 20 hearing of the House Special Committee on Fisheries. Several questions came up during the hearing (paraphrased below) and some additional information may help to put the administration's position in context.

Is there a comprehensive list of all currently authorized mixing zones?

The Department's current permit tracking data system does not specifically track the details of authorized mixing zones, however, the Department can provide general information on authorized mixing zones (see Enclosure 1).

How many wastewater discharge authorizations are issued each year?

In FY 2005, the State issued 155 wastewater discharge authorizations; 72 of those included an authorized mixing zone (21 of them in freshwater).

How does the Department track compliance with authorized mixing zones and how many inspections does the Department conduct?

Many permitted facilities (with and without authorized mixing zones) are required to conduct self-monitoring and to report the results of that monitoring to the Department and to the Environmental Protection Agency (EPA). These "discharge monitoring reports" are reviewed by the Department for compliance with permit conditions.

During FY 2005, the Department conducted 128 compliance inspections. Facilities chosen for inspection are based on a risk-based ranking system. Samples were collected at a quarter of the inspections to independently verify facility monitoring reports. Since the state currently shares permitting and compliance authority with EPA, they also conducted facility inspections in Alaska. EPA conducted 71 inspections at facilities with wastewater permits during the same State FY 2005 time period. Not all of the State or EPA inspections involve facilities with authorized mixing zones.

Are there facilities that have a mixing zone authorization with timing restrictions on their discharge to avoid spawning areas?

Enclosure 2 is a list of authorized mixing zones where there are timing restrictions on the discharge to avoid spawning areas. Many facilities that have authorized mixing zones in waters identified in the anadromous waters catalog, the state list of waters important to the spawning, rearing and migration of anadromous fish. However, these mixing zones are not in spawning areas of listed waterbodies.

The Committee requested clarification from the Departments of Fish and Game (F&G) and Natural Resources (DNR) regarding the definition of spawning area.

Fish spawning areas are essential to maintain viable fish populations and must be properly protected. For purposes of permitting various types of activities, the Office of Habitat, Management and Permitting at DNR and DF&G define "freshwater fish spawning areas" as areas within lakes, streams, rivers, or other flowing fresh waters that offer suitable habitat for fish spawning and where spawning adults, incubating eggs, or alevins are present. In identifying and managing spawning areas, the agencies consider the temporal and spatial aspects of spawning habitats and activity, the proposed activity, and potential impacts in such a manner that the continued long-term use and availability of spawning habitat is properly protected.

Does the permit applicant determine if their proposed discharge will be to a spawning area?

No. Past and current practice (and now codified in the Department's new regulations) require the Department to defer to the best professional judgment of F&G or DNR to determine whether a proposed mixing zone will affect salmon or resident fish spawning areas. Enclosure 3 is an example of a document used by the Department when gathering information about potential mixing zones. This document includes a section completed with information from DNR or F&G regarding spawning areas (highlighted in the enclosure).

Does the Department have the discretion to choose which agency (F&G or DNR) provides fish protection input into mixing zone authorization decisions?

No. The Department consults with the resource agency that has jurisdiction over the waterbody where the proposed discharge will occur. F&G has authority over waters in

legislatively designated special areas (AS 16.20.050) and DNR has authority over all other waters (AS 41.14.870).

I would be happy to provide any other information requested by the committee.

Sincerely,

Lynn J. Tomich Kent

Lynn J. Tomich Kent
Director

Enclosures

cc. House Special Committee on Fisheries members
Representative Paul Seaton

Enclosure 1

Currently Authorized Mixing Zones

157 Municipal Wastewater Treatment Plants

Municipal Wastewater (Sewage) Treatment plants discharge to both fresh and marine water. Their mixing zones vary in size.

204 Seafood Processors

Most of the seafood processors discharge to marine waters under several general and individual permits, the bulk of them under general permits. The mixing zone under these general permits is described as a cylindrical volume of water, with a horizontal radius of 100 feet from the diffuser and the full depth of the waterbody.

59 Placer Mines

Placer mines operate under a general permit, with site-specific, freshwater mixing zones.

15 Oil and Gas Related Facilities

All oil and gas related facilities with authorized mixing zones discharge to marine waters.

3 Large Mines (all others meet WQS at end of pipe or do not discharge to surface water)

Greens Creek Mine has domestic and industrial discharges to marine waters of Hawk Inlet. Red Dog Mine has an industrial discharge to Ikalukrok and Red Dog Creeks. Usibelli Coal mine is in the process of collecting data that will support future mixing zone authorizations for their multiple discharges into Hoseanna Creek.

1 Fertilizer Plant

Agrium has an industrial discharge to Cook Inlet.

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

18 AAC 70.250 – 70.260 Mixing Zone Calculations

Region: NON-YUKON, NON-SE TR/B

OPERATOR
APMA #
Effluent Disch. (gpm)
Receiving Waterbody

	QUAD:
	NPDES:

HYDROLOGY
Upstream Drainage Area
Annual Precipitation (in.)
% Watershed Forested
Channel Slope (ft./ft.)

DATA INPUT

	square miles
	from USGS Water Resources Investigations Report 93-4179
	digitized from 1:50,000 USGS Quadrangle
	digitized from 1:50,000 USGS Quadrangle

Calculated by:

Agency: ADEC

RECEIVING WATERBODY CHARACTERISTICS

Response Type:
AS 41.14.840
AS 41.14.870
5 AAC 95.060 (Special Areas)
No Known Fish / No Permit Required
No Survey / No Permit Required At This Time

Source: OHMP/DNR Reviewer:

Anadromous Fish Spawning (Y/N)	
Resident Fish Spawning Redds (Y/N)	
Fish Migratory Corridor (Y/N)	
Spawning/Incubation Window:	
Escapement Index/Weir/Tower (Y/N)	
MZs Allowed? (Y/N/Conditioned)	
Authorized Period:	Year-round

Fish Species Present /
OHMP Decision
Rationale

--

STREAM DISCHARGE REGRESSION (cfs)

(Ashton and Carlson)

7Q10 low flow

July - Aug.

	-1.00
--	-------

July - Aug

1Q2 high flow

	0
--	---

CALC. END-OF-PIPE NTU LIMIT

(Calculate using 7Q10 Low Flow)

	##### NTU
--	-----------

Is Calculated Limit > 1,500 NTU?

APPROVED END-OF-PIPE NTU LIMIT

	#####
	##### NTU

GENERALIZED HYDRAULIC CHANNEL MORPHOLOGY (Bray 1982) - 1Q2 BANKFULL

Channel Width (feet)	0.00	$r^2=0.962$	Width = 2.38 * discharge (cfs) ^ 0.53
Channel Depth (feet)	0.00	$r^2=0.871$	Depth = 0.266 * discharge (cfs) ^ 0.33
Mean Channel Vel. (fps)	0.00	$r^2=0.499$	Velocity = 1.58 * discharge (cfs) ^ 0.14

GENERALIZED HYDRAULIC CHANNEL MORPHOLOGY (Bray 1982) - 7Q10 LOW FLOW

Channel Width (feet)	#NUM!	$r^2=0.962$	Width = 2.38 * discharge (cfs) ^ 0.53
Channel Depth (feet)	#NUM!	$r^2=0.871$	Depth = 0.266 * discharge (cfs) ^ 0.33
Mean Channel Vel. (fps)	#NUM!	$r^2=0.499$	Velocity = 1.58 * discharge (cfs) ^ 0.14

CALC. DOWNSTREAM LOCATION OF 95% COMPLETE MIXING (1Q2 High Flow)

(from Yearsley, EPA) $(0.45 * \text{Width}^2 * \text{Mean Vel.}) / (0.6 * \text{Depth} * (32 * \text{Depth} * \text{Slope})^5$

	#### feet
--	-----------

Std. Dev = +/- 30%

CALC. DOWNSTREAM LOCATION OF 95% COMPLETE MIXING (7Q10 Low Flow)

(from Yearsley, EPA) $(0.45 * \text{Width}^2 * \text{Mean Vel.}) / (0.6 * \text{Depth} * (32 * \text{Depth} * \text{Slope})^5$

	#NUM! feet
--	------------

Std. Dev = +/- 30%

EXPLANATIONS/COMMENTS

1. End-of-pipe limit (C2) = ((stream discharge/effluent discharge)+1) * 5 NTU; assumes 0 NTU background
2. Std. Error of the 7Q10 Low Flow Discharge Estimate: +/-2% / -24%
3. Std. Error of the 1Q2 High Flow Discharge Estimate: +21% / -17%
4. Regional hydrograph regressions may generate negative numbers. In those cases assume zero flow and set end-of-pipe limits at AK WQS
5. When calc. downstream location of 95% complete mixing is greater than 1 mile the mixing zone is truncated to 1 mile.

COMPARISON OF PROVISIONS IN THE OLD AND THE NEW MIXING ZONE REGULATIONS AND IN HB 328/SB255

Prepared by the office of Rep. Seaton

OLD MIXING ZONE REGULATIONS	NEW MIXING ZONE REGULATIONS	HB 328/SB 225	DIFFERENCES
<p>SPAWNING AREA PROHIBITION</p>	<p>SPAWNING AREA PROHIBITION</p>	<p>SPAWNING AREA PROHIBITION</p>	
<p>18 AAC 70.255. Mixing zones: In-zone quality and size specifications</p>	<p>18 AAC 70.240</p>	<p>The department may not authorize a mixing zone for lakes, streams, rivers, or other flowing fresh water in an area of</p>	<p>The language of HB 328 is taken from the old regulatory language. HB 328 also adds "lakes" to the spawning area mixing zone prohibition.</p>
<p>(h) For streams, rivers, or other flowing fresh waters subject to (e)(3) of this section, a mixing zone will not be authorized in an area of</p>	<p>(e) In lakes, streams, rivers, or other flowing fresh waters, a mixing zone will not be authorized in a spawning area or allowed to adversely affect the present and future capability of an area to support spawning, incubation, or rearing of any of the five species of Pacific salmon.</p>	<p>(1) anadromous fish spawning; or</p>	<p>In both the old regulation and HB 328 there is a flat prohibition on mixing zones applying to all anadromous fish spawning areas, and in the egg redds or nests of numerous different freshwater resident species.</p>
<p>(1) anadromous fish spawning; or</p> <p>(2) resident fish spawning redds for Arctic grayling, northern pike, rainbow trout, lake trout, brook trout, cutthroat trout, whitefish, sheefish, Arctic char (Dolly Varden), burbot, and landlocked coho, king, and sockeye salmon.</p>	<p>(f) In lakes, streams, or other flowing fresh waters, except as provided in (g) of this section, a mixing zone will not be authorized in a spawning area for Arctic Grayling; northern pike; lake trout; brook trout; sheefish; burbot; landlocked coho salmon, king salmon, or sockeye salmon; or anadromous or resident rainbow trout, Arctic char, Dolly Varden, whitefish or cutthroat trout.</p>	<p>(2) resident fish redds for</p> <p>(A) Arctic char; (B) Arctic grayling; (C) brook trout; (D) burbot; (E) cutthroat trout; (F) Dolly Varden; (G) lake trout; (H) landlocked coho, king, and sockeye salmon; (I) northern pike; (J) rainbow trout; (K) sheefish; or (L) whitefish.</p>	<p>In contrast, the newly adopted mixing zone regulations contain a prohibition only on mixing zones in the spawning areas of any of the five species of Pacific salmon. Mixing zones may be authorized in a spawning area for resident freshwater and non-salmon anadromous species. Mixing zones may also be authorized in areas that may support spawning, incubation, or rearing of any of the five species of Pacific salmon, as long as the pollutant will not adversely affect the present and future capability of the area to support these activities.</p>
	<p>(g) The Department may authorize a mixing zone in a spawning area of a lake, stream, river or other flowing fresh water for the species listed in subsection (f) if, after consultation with the Department</p>		

of Natural Resources, Office of Habitat Management and Permitting, or the Department of Fish and Game if with a legislatively designated special area under AS 16.20, the department finds the applicant has

(1) demonstrated that the discharge does not contain pollutants at concentrations that exceed the criteria for growth and propagation of fish, shellfish, and other aquatic life, and wildlife established in 18 AAC 70.020(b) and that the discharge will not adversely affect the capability of the area to support future spawning, incubation, and rearing activities;

(2) submitted a mitigation plan approved by the Department of Fish and Game under 5 AAC 95.900 if within a legislatively designated special area under AS 16.20; or

(3) submitted a mitigation plan approved by the Department of Natural Resources, Office of Habitat Management and Permitting, and incorporating as part of the discharge authorization, using the methods established in 11 AAC 195.010.

OLD MIXING ZONE REGULATIONS	NEW MIXING ZONE REGULATIONS	HB 328/SB 225	DIFFERENCES
<p>SPATIAL AND TEMPORAL SPAWNING AREAS</p>	<p>SPATIAL AND TEMPORAL SPAWNING AREAS</p>	<p>SPATIAL AND TEMPORAL SPAWNING AREAS</p>	<p>The old Mixing Zone regulations do not make reference to spatial and temporal spawning areas. Neither of the two previously proposed mixing zone regulations made reference to spawning areas as spatial and temporal entities. The new mixing zone regulations contain this language, implying that mixing zones will be allowed in areas that at some part of the year are used for spawning.</p>
<p>No reference found</p>	<p>(j) For purposes of this section, the department shall defer to the Department of Natural Resources, Office of Water Management and Permitting and the Department of Fish and Game to determine spawning areas, both spatially and temporally.</p>	<p>No reference</p>	<p>"A mixing zone could be allowed when spawning salmon, eggs, or larvae are not present, state officials said. For example, a placer miner could "operate for a very small window of time" in some salmon spawning streams in Alaska, said Lynn Kent, director of the Environmental Conservation Department's Division of Water."*</p>
			<p>*"Mixing Zone Change Fuzzy for Fishermen" Elizabeth Bluemink, Juneau Empire, January 15, 2006</p>

OLD MIXING ZONE REGULATIONS	NEW MIXING ZONE REGULATIONS	HB 328/SB 225	DIFFERENCES
<p data-bbox="111 230 471 340"> EXCEPTIONS TO THE SPAWNING AREA PROHIBITION </p> <p data-bbox="111 383 395 418"> No exceptions found </p>	<p data-bbox="620 230 974 340"> EXCEPTIONS TO THE SPAWNING AREA PROHIBITION </p> <p data-bbox="620 383 1078 800"> (i) The provisions of (e),(f) and (g) of this section do not apply to the renewal of a mixing zone authorization where spawning was not occurring at the time of the previous authorization, but successful spawning, incubation and rearing has occurred within the mixing zone subsequent to the previous authorization of that mixing zone. </p>	<p data-bbox="1107 230 1461 340"> EXCEPTIONS TO THE SPAWNING AREA PROHIBITION </p> <p data-bbox="1107 383 1565 887"> "lakes, streams, rivers, or other flowing fresh water" includes lakes, streams, rivers, or other flowing fresh water that have been altered by remediation or construction activities; the term does not include an artificially constructed facility for water, wastewater, holding, or channeling, unless the artificial facility is constructed for the purpose of facilitating fish spawning. </p>	<p data-bbox="1587 383 2072 618"> The new mixing zone regulations contain a clause that allows a mixing zone in flowing fresh water to be re-permitted if spawning, incubation, or rearing occurs within the active mixing zone. </p> <p data-bbox="1587 661 2072 921"> HB 328 contains an exemption for mixing zones in man-made ditches and holding ponds by prohibiting reclassification of these areas as freshwater spawning areas if they are subsequently colonized by spawning fish. </p>

Mine	Waterbody	Marine/ Fresh	Fish Species	Timing Restrictions to avoid spawning areas.
Merrill Placer Mine	Falls creek	Fresh	Salmon	No discharge from 7/16 to 5/14
Tiaga Placer Mine	Dry Creek	Fresh	Salmon	No discharge 6/16 to 4/30
Tiaga Placer Mine	Aloha Creek	Fresh	Salmon	No discharge from 6/16 to 4/30
Tiaga Placer Mine	Comeback Creek	Fresh	Salmon	No discharge from 6/16 to 4/30
Tweet Placer Mine	Kougrok River	Fresh	Salmon and Non-Salmon	No discharge from 9/1 to 6/15
Lohman Placer Mine	Lower Coffee Creek	Fresh	Non-Salmon	No discharge from 7/10 to 2/15
Wolf Placer Mine	Walker Fork 40- Mile River	Fresh	Non-Salmon	No discharge from 5/1 to 8/15
Read Placer Mine	Vault Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
Smith Placer Mine	Deadwood Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
Stout and Langner Placer Mine	Quartz Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
Polar Mining Placer Mine	Goldstream Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
Willis Placer Mine	Crooked Creek	Fresh	Non-Salmon	No discharge from 5/1 to 8/15
Earth Movers of Fairbanks Placer Mine	Fairbanks Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
Mayo Placer Mine	Deadwood Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
McCloskey Placer Mine	Deadwood Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
Arctic Gold Placer Mine	Garfield Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
Bras Placer Mine	Canyon Creek	Fresh	Non-Salmon	No discharge from 5/1 to 8/15
Cogdon Placer Mine	Quail Creek	Fresh	Non-Salmon	No discharge from 5/1 to 8/15
Frantz Placer Mine	Linda Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
Clack-Witz Placer Mine	Ganes Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
Loud Placer Mine	Harrison creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
Newby Placer Mine	Little Boulder Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
Wicken Placer Mine	Gold Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15

Green Hill Liner Placer Mine	North Fork Harrison Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
Northern Placer Mine	Enina Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
Wase Placer Mine	Hammond River	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
Rosario Placer Mine	Colorado Creek	Fresh	Non-Salmon	No discharge from 5/1 to 5/15
Great Divide Placer Mine	Little Boulder Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
Pacific Mining	Porcupine Creek	Fresh	Non-Salmon	No discharge from 5/1 to 5/15
Tainter Placer Mine	Prospect Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
Kopperberg Mining Placer Mine	Faith Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15
Sather Placer Mine	Fairbanks Creek	Fresh	Non-Salmon	No discharge from 5/1 to 6/15

Note: 3 placer mine mixing zones in waterbodies with both anadromous and resident fish denied where timing restrictions cannot avoid spawning areas.

Nyac Placer Mine	Yulksak River	Fresh	Anadromous and Resident	No MZ granted. Habitat said no time when wastewater can be discharged. Applicant must meet WQS at end of pipe.
Nyac Placer Mines	Bear Creek	Fresh	Anadromous and Resident	No MZ granted. Habitat said no time when wastewater can be discharged. Applicant must meet WQS at end of pipe.
Nyac Placer Mine	California Creek	Fresh	Anadromous and Resident	No MZ granted. Habitat said no time when wastewater can be discharged. Applicant must meet WQS at end of pipe.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

November 1, 2004

Nancy Sonafrank
Water Quality Standards Section Manager
Alaska Department of Environmental Conservation
610 University Drive
Fairbanks, Alaska 99709

Dear Ms. Sonafrank:

The National Marine Fisheries Service (NMFS) has reviewed proposed revisions to the Mixing Zone sections of the Alaska Water Quality Standards. The Alaska Department of Environmental Conservation (DEC) is proposing several changes to the Mixing Zones sections of the Water Quality Standards in 18 AAC 70.240 through 70.270 to:

- Improve clarity and reduce redundancy;
- Allow mixing zones in certain fish spawning areas where there will be no adverse effect on the capability of an area to support fish spawning, rearing, or incubation (the proposed regulations provide for consideration of measures that would offset the potential adverse effects of mixing zones on aquatic resource); and
- Simplify some technical provisions including those dealing with risk assessment, flow calculations, and mixing zone models.

NMFS supports efforts by DEC to improve clarity and reduce redundancy in regulation, and many of the proposed amendments to the Alaska Water Quality Standards appear to yield no substantive change. However, NMFS opposes the proposed regulation to allow for mixing zones in certain fish spawning areas. This proposed revision is a significant change from the existing prohibition on mixing zones in spawning and rearing habitat of resident and anadromous fish. Water quality standards are premised on levels that do not adversely affect fish and/or their habitat, and any mixing zone (i.e., an allowable variance from water quality standards) could adversely affect fish and their habitat. The proposed change allows for the interpretation of data that are weak (based on acute toxicity information) and the interpretation or extrapolation of that data may be flawed. Applying acute toxicity data to a situation where chronic impacts occur (as in a mixing zone) and fish embryos and larvae are present may adversely affect living marine resources including Essential Fish Habitat (EFH). Our specific comments on the amendment to the Water Quality Standards at 18 AAC 70 are enclosed and include comments from our research scientists at the Auke Bay Laboratory.

NOAA Report



**National Marine Fisheries Service (NMFS)
Comments on the Draft Revision of Mixing Zone Regulations, 18 AAC 70.240-270**

NMFS opposes the proposal to allow mixing zones in areas of spawning and rearing habitat. Scientific research, including research conducted by NMFS, increasingly indicates that these habitats are critical to the survival of numerous fish species, including prey species, and that the early life stages that utilize these habitats are extremely sensitive to chronic pollution. Chronic pollution over time in spawning and rearing habitats will place those populations at risk over the long term, leading to a diminishing of the stock and possibly to localized extinction.

Allowing mixing zones for pollutants in water generally is based on two assumptions: (1) exposure to fish will be transient, and (2) short exposures to toxicant levels will be below acute toxicity levels. These assumptions might be met with adult transient fish moving through an area, but are not likely to be met if there are resident fish, a rearing area, and most importantly, a spawning area. Developing salmon eggs and larvae will be in spawning gravels for months, and any exposure they receive from elevated levels in a mixing zone would be chronic. Predicting impacts of chronic toxicity using acute toxicity information is fundamentally flawed because the mechanisms of toxicity are intrinsically different between acute toxicity (narcosis) and chronic toxicity. In other words, simply applying a dilution safety factor of 100 or some other value does not have relevance when calculating the potential chronic impacts to embryos and developing larvae.

The preponderance of recent scientific evidence to emerge from toxicological studies suggests that concentrations as low as one part per billion of PAH (polynuclear hydrocarbons) can adversely impact developing fish embryos. As our understanding of toxic effects of contaminants increases, the evidence suggests that the goal of most fisheries pollution mitigation should be to avoid exposing spawning areas to environmentally persistent contaminants, especially in situations such as mixing zones where fish eggs and larvae are exposed chronically.

Streams and estuaries sustain the vulnerable early developmental life stages of many fish species. Salmon eggs, larvae, and juveniles use both stream and estuary for much of the first year of life, and the juveniles of many marine species use the estuaries for nursery grounds. The principal threat to these species is not from acutely toxic concentrations that can result in mortality, but in the more subtle effects of low-level contaminant exposures to these sensitive life stages. Incubating eggs are very sensitive to long-term exposures to those pollutants such as hydrocarbons, pesticides, and PCBs that sequester onto lipid molecules in the developing embryos. These environmentally persistent organic pollutants remain in the eggs as they develop. The result is that fewer juveniles survive, so that recruitment from the early life stages is reduced and adult populations may not be replaced at sustainable levels.

Most of the toxicity models currently in use for fish assume a disruption of the nervous system leading to narcosis and eventual death. Water quality standards for mixing zones are predicated on this model of how toxic chemicals work. Recent research indicates that pollutants such as polycyclic aromatic hydrocarbons (PAHs) are unlikely to act as narcotic agents in early life stages of fish that have been chronically exposed as embryos. Instead embryonic exposures result in edema of the yolk sac.

hemorrhaging, disruption of cardiac function, binding of aryl hydrocarbon receptors, enzyme induction, mutation and heritable changes in progeny, craniofacial and spinal deformities, neuronal cell death, anemia, reduced growth, and impaired swimming (White et al. 1999, Barron et al. 2003, Billiard et al. 1999, 2002, Brinkworth et al. 2003, Marty et al. 1997, Incardona et al. in press). Exposure to sunlight results in a 48 fold increase in toxicity of PAH to fish larvae (Barron et al. 2002) and resulted in 2 ppb becoming toxic to the calanoid copepods that form much of the diet of developing juvenile fishes (D Jesterloh et al. 2002).

Early life stages are more vulnerable to both the chemical effects of toxicants, and to the ecological consequences. In a developing embryo, cellular damage may be replicated many times as tissues develop and enlarge, resulting in a tissue that is severely compromised in function at later life stages. The embryo may develop normally for some time, as it may not need this tissue until a later life stage, thus the consequences of damage may not be apparent immediately. This concept was demonstrated eloquently when salmon embryos were exposed in controlled laboratory conditions to low levels of crude oil, and then tagged and released to the marine environment. A variety of symptoms were evident in many of the resulting larvae, from mortalities to deformities, to even the more subtle effects on growth from very normal appearing animals. Delayed impacts on growth were evident at 19 parts per billion total PAH, and the ecological consequence (suffering increased levels of predation) was evident when fewer adults returned from the oil exposed groups (Heintz 2000). Exposure of developing embryos to 5 and 19 ppb total PAH resulted in a subsequent 20% and 40% reduction in marine survival among the returning adults. Exposure of incubating herring eggs to weathered oil caused significant morphological defects at 9 ppb, and effects of more weathered oil were significant at concentrations as low as 0.2 ppb PAH; chromosomal aberrations were observed at 0.7 parts per billion (ppb) (Carls et al. 1999). Over time reductions in adult recruitment will slowly and subtly result in lower populations, eventually leading to extinction of the stock. This situation has probably been the primary mechanism leading to missing populations in urban estuaries.

Allowing persistent organic pollutants into the environment also results in creating long-term reservoirs of pollution that are available to organisms. Hydrocarbons, pesticides, and PCBs tend to adsorb to organic tissue, and can be transferred up the food chain, or can be adsorbed to inorganic matter in sediments, where they can remain bioavailable for years. There is a substantial uptake of these compounds, especially in many invertebrate species that do not have the biochemical mechanisms to purge their systems of the pollutants (Varanasi et al. 1989, 1992; Meador et al. 1995). There is a growing body of evidence of accumulations of persistent organic pollutants in the cold sink of the arctic, and Alaskan waters with many lipid rich compartments (copepods, forage fish, target species, marine mammals) is becoming more contaminated each year from pollutants originating in other major geographic areas. We would not want to accelerate this problem with local releases with more direct routes to Alaskan fish resources.

The concern regarding chronic pollution to embryos applies to non-organic pollutants as well, because the concepts are the same, although the literature is sparse. In this case, the contaminant is not necessarily trapped in the tissues for long periods of time because of the high affinity of large organic molecules in lipids, but remains in tissues because of the continuous replacement by the chronic mixing zone source. In other words, in both cases a tissue load is present. The second major principle is that chronic exposure to embryos and larvae are special biological situations. Because of the long

incubation time, the exposure to embryos and larvae is chronic, and any extrapolation from acute toxicity tests and mechanisms does not apply. Small and seemingly innocuous interruptions or interferences with the embryo development process can have lethal effects, whether they are immediately obvious or delayed, and are very subtle to detect. Chronic studies with embryos and subsequent wild releases are the only concrete way to detect sublethal effects that will affect returning adult numbers. NMFS is concerned that the proposed changes to the water quality standards would shift the burden of proof – meaning that non-harmful acute tests could be used inappropriately to judge the potential harm of chronic exposures to embryos and larvae, thereby underestimating actual effects.

Based on research conducted by NMFS and others, we recommend that DEC not approve mixing zones for areas of fish spawning and rearing. Using acute toxicity data and toxicity models is inappropriate for the protection of fish embryos and larvae in a chronic exposure situation. The populations exposed will be at considerable risk over time, and those exposed stocks can be expected to diminish over time to levels that may not support subsistence, sport, or commercial harvests.

Specific Comments

18 AAC 70.240 (c)(4)(B) As written, this section states that DEC will approve a mixing zone as proposed or with conditions, only if it finds that available evidence reasonably demonstrates that an effluent or substance will "... be treated to remove, reduce, and disperse pollutants, using methods found by the department to be the most effective and technologically and economically feasible, consistent with the highest statutory and regulatory treatment requirements."

The regulations should be more specific. Statutory and regulatory treatment requirements differ around the country, and for certain discharges there are areas in the country with higher treatment requirements than Alaska. What standard will be used to assess whether a mixing zone is "consistent with the highest statutory and regulatory treatment requirements"?

18 AAC 70.240 (c)(4)(B) This section states that mixing zones will not "create a public health hazard through encroachment on existing uses of the waterbody for water supply or contact recreation."

How is encroachment on existing uses defined? Should this be cross referenced to statutes that cover water rights?

18 AAC 70.240 (c)(4)(D) "the mixing zone will not in streams, rivers, or other flowing fresh waters, result in a reduction in fish population levels;"

Are individual fish kills acceptable? How will the population be tracked to insure that there will not be a reduction in fish populations?

18 AAC 70.240 (c)(4)(E) "the mixing zone will not in streams, rivers, or other flowing fresh waters, adversely affect the capability of an area to support spawning, incubation or rearing of anadromous or resident fish;"

Water quality standards are premised on levels that do not adversely affect fish and/or their habitat, and any mixing zone (i.e., an allowable variance above water quality standards) could adversely affect fish and their habitat.

18 AAC 70.240 (c)(4)(F) "the mixing zone will not in streams, rivers, or other flowing fresh waters, result in permanent or irreparable displacement of indigenous organisms;"

Again, if a mixing zone is a variance to water quality standards, indigenous organisms may find areas where the levels of pollutants exceed water quality standards to be inhospitable.

18 AAC 70.240 (d)(8) DEC will approve a mixing zone, as proposed or with conditions, only if the DEC finds that available evidence reasonably demonstrates that within the mixing zone the pollutants discharged will not "exceed acute aquatic life criteria at and beyond the boundaries of a smaller initial mixing zone surrounding the outfall, the size of which shall be determined using methods approved by the department."

With no spatial limits on the size of the smaller initial mixing zone, a very large initial mixing zone could be permitted, allowing large areas to exceed acute aquatic life criteria. We recommend specifying that the initial mixing zone must not extend beyond the immediate vicinity of the outfall. Also, this section needs to clarify what is meant by "... methods approved by the department." Some examples of the types of those methods would be helpful. In addition, NMFS suggests that the sentence read "... aquatic life criteria *to* and beyond.

18 AAC 70.240 (e)(1)(A) DEC will approve a mixing zone, as proposed or with conditions, only if it finds that the mixing zone is as small as practicable and will comply with the following size restrictions, unless DEC finds that evidence is sufficient to reasonably demonstrate that these size limitations can be safely increased: "(1) for estuarine and marine waters, measured at mean lower low water, (A) the cumulative linear length of all mixing zones intersected on any given cross section of an estuary, inlet, cove, channel, or other marine water may not exceed 10 percent of the total length of that cross section;"

Does the cumulative linear length refer to the perimeter of the waterbody?

18 AAC 70.240 (f) "For streams, rivers, or other flowing fresh waters, in calculating the maximum pollutant discharge limitation, the volume of flow available for dilution must be determined using the actual flow data collected concurrent with the discharge or using other methods approved by the department."

If the discharge can occur 24 hours a day seven days a week, year round, what part of the annual flow would be used?

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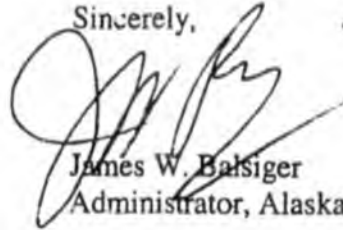
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Should you have any questions regarding these comments please contact Ms. Jeanne Hanson at (907) 271-3029.

Sincerely,



James W. Balsiger
Administrator, Alaska Region

Enclosure

cc: NMFS HCD – Susan Walker
NMFS Auke Bay Lab – Jeep Rice
Records – Lori Durall

USFWS, ADNR-OHMP, ADEC – Anchorage

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**Current regulations allowing for short term
variances from state water quality standards**

⊕ 18 AAC 70.200. Short-term variance

⊕ (a) In its discretion, the department will grant a short-term variance from the antidegradation policy standard of 18 AAC 70.015 or the water quality criteria of 18 AAC 70.020(b) for

(1) a one-time, temporary activity that is a nonpoint source of water pollution; and

(2) a temporary activity associated with the placement of dredged or fill material affecting a specific waterbody.

(b) The department will grant a short-term variance only if an applicant shows to the department's satisfaction that

(1) wastes or substances that might adversely affect water quality are controlled, using methods the department finds most effective;

(2) the activity will be conducted in a manner to mitigate water quality impacts, using methods the department finds most effective; and

(3) the activity, when completed, will not cause a long-term, chronic, or recurring violation of the water quality standards.

(c) The department will, in its discretion, grant a short-term variance by geographic area or project, or for a specific event. The term of a variance will be as short as practicable, and will, at the latest, expire when the projects is completed.

(d) A person seeking a short-term variance shall submit a written request and proceed in accordance with 18 AAC 15.020 - 18 AAC 15.100. The request must state the

(1) location, time, duration, and type of activity for which the variance is sought;

(2) reasons why the activity is required;

(3) a real extent and quantified degree of variance from the applicable criteria;

(4) detailed construction and operating plans, including water pollution control and mitigation measures; and

(5) activity's estimated impact on the uses of the water involved, including recreation and use for habitat, rearing, growth, or migration by fish, shellfish, other aquatic life, and wildlife.

(e) The department will, in its discretion, treat an application for a permit under Sec. 404 of the Clean Water Act as an application for a short-term variance.

⊕ **History:** Eff. 11/1/97, Register 143

⊕ **Authority:** AS 46.03.020

Current AAC

22. *Will the tailings be capped after processing is complete? What will be used?*

Yes, the tailings will be capped although the specific materials to be used will not be known until Northern Dynasty completes its Reclamation Plan.

In general, capping may be carried out using water, soils or mine rock. Sometimes, capping is achieved by applying 'soil amendments' and planting in order to get a self-sustaining plant community established. In such cases, capping with other materials is not necessary.

Northern Dynasty's Reclamation Plan, which must be in place before mine permits are issued, will specify what capping techniques will be employed and the nature of the medium to be used.

23. *What will the tailings impoundment look like after reclamation?*

Northern Dynasty is still developing its mine plan for the Pebble Project, including its Reclamation Plan. The steps taken to reclaim disturbed areas following mine closure will be fully defined within the mine planning materials to be submitted for permit application sometime next.

In general, reclamation will include land contouring, establishing native plant cover, wetland creation and the development of surface water drainage channels. Embankments will likely be visible as gently sloping earthen landforms with level crests and generally straight alignments.

In the area of the tailings pond where 'potentially reactive' materials are stored, water cover will be maintained to avoid acidic conditions. This could be accomplished by building a flooded porous rock fill with a revegetated cap along the perimeter, along with a shallow pond over the remainder of the surface.

The rest of the tailings facility will contain non-reactive sand and silt-size rock particles. It may be reclaimed through a combination of methods, including re-vegetation and surface ponds.

* → 24. *What exactly is a Mixing Zone? Will Northern Dynasty use a Mixing Zone?* *

A 'Mixing Zone' is a three-dimensional area in a surface water body specified in a discharge permit, within which Aquatic Life Standards do not have to be met.

These zones are generally specified where an 'end-of-pipe' discharge does not meet Aquatic Life Standards, but where mixing with receiving water will result in those standards being met further downstream. Some discharges do not need 'Mixing Zones' because they already meet Aquatic Life Standards, while others do because they do not meet these standards.

There are no current plans for a 'Mixing Zone' at the proposed Pebble mine.

Current regulations allowing for site-specific water quality designations

✦ 18 AAC 70.235. Site-specific criteria

✦ (a) The department will, in its discretion, establish a site-specific water quality criterion that modifies a water quality criterion set out in 18 AAC 70.020(b)

(1) in a permit, certification, or approval as described in (b) of this section; or

(2) in regulation as described in (c) of this section.

(b) If the department finds that the natural condition of a waterbody is demonstrated to be of lower quality than a water quality criterion set out in 18 AAC 70.020(b), the natural condition constitutes the applicable water quality criterion. Upon application or on its own initiative, the department will determine whether a natural condition of a waterbody should be approved as a site-specific water quality criterion in a permit, certification, or approval issued by the department. Before making the determination, the department will issue public notice of a proposed approval under this subsection and provide opportunity for public comment. If a natural condition of a waterbody varies with time, the natural condition will be determined to be the prevailing highest quality natural condition of the waterbody measured during an annual, seasonal, or shorter time period before discharge or operation, or as the actual natural condition of the waterbody measured concurrent with discharge or operation. The department will, if necessary to adequately protect water quality,

(1) determine a natural condition for one or more seasonal or shorter time periods to reflect variable ambient conditions; and

(2) require additional or continuing monitoring of natural conditions as a condition of a permit, certification, or approval.

(c) Upon application, or on its own initiative, the department will, in its discretion, set site-specific criteria in regulation if the department finds that the evidence reasonably demonstrates that the site-specific criterion will fully protect designated uses in 18 AAC 70.020(b) and that

(1) for reasons specific to a certain site, a criterion in 18 AAC 70.020(b) is more stringent or less stringent than necessary to ensure full protection of the corresponding use class; or

(2) a criterion would be better expressed in terms different from those used in 18 AAC 70.020(b).

(d) The department will set a site-specific criterion under (c) of this section for the "growth and propagation of fish, shellfish, other aquatic life, and wildlife" use classes in 18 AAC 70.020(a) (1)(C) and 18 AAC 70.020(a) (2)(C) only if the department finds that the evidence is sufficient to reasonably demonstrate that

(1) the species or habitats present, or expected to be present under natural conditions, are more sensitive or less sensitive to a substance than indicated by the criterion, and a site-specific criterion is required to prevent adverse effects or to alleviate an unnecessarily restrictive general criterion; or

(2) the natural characteristics of the receiving environment would increase or reduce the biological availability or the toxicity of a substance, or otherwise alter the substance, and a site-specific criterion is

required to prevent adverse effects or to alleviate unnecessarily restrictive general criterion.

(e) An applicant seeking a site-specific criterion under this section shall provide all information that the department determines is necessary to modify an existing criterion. The department will, in a timely manner, request and review for completeness, information submitted under this subsection. In all cases, the burden of proof is on the applicant seeking a site-specific criterion.

✦ **History:** Eff. 11/1/97, Register 143; am 4/29/99, Register 150

✦ **Authority:** AS 46.03.010

AS 46.03.020

AS 46.03.050

AS 46.03.070

AS 46.03.080

AS 46.03.090

AS 46.03.100

AS 46.03.110

AS 46.03.710

AS 46.03.720

Editor's note: The development documents for site-specific criteria established under 18 AAC 70.235 (b) in a permit, certification, or approval may be reviewed in or requested from the department's Juneau office.



**Mixing Zone regulations adopted January 12, 2006.
Spawning area language at 18 AAC 70.240 (e)-(j)**

(5) result in undesirable or nuisance aquatic life;

(6) produce objectionable color, taste, or odor in aquatic resources harvested from the area for human consumption;

(7) cause lethality to passing organisms; or

(8) exceed acute aquatic life criteria at and beyond the boundaries of a smaller initial mixing zone surrounding the outfall, the size of which shall be determined using methods approved by the department.

(e) In lakes, streams, rivers, or other flowing fresh waters, a mixing zone will not be authorized in a spawning area or allowed to adversely affect the present and future capability of an area to support spawning, incubation, or rearing of any of the five species of Pacific salmon.

(f) In lakes, streams, rivers, or other flowing fresh waters, except as provided in (g) of this section, a mixing zone will not be authorized in a spawning area for Arctic Grayling; northern pike; lake trout; brook trout; sheefish; burbot; landlocked coho salmon, king salmon, or sockeye salmon; or anadromous or resident rainbow trout, Arctic char, Dolly Varden, whitefish, or cutthroat trout.

(g) The Department may authorize a mixing zone in a spawning area of a lake, stream, river or other flowing fresh water for the species listed in subsection (f) if, after consultation with the Department of Natural Resources, Office of Habitat Management and Permitting, or the Department of Fish and Game if within a legislatively designated special area under AS 16.20, the department finds that the applicant has

(1) demonstrated that the discharge does not contain pollutants at concentrations that exceed the criteria for growth and propagation of fish, shellfish, and other aquatic life, and wildlife established in 18 AAC 70.020(b) and that the discharge will not adversely affect the capability of the area to support future spawning, incubation, and rearing activities;

(2) submitted a mitigation plan approved by the Department of Fish and Game under 5 AAC 95.900 if within a legislatively designated special area under AS 16.20; or

(3) submitted a mitigation plan approved by the Department of Natural Resources, Office of Habitat Management and Permitting, and incorporated as part of the discharge authorization, using the methods established in 11 AAC 195.010.

(h) The Department may require the applicant, in a mixing zone authorization under (g) of this section, to monitor effluent, ambient water quality, and biological conditions to determine whether unanticipated adverse effects on spawning, incubation and rearing of species identified in subsection (f) are occurring.

(i) The provisions of (e), (f) and (g) of this section do not apply to the renewal of a mixing zone authorization where spawning was not occurring at the time of the previous authorization, but successful spawning, incubation and rearing has occurred within the mixing zone subsequent to the previous authorization of that mixing zone.

(j) For purposes of this section, the department will defer to the Department of Natural Resources, Office of Habitat Management and Permitting or the Department of Fish and Game to determine spawning areas, both spatially and temporally.

(k) The department will approve a mixing zone, as proposed or with conditions, only if it finds that the mixing zone is as small as practicable and will comply with the following size restrictions, unless the department finds that evidence is sufficient to reasonably demonstrate that these size restrictions can be safely increased:

(1) for estuarine and marine waters, measured at mean lower low water,

(A) the cumulative linear length of all mixing zones intersected on any given cross section of an estuary, inlet, cove, channel, or other marine water may not exceed 10 percent of the total length of that cross section; and

(B) the total horizontal area allocated to all mixing zones at any depth may not exceed 10 percent of the surface area;

(2) for lakes, the total horizontal area allocated to all mixing zones at any depth may not exceed 10 percent of the lake's surface area;

(3) for streams, rivers, or other flowing fresh waters, the length of a mixing zone may not extend beyond the computed point of complete mixing, as determined using a standard river flow mixing model or other methods accepted by the department;

(4) for streams, rivers, or other flowing fresh waters, the length of a mixing zone may not extend downstream beyond the location where the department determines that a public health hazard reasonably could be expected to occur.

(l) For streams, rivers, or other flowing fresh waters, in calculating the maximum pollutant discharge limitation, the volume of flow available for dilution must be determined using

(1) the actual flow data collected concurrent with the discharge; or

**18 AAC 70.255. Mixing zones: In-zone quality and size specifications**

(a) The size, location, or other limits of a mixing zone set by or under this chapter will be established in a discharge permit, certification, or order issued by the department under the appropriate chapter in this title.

(b) Water quality criteria must be met at the boundary of the mixing zone. A discharge may not cause or reasonably be expected to cause

(1) lethality to passing organisms in the mixing zone; or

(2) a toxic effect in the water column, sediments, or biota outside the boundaries of the mixing zone.

(c) Human health and chronic aquatic life criteria apply at and beyond the boundaries of the mixing zone.

(d) Acute aquatic life criteria apply at and beyond the boundaries of a smaller initial mixing zone surrounding the outfall. The smaller initial mixing zone for application of acute criteria must be sized to prevent lethality to passing organisms. Methods for calculating the boundaries of the smaller initial mixing zone for application of acute criteria, unless otherwise specified by the department, must follow procedures under Alternatives 2, 3, or 4 in Section 5.1.2 of the United States Environmental Protection Agency's Water Quality Standards Handbook, Second Edition, August 1994, EPA-823-B-94-005a.

(e) Unless the department finds that evidence is sufficient to reasonably demonstrate, in accordance with this section, that the size limitations of a mixing zone can be safely increased, a mixing zone must comply with the following size restrictions:

(1) for estuarine and marine waters, measured at mean lower low water,

(A) the cumulative linear length of all mixing zones intersected on any given cross section of an estuary, inlet, cove, channel, or other marine water may not exceed 10 percent of the total length of that cross section; and

(B) the total horizontal area allocated to mixing zones may not exceed 10 percent of the surface area;

(2) for lakes, the total horizontal area allocated to all mixing zones may not exceed 10 percent of the lake's surface area; and

(3) for streams, rivers, or other flowing fresh waters, subject to (f), (g), and (h) of this section, the length of a mixing zone may not extend downstream beyond the limits described in (A) or (B) of this paragraph, whichever is closer to the point of discharge, as follows:

(A) beyond the computed point where the variation in the concentration of a water quality parameter across a stream, river, or other flowing fresh water is predicted to be less than five percent, as determined using a standard river flow mixing model accepted by the department; or

(B) beyond the location where the department determines that a public health hazard reasonably could

be expected to occur.

(f) For streams, rivers, or other flowing fresh waters subject to (e)(3) of this section, in calculating the maximum pollutant discharge limitations, the volume of flow available for dilution must be determined using

(1) the actual flow as determined by gauging data collected concurrent with the discharge; or

(2) for conventional or nontoxic substances, the default 2-year, 3-day low flow (3Q2) appropriate to the period of discharge; for toxic substances, the 10-year, 7-day low flow (7Q10) as the chronic criteria design flow and the 10-year, 1-day (1Q10) as the acute criteria design flow for protection of aquatic life; for carcinogens, the harmonic mean flow as the design flow for the protection of human health; these low flows must be calculated using methods of Ashton and Carlson, *Determination of Seasonal, Frequency and Durational Aspects of Streamflow with Regard to Fish Passage Through Roadway Drainage Structures* (1984), Carison, *Seasonal, Frequency and Durational Aspects of Streamflow in Southeast and Coastal Alaska* (1987), or another appropriate regional regression flow model approved by the department; numeric water quality criteria apply at all design flows that are equal to or greater than these critical low flows.

(g) For streams, rivers, or other flowing fresh waters subject to (e)(3) of this section, a mixing zone may not result in

(1) permanent or irreparable displacement of indigenous organisms; or

(2) a reduction in fish or shellfish population levels.

(h) For streams, rivers, or other flowing fresh waters subject to (e)(3) of this section, a mixing zone will not be authorized in an area of

(1) anadromous fish spawning; or

(2) resident fish spawning redds for Arctic grayling, northern pike, rainbow trout, lake trout, brook trout, cutthroat trout, whitefish, sheefish, Arctic char (Dolly Varden), burbot, and landlocked coho, king, and sockeye salmon.

History: Eff. 11/1/97, Register 143

Authority: AS 46.03.020

AS 46.03.030

AS 46.03.070

AS 46.03.080

AS 46.03.100

AS 46.03.110

AS 46.03.710

Comparison of Provisions in the old and new Mixing Zone Regulations and in HB 328(FSH)

Prepared by the office of Rep. Seaton

OLD MIXING ZONE REGULATIONS	NEW MIXING ZONE REGULATIONS	HB 328	DIFFERENCES
<p>SPAWNING AREA PROHIBITION</p> <p>18 AAC 70.255. Mixing zones: In-zone quality and size specifications</p> <p>(h) For streams, rivers, or other flowing fresh waters subject to (e)(3) of this section, a mixing zone will not be authorized in an area of</p> <p>(1) anadromous fish spawning; or</p> <p>(2) resident fish spawning redds for Arctic grayling, northern pike, rainbow trout, lake trout, brook trout, cutthroat trout, whitefish, sheefish, Arctic char (Dolly Varden), burbot, and landlocked coho, king, and sockeye salmon.</p>	<p>SPAWNING AREA PROHIBITION</p> <p>18 AAC 70.240</p> <p>(e) In lakes, streams, rivers, or other flowing fresh waters, a mixing zone will not be authorized in a spawning area or allowed to adversely affect the present and future capability of an area to support spawning, incubation, or rearing of any of the five species of Pacific salmon.</p>	<p>SPAWNING AREA PROHIBITION</p> <p>The department may not authorize a mixing zone for lakes, streams, rivers, or other flowing fresh water in an area of</p> <p>(1) anadromous fish spawning; or</p> <p>(2) resident fish redds for</p> <p>(A) Arctic char; (B) Arctic grayling; (C) brook trout; (D) burbot; (E) cutthroat trout; (F) Dolly Varden; (G) lake trout; (H) landlocked coho, king, and sockeye salmon; (I) northern pike; (J) rainbow trout; (K) sheefish; or (L) whitefish.</p>	<p>The language of HB 328 is taken from the old regulatory language. HB 328 also adds "lakes" to the spawning area mixing zone prohibition.</p> <p>In both the old regulation and HB 328 there is a flat prohibition on mixing zones applying to all anadromous fish spawning areas, and in the egg redds or nests of numerous different freshwater resident species.</p> <p>In contrast, the newly adopted ADEC Mixing Zone regulations contain a prohibition only on mixing zones in the spawning areas of any of the five species of Pacific salmon. Mixing zones may be authorized in a spawning area for resident freshwater and non-salmon anadromous species. Mixing zones may also be authorized in areas that may support spawning, incubation, or rearing of any of the five species of Pacific salmon, as long as the pollutant will not adversely affect the present and future capability of the area to support these activities.</p>

OLD MIXING ZONE REGULATIONS

SPATIAL AND TEMPORAL SPAWNING AREAS

No reference found

NEW MIXING ZONE REGULATIONS

SPATIAL AND TEMPORAL SPAWNING AREAS

(j) For purposes of this section, the department will defer to the Department of Natural Resources, Office of Habitat Management and Permitting or the Department of Fish and Game to determine spawning areas, both spatially and temporally.

HB 328

SPATIAL AND TEMPORAL SPAWNING AREAS

(c) In this section

(1) "area" means the physical location where spawning occurs

DIFFERENCES

HB 328 specifies that, for the purpose of the bill, a spawning area is strictly a physical location and is not to be interpreted temporally. This does not limit the permitting of activities (aside from discharging into a mixing zone) in spawning areas when it is determined that spawning and incubation is not occurring.

The old Mixing Zone regulations do not make reference to spatial and temporal spawning areas. Neither of the two previously proposed mixing zone regulations made reference to spawning areas as spatial and temporal entities. The new ADEC Mixing Zone regulations contain this language, implying that mixing zones will be allowed in stream areas used for spawning during some portion of the year.

"A mixing zone could be allowed when spawning salmon, eggs, or larvae are not present, state officials said. For example, a placer miner could "operate for a very small window of time" in some salmon spawning streams in Alaska, said Lynn Kent, director of the Environmental Conservation Department's Division of Water."*

*"Mixing Zone Change Fuzzy for Fishermen" Elizabeth Bluemink, Juneau Empire, January 15, 2006

OLD MIXING ZONE REGULATIONS	NEW MIXING ZONE REGULATIONS	HB 328	DIFFERENCES
EXCEPTIONS TO THE SPAWNING AREA PROHIBITION	EXCEPTIONS TO THE SPAWNING AREA PROHIBITION	EXCEPTIONS TO THE SPAWNING AREA PROHIBITION	
<p>No exceptions found</p>	<p>(i) The provisions of (e),(f) and (g) of this section do not apply to the renewal of a mixing zone authorization where spawning was not occurring at the time of the previous authorization, but successful spawning, incubation and rearing has occurred within the mixing zone subsequent to the previous authorization of that mixing zone.</p> <p>(f) In lakes, streams, or other flowing fresh waters, except as provided in (g) of this section, a mixing zone will not be authorized in a spawning area for Arctic Grayling; northern pike; lake trout; brook trout; sheefish; burbot; landlocked coho salmon, king salmon, or sockeye salmon; or anadromous or resident rainbow trout, Arctic char, Dolly Varden, whitefish or cutthroat trout.</p> <p>(g) The Department may authorize a mixing zone in a spawning area of a lake, stream, river or other flowing fresh water for the species listed in subsection (f) if, after consultation with the Department of Natural Resources, Office of</p>	<p>(b) The prohibition in (a) of this section does not apply to the renewal of a municipal wastewater facility's mixing zone authorization during the useful life of the wastewater facility for an area where spawning was not ongoing at the time of the initial authorization and the mixing zone became a spawning area after the date of the initial authorization.</p> <p>(c) (2) "lakes, streams, rivers, or other flowing fresh water" includes lakes, streams, rivers, or other flowing fresh water that have been altered by remediation or construction activities; the term does not include an artificially constructed facility for water, wastewater, holding, or channeling, unless the artificial facility is constructed for the purpose of facilitating fish spawning.</p>	<p>HB 328 allows for mixing zones in man-made ditches and holding ponds by prohibiting reclassification of these areas as freshwater spawning areas if they are subsequently colonized by spawning fish.</p> <p>HB 328 also allows municipal wastewater discharges to be re-authorized for the useful life of a facility if spawning occurs in the mixing zone after initial authorization.</p> <p>The new ADEC Mixing Zone regulations contain a clause that allows any mixing zone in flowing fresh water to be re-permitted if spawning, incubation, or rearing occurs within the active mixing zone.</p> <p>The new ADEC Mixing Zone regulations allow mixing zones in the spawning areas of Arctic Grayling; northern pike; lake trout; brook trout; sheefish; burbot; landlocked coho salmon, king salmon, or sockeye salmon; or anadromous or resident rainbow trout, Arctic char, Dolly Varden,</p>

Habitat Management and Permitting, or the Department of Fish and Game if with a legislatively designated special area under AS 16.20, the department finds the applicant has

(1) demonstrated that the discharge does not contain pollutants at concentrations that exceed the criteria for growth and propagation of fish, shellfish, and other aquatic life, and wildlife established in 18 AAC 70.020(b) and that the discharge will not adversely affect the capability of the area to support future spawning, incubation, and rearing activities;

(2) submitted a mitigation plan approved by the Department of Fish and Game under 5 AAC 95.900 if within a legislatively designated special area under AS 16.20; or

(3) submitted a mitigation plan approved by the Department of Natural Resources, Office of Habitat Management and Permitting, and incorporating as part of the discharge authorization, using the methods established in 11 AAC 195.010.

whitefish or cutthroat trout if the permit applicant can either prove that the discharge into the mixing zone will not exceed the water quality criteria for growth and propagation of fish, shellfish and other aquatic life and wildlife OR if the permit applicant has submitted an approved mitigation plan.

Section (g) (3) of the new ADEC Mixing Zone regulations refers to the submission of a mitigation plan that uses methods established in 11 AAC 195.010, the section of DNR regulation where the Anadromous Stream Catalog is adopted by reference. Mitigation language in the Anadromous Stream Catalog is currently under revision.

Mixing zones, wild salmon don't mix

By BRIAN KRAFT

(Published: August 31, 2005)

The state of Alaska has a reputation for being a pristine wilderness with an abundance of fertile habitat and waterways that produce tremendous amounts of game and fish. This reputation could soon be put to the test. Our state government is preparing to allow large industrial projects to utilize these very habitats as "mixing zones."

A mixing zone as defined on the Alaska Department of Natural Resources Web site is "a permitted area in which discharge substances mix with, and are diluted by receiving waters. Some water quality criteria may be exceeded in a mixing zone." Current regulations in Alaska do not allow for mixing zones of any kind in salmon spawning rivers or flowing waters. This is because our past government officials have recognized the importance of having pure, healthy habitat for our salmon and what these salmon mean to our state -- subsistence, commercial and sport. The proposed changes would now allow industries to pollute our rivers where salmon spawn.

According to DNR Web sites, the Department of Environmental Conservation envisions three criteria where a mixing zone would be permitted. First, a mixing zone may be permitted for specific pollutants that do not harm fish. Second, the discharge of pollutants may be timed to avoid the spawning season. And the third criterion is that the project design may include habitat improvements such that the positive effects offset the negative effects, resulting in no net change.

As an Alaska resident, these criteria concern me. Why would we want deliberately to pollute any of our rivers? This just does not make sense. We have seen the results of polluted waterways throughout the Pacific Northwest.

The second criterion is alarming in that the spawning areas for our salmon do not become a nutrient-rich environment for a short window of time during the spawn. These areas are a year-round source of nutrients for the salmon at the most critical stages of their life cycle. Far too often, we as a society have tried to mess with Mother Nature only to be reminded time and time again that we are human, that we make mistakes.

This leads me into the third criterion of establishing artificial or compensation-type systems to make up for the destruction of the wild salmon. This goes directly against what Bristol Bay is all about -- wild salmon. Not farmed or hatchery fish -- but wild salmon. We should be doing everything in our power to protect and ensure that the last great wild salmon runs in the world and their crucial spawning beds are not jeopardized. According to the Environmental Protection Agency's Web site, "Mixing zones should not be permitted where they may endanger critical area (breeding grounds, recreational areas, areas with sensitive biota)."

Mixing zones help one industry in particular, and that is the mining industry. The reason is simple. It is much cheaper to discharge pollutants into a waterway than to contain and treat them.

A mixing zone near the Koktuli River and Upper Talarik Creek is not a good idea for Alaska salmon. I do not know of an area that is more critical than spawning beds for our salmon. A mixing zone in this area coupled with a large open-pit mine that exposes sulfides and heavy metals and a large tailings pond will bring on the potential for damage to our fish. I do not think that we should accept the undeniable risks that are coupled with these proposals.

Remember, we are all human. and no matter how great we think we are, we still make mistakes. Let's not make a mistake in Bristol Bay.

Brian Kraft is director of Bristol Bay Alliance and Southwest Alaska project director for Trout Unlimited. He is also general manager of Alaska Sportsman's Lodge in the Bristol Bay region.

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Anchorage Daily News

Protect our streams**Alaska shouldn't risk mixing zones in fish streams at any time or place***(Published: January 20, 2006)*

Gov. Frank Murkowski and his troops touted his recent announcement about mixing zones as a great, environmentally friendly decision for Alaska salmon. Mixing zones are areas where higher pollution is allowed on the theory that it will harmlessly dilute elsewhere in the water.

The governor patted himself on the back for deciding to "retain the current regulatory prohibition on mixing zones in salmon spawning areas." His aides noted that the new rules even extend the current ban to salmon spawning zones within lakes, which are not currently protected.

That move marked a sharp retreat from the governor's two-year campaign to weaken mixing-zone rules as they apply to salmon.

Does he deserve a lot of credit for backing off a bad idea?

Well, it is somewhat out of character. It's a rare case where he trimmed his sails in response to well-founded public opposition to a misguided initiative.

But the rules he's keeping are not nearly as good as they might sound. Mixing zones are banned only in salmon spawning areas, and only when spawning salmon or eggs or hatchlings are actually there. The rest of the stream or river is open to potential mixing zones the rest of the time.

While he was bragging about the salmon protections, Gov. Murkowski weakened the mixing-zone rules for other fish. The old rules banned them in areas where fish reproduce; the governor lifted that ban.

The governor's people say the new rules include plenty of restrictions that make sure any newly authorized mixing zone won't actually harm salmon or other fish. In theory, that sounds good. In practice, it all depends on how the standards are applied.

Does the mining company or industrial operation or land owner have to prove the added pollution won't cause harm? Or does the agency have to prove that the proposal will in fact damage the environment?

Either way, proving the claim in advance is impossible to do with certainty. What is known for certain is that the mixing-zone applicant says a government rule is standing in the way of jobs, investment, economic progress and the rightful operation of the free market.

Result? Agencies could allow some new, higher level of pollution.

They may or may not adequately monitor what happens as the added pollution goes into the environment. Experts may or may not agree on whether the data show a problem. Nature is a complex system. Scientists are seldom sure they have enough data to understand what's really going on. A single effect, like a drop in migratory fish populations, seldom stems from a single

cause. If agencies allow the pollution, and discover it does cause harm, it's too late.

Alaska, the one state in the country still with healthy runs of wild salmon, has too much at stake. Allowing mixing zones in salmon streams at any time is a risky gamble with the future of an industry that's already under economic siege.

That's why state Rep. Paul Seaton, a Republican fisherman from Homer, introduced a bill banning mixing zones in fish spawning areas. Unfortunately, his bill probably doesn't go far enough. It leaves room for hairsplitting about whether a mixing zone is OK as long as fish or eggs or hatchlings are not there right at that moment. That loophole lets polluters flush pollutants downstream, into the path of migrating salmon or other fish. Dilution is not the solution to pollution.

The Legislature will hold the first committee hearing on Rep. Seaton's bill today. Lawmakers should give Alaska salmon and other fish the protection they deserve and keep the extra pollution from mixing zones out of all Alaska fish streams.

BOTTOM LINE: Gov. Murkowski won't keep mixing zones out of Alaska's fish streams. The Legislature should.

Honesty on the Web

Most every business seems to have its own Web site nowadays, flashing all the benefits of its products or services, promising customers the best, the fastest and the least expensive goods or service in town.

Is it all true? What about customer complaints? You don't see much of that on business Web sites. The news is particularly one-sided, which is what you would expect from a company's own advertising. There's nothing wrong with a business using its Web site to promote itself -- that's how advertising works.

But, as in all things in life, there are exceptions. One particular pizza parlor Web site for ordering deliveries in the Anchorage area includes a feature for customers to write their own reviews. No corporate public relations campaign, just a Web click away for customer feedback.

I was curious as to what other customers thought of the service, so I looked. Maybe I would learn something extra special about the vegetarian pizza (the healthy me) or get a new insight into the bacon double cheeseburger pizza (the unhealthy me).

Give the pizza people credit for uncensored honesty. The two customer reviews on the site both trashed the service. The first, posted a few weeks ago, complained of slow delivery (two hours and waiting). The second, put up on the Web just last week, complained of a shortage of cheese and pepperoni. "Had my wife (6 mos. preg.) not been so hungry for this craving, I would have given it back," the reviewer wrote.

Regardless of the disgruntled pizza shoppers, I placed my order and got it on time and exactly as advertised. I'll probably go back, not just to eat the pizza but because I appreciated the unedited opinions on the Web site.

-- Larry Persily

CITY OF VALDEZ, ALASKA

RESOLUTION 06-12

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF VALDEZ, ALASKA SUPPORTING HOUSE BILL 328 PROHIBITING MIXING ZONES IN FRESHWATER SPAWNING WATERS TO INCLUDE LANGUAGE REGARDING ARTIFICIALLY CONSTRUCTED WASTEWATER FACILITIES

WHEREAS, the City of Valdez operates the Valdez Sewer Treatment Plant; and

WHEREAS, the existing Valdez Sewer Treatment Plant and outfall line have been in place since the mid 1980's; and

WHEREAS, Alaska Statute 46.03 prohibits mixing zones in spawning waters; and

WHEREAS, House Bill 328 has been introduced amending the Alaska Statutes to indicate that freshwater does not include an artificially constructed facility for water, wastewater, holding, or channeling, unless the artificial facility is constructed for the purpose of facilitating fish spawning; and

WHEREAS, the Valdez Sewer Treatment Plant outfall was constructed for wastewater discharge purposes.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL FOR THE CITY OF VALDEZ, ALASKA that:

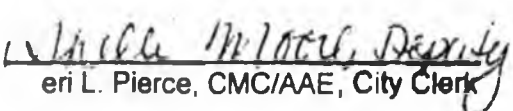
The City Council of the City of Valdez Alaska supports House Bill 328 prohibiting mixing zones in freshwater spawning waters including language regarding artificially constructed wastewater facilities.

PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF VALDEZ, ALASKA this 17th Day of January, 2006.

CITY OF VALDEZ, ALASKA


Bert L. Cottle Mayor

ATTEST:


Teri L. Pierce, CMC/AEE, City Clerk

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/Nc 1901

Support

IGIUGIG TRIBAL VILLAGE COUNCIL

A.K.A. Igiugig Village Council

P.O. Box 4008

Igiugig, AK 99613

Phone: (907) 533-3211 or Fax: (907) 533-3217 www.igiugig.com e-mail: igiugig@starband.net

January 30, 2006

Representative Seaton


Fax # 907.465.3472

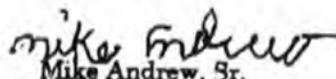
Dear Representative Seaton:

Please be advised that Igiugig Tribal Village Council (ITVC) and Igiugig Native Corporation (INC) strongly support HB328 and SB225 on mixing zones. Our community represented by ITVC and INC believe that the proposed legislation is the only mechanism that will insure the safety and quality of water sources in our region. Legislation will clearly dictate allowable uses of mixing zones and eliminate "interpretations" by managers and manipulation by politicians. Passage of this legislation will also send a clear message to the State and country that Alaska values its pristine water conditions and is taking strong measures to ensure sustainable water quality and renewable resources for future generations.

Igiugig Tribal Village Council (ITVC) and Igiugig Native Corporation (INC) strongly support passage of HB328 and companion bill SB225 on mixing zones. Please contact us for any further information that may be required on this issue.

Sincerely


Lydia Olympic
ITVC President


Mike Andrew, Sr.
INC Vice President

CORRECTION

THE FOLLOWING DOCUMENT(S)
HAVE BEEN REFILMED TO
ASSURE LEGIBILITY OR PAGINATION



Central Microfilm Services
Department of Education & Early Development
State of Alaska

CITY OF VALDEZ, ALASKA

RESOLUTION 06-12

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF VALDEZ, ALASKA SUPPORTING HOUSE BILL 328 PROHIBITING MIXING ZONES IN FRESHWATER SPAWNING WATERS TO INCLUDE LANGUAGE REGARDING ARTIFICIALLY CONSTRUCTED WASTEWATER FACILITIES

WHEREAS, the City of Valdez operates the Valdez Sewer Treatment Plant; and

WHEREAS, the existing Valdez Sewer Treatment Plant and outfall line have been in place since the mid 1980's; and

WHEREAS, Alaska Statute 46.03 prohibits mixing zones in spawning waters; and

WHEREAS, House Bill 328 has been introduced amending the Alaska Statutes to indicate that freshwater does not include an artificially constructed facility for water, wastewater, holding, or channeling, unless the artificial facility is constructed for the purpose of facilitating fish spawning; and

WHEREAS, the Valdez Sewer Treatment Plant outfall was constructed for wastewater discharge purposes.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL FOR THE CITY OF VALDEZ, ALASKA that:

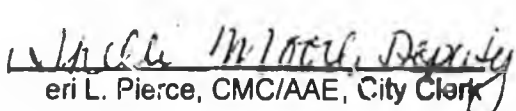
The City Council of the City of Valdez Alaska supports House Bill 328 prohibiting mixing zones in freshwater spawning waters including language regarding artificially constructed wastewater facilities.

PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF VALDEZ, ALASKA this 17th Day of January, 2006.

CITY OF VALDEZ, ALASKA


Bert L. Cottle Mayor

ATTEST:


Teri L. Pierce, CMC/AEE, City Clerk

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Support



"Alaska at Its Best!"

CITY OF PALMER

231 West Evergreen Avenue
Palmer, Alaska 99645
Phone (907) 745-3271 • Fax (907) 745-0930
www.cityofpalmer.org

January 26, 2006

Representative Carl Gatto
State Capital, Room 411
Juneau, AK 99801-1182

Re: CS HB 328

Dear Representative Gatto:

The City of Palmer supports the addition of language in the committee substitute for HB 328 regarding mixing zones in freshwater spawning areas.

The addition of section (b) addresses a concern involving the Palmer municipal wastewater treatment facility mixing zone. Subsection (b) reads:

- (b) The prohibition in (a) of this section does not apply to the renewal of a municipal wastewater facility's mixing zone authorization during the useful life of the wastewater facility for an area where spawning was not ongoing at the time of the initial authorization and the mixing zone became a spawning area after the date of the initial authorization.

This language removes Palmer's concern that the legislation as initially proposed might prevent the renewal of Palmer's wastewater discharge permit.

Thank you for your attention to this issue. If you require additional information, please contact me at 761-1304.

Sincerely,

Thomas Healy
City Manager

IGIUGIG TRIBAL VILLAGE COUNCIL

A.K.A. Igiugig Village Council

P.O. Box 4008

Igiugig, AK 99613

Phone: (907) 533-3211 or Fax: (907) 533-3217 www.igiugig.com e-mail: igiugig@starband.net

January 30, 2006

Representative Seaton

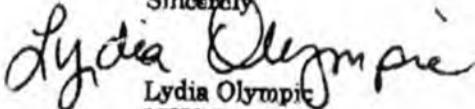
Fax # 907.465.3472

Dear Representative Seaton:

Please be advised that Igiugig Tribal Village Council (ITVC) and Igiugig Native Corporation (INC) strongly support HB328 and SB225 on mixing zones. Our community represented by ITVC and INC believe that the proposed legislation is the only mechanism that will insure the safety and quality of water sources in our region. Legislation will clearly dictate allowable uses of mixing zones and eliminate "interpretations" by managers and manipulation by politicians. Passage of this legislation will also send a clear message to the State and country that Alaska values its pristine water conditions and is taking strong measures to ensure sustainable water quality and renewable resources for future generations.

Igiugig Tribal Village Council (ITVC) and Igiugig Native Corporation (INC) strongly support passage of HB328 and companion bill SB225 on mixing zones. Please contact us for any further information that may be required on this issue.

Sincerely



Lydia Olympic
ITVC President



Mike Andrew, Sr.
INC Vice President

**CITY OF HOMER
HOMER, ALASKA**

Mayor

RESOLUTION 05-123

A RESOLUTION OF THE CITY COUNCIL OF HOMER, ALASKA OPPOSING THE ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION'S PROPOSAL TO AMEND 18 AAC 70.240 TO ALLOW INCREASED POLLUTION - THROUGH USE OF MIXING ZONES IN ALASKA SALMON STREAMS.

WHEREAS, The Alaska Department of Environment Conservation recently proposed new rules to allow "mixing zones" in Alaska fish streams; and

WHEREAS, Mixing zones allow pollution at levels that violate standards designed to protect fish and fish consumers; and

WHEREAS, Alaska's wild salmon are renowned worldwide for being clean, fresh and healthy, and

WHEREAS, Alaska salmon fisheries support countless families and communities throughout the Homer area, and form part of the cultural fabric that makes Alaska unique; and

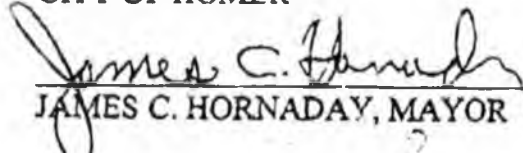
WHEREAS, Salmon health, salmon habitat and salmon marketing will suffer under a broad new rule allowing increased pollution into Alaska's salmon streams; and

WHEREAS, The state of Alaska has limited technical and financial resources to assess the consequences of increased pollution into Alaska's salmon streams; and

WHEREAS, Alaskans resoundingly opposed a similar proposal from the Murkowski Administration last year, and vital local and state government resources are being spent to undermine fish stream and salmon marketing protections.

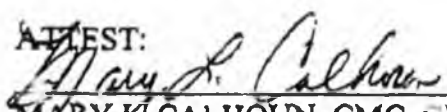
NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Homer hereby opposes the Alaska Department of Environmental Conservation's proposal to amend 18 AAC 70.240 to allow increased pollution through the use of mixing zones in Alaska salmon streams.

CITY OF HOMER



JAMES C. HORNADAY, MAYOR

ATTEST:



MARY L. CALHOUN, CMC, CITY CLERK
Fiscal Note: NA

Seldovia Village Tribe



January 12, 2006

Dear Honorable Representative Seaton,

Seldovia Village Tribe, a federally recognized Alaska Tribe supports the legislation -

HOUSE BILL NO. 328

introduced by yourself, along with Representative Kurt Olson (R-Kenai), Representative Carl Gatto (R-Palmer) and Representative Gabrielle LeDoux (R-Kodiak) that would place in statute the prohibition on pollution mixing zones in Alaska freshwater spawning waters.

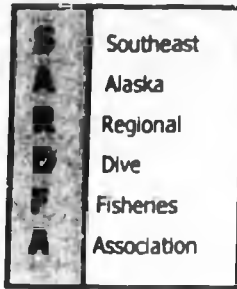
We agree that House Bill No. 328 is needed to protect the habitat of Alaska's world famous salmon and trout and to protect Alaska salmon marketing efforts, and the subsistence people and cultures that rely on them.

Thank You,

SELDOVIA VILLAGE TRIBE

A handwritten signature in black ink, appearing to read "Michael Opheim", followed by a long horizontal line extending to the right.

Michael Opheim
Environmental Coordinator



Mission Statement: To develop, expand, and enhance new and existing dive fisheries in Southeast Alaska.

Julie Decker, Executive Director
Box 2138, Wrangell, AK 99929
Ph: 907-874-3100; Fax: 907-874-4270
info@sardfa.org
www.sardfa.org

Representative Bill Thomas, Co-Chair
Representative Gabrielle LeDoux, Co-Chair
House Fisheries Committee

January 26, 2006

RE: Support for HB 328

Dear Representatives Thomas and LeDoux,

The Southeast Alaska Regional Dive Fisheries Association (SARDFA) is a strong supporter of regional economic development and also recognizes the importance of clean waters for the health of Alaska's fishing resources. However, SARDFA does not believe that economic development of Alaska's natural resources and having a healthy, clean environment are mutually exclusive. SARDFA believe CS HB 328 strikes a balance between the resource development and a clean environment.

There is also some discussion amongst our group whether the latest version of DEC's regulations regarding mixing zones may also strike this balance. This is not clear to us yet, but we will be pursuing a clear interpretation of it.

Thank you for your time and consideration.

Sincerely,

Julie Decker, Executive Director

Members of:
Southeast Conference
United Fishermen of Alaska
Pacific Coast Shellfish Growers' Assoc.
Interstate Shellfish Sanitation Conference

Cc: Representative Paul Seaton
Mark Vinsel, Executive Director, UFA
SARDFA Board of Directors



Alaska Trollers Association

130 Seward St., No. 211
Juneau, Alaska 99801
(907) 586-9400
(907) 586-4473 Fax

January 13, 2006

Representative Bill Thomas
Representative Gabrielle LeDoux
Co-Chairs, House Fish Committee
Alaska State House of Representatives
State Capitol
Juneau, Alaska 99801-1182

Dear Representatives Thomas and LeDoux:

I write on behalf of the Alaska Trollers Association (ATA) with regard to HB 328, which seeks to put in place a statutory prohibition on mixing zones in spawning streams. ATA supports prohibition of mixing zones, in both spawning and rearing areas, but at this time needs more information before encouraging a statute over regulations.

For your information and background, I will attach the comments ATA submitted on DEC's proposed mixing zone regulations. A key concern to ATA is defining ADFG's roll in mixing zone decisions. It just makes sense that the agency with the highest level responsibility for maintaining sustainable populations of fish and wildlife should be also bear key responsibility and authority for securing the habitat necessary to support them. We don't have to look too far south to see what happens when fishery scientists and managers are removed from decisions governing the use of land and water.

Yesterday, DEC published regulations pertaining to mixing zones. I did have a chance to read the regulations and believe there are some good features. That said, because there has been no specific examples given as to why new regulations are needed, it's hard to envision how they will be implemented. Due to preparations for the Southeast Board of Fisheries meeting, which begins next week in Ketchikan, I have been unable to closely study the new regulations and how they mesh with other law. So for now, I offer these initial questions:

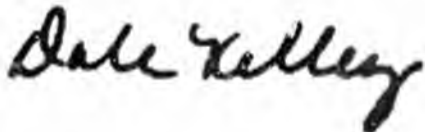
1. Is the language as written strong enough to prevent mixing zones in all spawning and rearing areas, except under the most extreme circumstances?

2. ADFG appears to have some chance of being given deference with respect to identifying spawning areas, but they are not the lead agency for this purpose, nor are they given deference for denying mixing zones in either spawning or rearing habitat - ADFG will merely be one of two agencies that may be consulted. Is that correct?
3. Why is ADFG only allowed to approve mitigation plans designed for "legislatively designated special areas"? And, under what circumstances would we allow mixing zones in such places?
4. Will the regulations protect fish that live in the outfall of a landlocked lake? For instance, if a lake has a waterfall flowing into a stream?
5. Mention is made in the regulations about permit reauthorization in an area where spawning didn't occur previous to securing a mixing zone, but has developed since. Does this item resolve the problem in Valdez? And, does ADFG also intend to re-catalogue that specific area?

There are likely many more questions that will be posed and discussed during this week's hearing. I appreciate the time you are devoting to clarifying the bill and possibly moving it forward. I'm sorry to miss the hearing and hope that there will be follow up at a time that SE fishing groups are better able to participate.

Please feel free to contact me via email or cell if I can help or if you have additional information you think would assist ATA as it considers a position on HB 328. We will take up this legislation during our spring board meeting, which will run concurrent with the Board of Fisheries meeting.

Best regards,



Dale Kelley
Executive Director

Ian Laing

From: on behalf of Rep. Paul Seaton
Subject: FW: Mixing Zone Legislation Update

From: Marv Smith [mailto:marvsmith.lpboro@starband.net]
Sent: Wednesday, January 25, 2006 8:44 AM
To: Louie Flora
Subject: Re: Mixing Zone Legislation Update

Louie:

The Borough Assembly and Planning Commission passed a resolution dated November 9th opposing the Mixing Zone regulations that DEC passed. Would you like for me to send you a copy of that passed resolution to support HB328? Let me know!

Thanks,
Marv

Ian Laing

From: Maridon Boario
Sent: Wednesday, January 25, 2006 11:01 AM
To: Louie Flora
Subject: FW: Support HB 328

Louie
Here is the e-mail Woodie received from YRDFA.

Thanks
Maridon

From: Becca Robbins [mailto:becca@yukonsalmon.org]
Sent: Thursday, January 19, 2006 3:49 PM
To: Rep. Woodie Salmon
Subject: Support HB 328

Dear Representative Salmon:

I am writing on behalf of the Yukon River Drainage Fisheries Association (YRDFA) to urge you to support HB 328. YRDFA represents subsistence and commercial fishers on the Yukon River, some of whom are your constituents. YRDFA opposed DEC's proposed mixing zone regulations in both 2004 and 2005. We do not feel that DEC's new regulations provide adequate protection to salmon and non-salmon species. We support HB 328 to protect fish from mixing zone pollution.

Mixing zones pose threats to anadromous and freshwater fish populations. As you know, salmon in particular plays an important cultural and economic role for those who live on the Yukon River. For many residents the commercial salmon harvest provides the only means of income for those who live in the remote villages of the Yukon River. Salmon and other freshwater fish provide a primary source of food for residents along the Yukon River, including food for dogs utilized in subsistence activities. Mixing zones, by allowing levels of pollution otherwise prohibited under water quality standards, pose a threat to anadromous and freshwater fish and Yukon River fishers who depend on these fish for income and subsistence.

Mixing zones also threaten commercial salmon markets. Alaska salmon is valuable in the market precisely because of the clean, healthy waters in which our salmon swim. YRDFA and Yukon River fishers have invested significant amounts of time and money in marketing campaigns focused on the wild, healthy status of Alaska's salmon waters. Allowing mixing zones in salmon spawning areas even when salmon are not spawning will severely harm this image, counter these efforts and threaten the marketability of Alaska salmon products.

While the regulations as adopted maintain some degree of protection for salmon, they leave much to be desired. They give DEC far too much discretion in identifying salmon spawning areas - under these new regulations, a mixing zone could be allowed in a salmon spawning area when spawning fish are not present. This loophole ignores the importance of spawning grounds not only for fish spawning, but for fish rearing as well. The regulations also give DEC the ability to defer to Department of Natural Resources Biologists' opinion in determining spawning areas and ignore the Alaska Department of Fish

& Game's determinations. The new regulations continue to place far too much of the responsibility for showing that a mixing zone will not have adverse affects for fish in the hands of the permit applicant. Finally, the proposed regulations offer even less protection for non-salmon species, which many Yukon River subsistence fishers rely on before and after the salmon are running and in years of low salmon returns for sustenance for themselves and their sled dogs. For non-salmon species, under the new regulations DEC can authorize a mixing zone in a spawning area if the applicant simply submits a mitigation plan. The grandfather clause, which allows DEC to renew a mixing zone authorization in a salmon spawning area if salmon were not present at the initial time of permitting, threatens to counter habitat restoration and dam removal efforts throughout the state. Under this rule, if habitat is restored and fish are able to return to their spawning grounds, newly restored fish populations would then have to contend with a mixing zone in their spawning grounds. This rule has the backwards effect of punishing newly restored fish populations and habitat restoration efforts.

HB 328 would once again prohibit mixing zones in spawning areas for salmon and non-salmon species. This would ensure that these species are adequately protected and that Alaskans will not have to continue to spend their valuable time working to maintain these protections.

On behalf of the Yukon River Drainage Fisheries Association and subsistence and commercial fishers on the Yukon River I urge you to support HB 328 and protect a resource vital to your constituents' existence and well-being.

Sincerely,

Rebecca A. Robbins
Policy Coordinator

Becca Robbins
Policy Coordinator
Yukon River Drainage Fisheries Association
725 Christensen Dr., Ste 3-B
Anchorage, AK 99501
907.272.3141x106
Toll Free: 877.99YUKON(98566)
www.yukonsalmon.org

Louie Flora

From: Emille Otis [emmy@xyz.net]
Sent: Thursday, January 19, 2006 10:06 PM
To: Louie Flora
Subject: Written Comments to HB 328 and SB 225

To whom it may concern:

As I will be at work and unable to testify to the Alaska House Fisheries Committee on HB 328 Friday morning, I am submitting the following written comments, which I hope you will consider. I also hope you will consider accepting public comments on this important legislation in the future.

I fully support Rep. Paul Seaton's HB 328. It's heartening to know that we have a forward-thinking legislator who realizes that pristine waters and healthy fishery resources are the cornerstones of Alaska's sustainable fishing and tourism industries, and that without these renewable resources, our state will have nothing to rely on after our non-renewable resources are gone.

The only way to assure the continuation of Alaska's enviable situation of maintaining strong, healthy fish stocks, is to maintain stringent water quality and habitat protection regulations. Every state that has decided to weaken their water quality regulations (e.g., allowing mixing zones in fish spawning, incubation, and rearing areas) to make it easier for extractive industries to conduct business, have paid the price. Many of these states now have health advisories warning against consumption of their fish. Others face constant litigation against their failures to protect the public's resource and they struggle with funding for expensive mitigation projects that rarely provide full restoration of lost resources. It is inconceivable to me that Alaska is considering following in their footsteps and risking the long-term health of its most valuable renewable resource by weakening the water quality regulations that have done such an outstanding job of protecting fisheries so far.

The Alaska Department of Environmental Conservation's (ADEC) new regulations regarding mixing zones do NOT ensure adequate protection to our state's valuable fishery resources. Instead, the new regulations introduce loopholes that would lead to mixing zones in salmon, trout, and char spawning, incubation, and rearing areas. Unfortunately, the new regulations do NOT require comprehensive baseline studies prior to permitting mixing zones so that effects from the mixing zone can be readily compared to pre-permitted conditions. Nor do the new regulations require unbiased follow-up monitoring of permitted mixing zones to assure compliance with the requirement that they do not "adversely affect the present and future capacity of an area to support spawning, incubation, and rearing of the five species of Pacific salmon". Without these requirements in regulation, and adequate funding for staff to conduct monitoring and enforcement activities, there is no way to assure compliance with the new regulations.

Furthermore, DEC's new regulations do NOT require that professional fishery biologists from the Department of Fish and Game be involved in mixing zone permitting decisions that affect the state's fishery resources, except in rare cases where special, legislatively designated areas are involved (e.g., State Refuges, Critical Habitat Areas, etc.). Instead, DEC's regs require

only that the Department of Natural Resources (who's mission is development, not conservation) be consulted on permitting matters and mitigation plans. They also leave Fish and Game out of monitoring activities and instead leave it up to the permittee (i.e., polluter) to determine whether or not their mixing zone is negatively affecting the future capacity of the area to support spawning, incubation, and rearing.

Rep. Seaton's HB 328 nips these problems in the bud by establishing an outright ban on mixing zones in the spawning areas of Alaska's five Pacific salmon species, as well as other important resident species (e.g., trout, char, burbot, sheefish, etc). While Rep. Seaton's bill provides strong protection for our state's salmon spawning areas, it also provides a sensible solution to the rare situations where salmon colonize and begin spawning in artificially constructed wastewater channels (e.g., Valdez Sewage Treatment Center), thereby solving one of the main reasons DEC cited for drafting new regulations in the first place.

Our elected representatives are supposed to conduct state business in a manner that is in the long-term best interest of all Alaskans. I expect you to do just that, by supporting Rep. Seaton's forward-thinking bill to provide the protection our state's most valuable resource needs to assure it's continued health for generations of Alaskans to come. Please don't be the legislature that future generations of Alaskans will look back on with disdain for opening the door to pollution of our salmon producing waters. Do the right thing, and pass HB 328.

Thank you for this opportunity to comment.

Sincerely,

Edward O. Otis
PO Box 1402
Homer, AK 99603

Juneau Douglas Fish and Game Advisory Committee
Kathy Hansen, Chair
9369 North Douglas Hwy
Juneau, AK 99801
907-586-6652

January 13, 2006

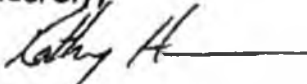
House Fish Committee
Alaska State Legislature
State Capitol (MS3100)
Juneau, AK 99801-1182

RE: HB #328 - Support

Dear Representative LeDoux, & Representative Thomas, Co-chairs,

The Juneau Douglas Fish and Game Advisory Committee met on January 12, 2006 on Board of Fish proposals. At the end of the meeting the Advisory committee passed a motion in support of HB #328 and SB #225 regarding mixing zones in spawning areas. We sent a resolution to DEC during the comment period on the proposed regulations opposing the changes and have attached that resolution to this letter of support for protecting salmon and fishery resources by prohibiting mixing zones in spawning and rearing areas.

Sincerely,



Kathy Hansen, Chair

CC: Rep. Seaton & Senator Stevens

Resolution of the Juneau-Douglas Fish & Game Advisory Committee

A Resolution Regarding the Alaska Department of Environmental Conservation's Proposed Regulations Relating to Water Quality Standards – Mixing Zones.

WHEREAS, the Alaska Department of Environmental Conservation (ADEC) has proposed new regulations that retain the existing general prohibition on mixing zones in fish spawning areas, but allow for exemptions from the prohibition; and

WHEREAS, a mixing zone area occurs where wastewater discharge mixes with a water body; and

WHEREAS, mixing zones may create pollution levels that fail to meet the goals of the Clean Water Act; and

WHEREAS, mixing zones allow pollution at levels that violate water quality standards designed to protect fish and fish consumers; and

WHEREAS, mixing zones are allowed under state regulations as the exception rather than the rule; and

WHEREAS, the current state water quality regulations, which became effective in November 1997, contain a prohibition on mixing zones in anadromous (migrating) or resident fish spawning areas; and

WHEREAS, there was extensive public comment in 2004 in opposition to a previous draft of ADEC regulations which would have lifted the state's prohibition on mixing zones in spawning streams; and

WHEREAS, this new 2005 proposal on mixing zones is open for public comment until December 19th; and

WHEREAS ADEC has held only one public hearing in Anchorage on December 5 on these controversial proposed mixing zone regulations; and

WHEREAS, Alaska's wild salmon are renowned worldwide for being clean, fresh, and healthy, and Alaska salmon require clean water and healthy habitats to thrive and reproduce; and

WHEREAS, Alaska salmon fisheries support countless families and communities throughout the state and form part of the cultural fabric which makes Alaska unique; and

WHEREAS, wild salmon and other freshwater marine life support numerous jobs and subsistence resources for the residents City and Borough of Juneau; and

WHEREAS, many Alaska salmon marketing efforts hinge on consumer preference for fish raised in pure mountain streams and harvested in pristine waters isolated from human impact; and

WHEREAS, allowing industrial mixing zones in salmon lakes and streams may impair the efforts of commercial, sports and charter fishing business to promote Alaska wild salmon as healthy, wild, and organic; and

WHEREAS, farmed salmon have created significant social and economic dislocation for Alaska's fishing families; and

WHEREAS, the ADEC has not identified any issues that can't be dealt with under the current mixing zone regulations, or which warrant a wholesale shift in this policy; and

WHEREAS, under the 2005 proposed regulations, ADEC may authorize a mixing zone in a spawning area if an applicant merely has an approved mitigation plan; and

WHEREAS, this approved mitigation plan may be as simple as substituting one stream for another; and

WHEREAS, the Juneau Douglas Fish and Game Advisory Committee represents all fishing user groups, conservation perspectives and the general public; and

WHEREAS, the JDAC is concerned that that ADEC's 2005 proposed mixing zone regulations, combined with ADEC's policy statements on this subject, will result in an increase in pollution in spawning streams; and

WHEREAS, the JDAC believes that salmon health, salmon habitat and salmon marketing may suffer under ADEC's 2005 proposal.

NOW THEREFORE, BE IT RESOLVED BY THE JUNEAU DOUGLAS FISH AND GAME ADVISORY COMMITTEE:

Section 1. That the JDAC hereby expresses its opposition to the Alaska Department of Environmental Conservation's proposed 2005 water quality-mixing zone regulations because implementation of the regulations would allow for increased pollution in fish spawning areas;

Section 2. That the JDAC requests that the Alaska Department of Environmental Conservation extend the public comment period until January 31, 2006.

Copies of this resolution shall be provided to Governor Frank Murkowski; Kurt Fredriksson, Commissioner of the Alaska Department of Environmental Conservation; Senator Kim Elton; Representatives Beth Keritula and Bruce Weyhrauch.

Adopted this 12th day of December 2005

Kathy Hansen Chair
Kathy Hansen, Chair, JDAC

Louie Flora

From: Rep. Paul Seaton
Sent: Sunday, January 22, 2006 12:10 PM
To: Louie Flora
Subject: FW: Letter of Support prohibiting pollution mixing zones

Ian Laing
Rep. Paul Seaton Staff
Capitol Building, Rm. 2
Juneau, AK 99801
907-465-2689

-----Original Message-----

From: marilyn@chickaloon.org [mailto:marilyn@chickaloon.org]
Sent: Sunday, January 22, 2006 9:28 AM
To: Rep. Paul Seaton
Cc: jennifer@chickaloon.org
Subject: Letter of Support prohibiting pollution mixing zones

January 21, 2006

Representative Paul Seaton
Alaska Legislature
Juneau, Alaska

Dear Representative Seaton:

Please accept this e-mail as a letter of support for prohibition on pollution mixing zones. The Chickaloon Village Traditional Council has written and signed a resolution stating the Tribe's opposition to changed regulations allowing pollution mixing zones in spawning areas. The Council has requested I write or e-mail you regarding our opposition to the pollution mixing zones in spawning areas.

This prohibition of pollution mixing zones in spawning areas is particularly important for our wild salmon. Letting mixing zones into these areas will effectively eliminate our wild salmon runs because the salmon are an indicator species of clean water - the salmon runs would die out for lack of clean water - and thus much of fishing industry will die out, also. And, at this time, the demand for wild salmon in Europe is increasing dramatically according to the international news media!

Please use this e-mail to help assure success in prohibiting mixing zones in spawning areas. Mixing zones do not eliminate pollution. They only dilute it.

Sincerely,

Marilyn Staggs
Executive Secretary for
Chickaloon Village Traditional Council
Telephone: (907) 745-0707
Fax: (907) 745-7154

(If you would like a copy of our Resolution opposing pollution mixing zones, please call or fax us. Thank you.)

mail2web - Check your email from the web at <http://mail2web.com/> .

Rep. Paul Seaton

From: michael bavers [mbavers@xyz.net]
Sent: Thursday, January 26, 2006 12:45 PM
To: Rep. Paul Seaton
Subject: Mixing Zone legislation

I would like to go on record as opposing any mixing zones in fresh water at any time.

Barring that happening, I support the proposed legislation that of House Bill 328.



Kachemak Bay Conservation Society

3734 Ben Walters Lane, Suite 202
Homer, AK 99603

Phone: (907)235-2062 • Fax: (907)235-4069 • kbcsc@xyz.net

January 26, 2006

Dear Representative Seaton,

The Kachemak Bay Conservation Society's mission is to protect the environment of the Kachemak Bay region and encourage sustainable use and stewardship of local natural resources through advocacy, education/information, and collaboration. Current state law prohibits mixing zones in salmon spawning areas, and we still see absolutely no reason to relax this law.

We are in support of HB 328. The Conservation Society would like to suggest an amendment to further strengthen HB 328. We feel the Bill should require that if a permit is requested for an uncatalogued water body, an assessment of that water body should be made before a permit is granted to see if it has anadromous fish or any of the other resident fish listed in the Bill.

Local and statewide fisheries are a vital and sustainable part of Alaska's economy. Allowing mixing zones threatens efforts by the fishing community to promote fresh, wild salmon through a marketing campaign emphasizing the clean, healthy, organic qualities of Alaskan salmon. Mixing zones are nothing more than pollution zones because they would allow higher pollution levels, a move that will damage Alaska's reputation as a state with unpolluted waterways. This outmoded and discredited method of handling waste should not be allowed.

Alaska is fortunate to still be able to claim rivers and streams free of health warnings about toxic fish. While other states are scrambling to clean up their streams, Alaska's current administration is considering implementation of a monumental mistake—a relaxation of our water quality standards! Many of our streams and rivers are not part of a regular sampling program to test for toxic pollution, nor will they be in the future. A very low level of hydrocarbon pollution, as low as one part per billion, can harm fish eggs and smolt. Alaskans consume large quantities of salmon. Toxins in fish can bioaccumulate in human fat cells, contributing to health concerns, particularly for pregnant women and children.

Alaskans are clear on this topic—they do not support mixing zones! KBCS opposes mixing zones and urges the State to maintain its high water quality standards in the interest of protecting our fisheries and the health of Alaskans.

Sincerely,

Dylan Weiser
President

Katie Shows

From: Jane Alberts
Sent: Friday, January 27, 2006 10:47 AM
To: Doug Letch; Ian Laing; Katie Shows; Louie Flora
Subject: Kenai Peninsula Online - Alaska Newspaper -



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Web posted Friday, January 27, 2006

Seaton should be applauded for bill to protect salmon

Prior to the industrial revolution, the streams and rivers of two continents, from Portugal and California in the south to arctic Europe and America, were the pristine nurseries of countless millions of salmon. As the forests were logged and factories replaced them, salmon in southwestern Europe began to disappear from their natal streams. Spawning streams retreated northward in Europe until salmon nearly vanished from that continent.

The same process began on the Atlantic coast of North America, and again, salmon were reduced to remnant populations. Still later, the stocks of Pacific salmon began to diminish in California, and with the decline of their freshwater habitat, their numbers began to diminish even in their once iconic strongholds the Columbia River, the Fraser, the Stikine, the Karluk. Now, Alaska is positioned at a unique place in this tragic decline of one of the biosphere's most valuable resources: we Alaskans control and can protect a large amount of the remaining undamaged salmon spawning habitat on the planet.

Thanks to Rep. Paul Seaton, HB 328 will marshal the rule of law rather than the whim of regulation to enforce that protection and limit pollution in salmon spawning areas. Rep. Seaton and HB 328 require the support of all Alaskans to oppose special interests and ensure that our salmon do not vanish as did their beleaguered kin on two continents.

Rob Lund



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Louie Flora

From: Rep. Paul Seaton
Sent: Tuesday, January 31, 2006 11:07 AM
To: louis_flora@legis.state.ak.us
Subject: FW: House Bill 328

From: Sara Petty [mailto:pettyinak@hotmail.com]
Sent: Tuesday, January 31, 2006 9:32 AM
To: Rep. Paul Seaton
Subject: House Bill 328

Dear Representative Seaton,

I recently read in the paper that you are supporting HB 328 which is to enforce regulations on pollution and protect the Salmon spawning streams. I wanted to say thank you, as a fellow Alaskan, I am young now, but I worry that in time when I do have children I will have nothing left to pass to them. Alaska is a beautiful place, and I intend to keep it that way. This is a badly needed bill and I will support it 100 %, if there is anything I can do that would help, please let me know.

Sara Petty
Anchorage

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Ian Laing

From: on behalf of Rep. Paul Seaton

Subject: FW: Thanks for the Mixing Zone Legislation Update

From: Kaden [mailto:kaden@prodigy.net.mx]

Sent: Wednesday, January 25, 2006 7:10 AM

To: Louie Flora

Subject: Thanks for the Mixing Zone Legislation Update

Hello Louie:

I appreciate you keeping me posted on the mixing zone legislation. My wife and I spend our winters away from Alaska in Mexico now that we are both retired. However, because we are still Alaska residents, spend seven months in Gustavus, and still operate a tourism business there, we are definitely interested in this issue. Our representative is Bill Thomas and our senator is Al Kookesh. Do either of them need to hear from us on this issue? We will be happy to write or call. Let me know.

Sincerely,
Hayden Kaden

|

1/31/2006

Ian Laing

From: on behalf of Rep. Paul Seaton
Subject: FW: Mixing Zone Legislation Update
Attachments: Prohibition of mixing zones.doc

From: Nancy [mailto:bear@alaska.net]
Sent: Tuesday, January 24, 2006 11:53 PM
To: Louie Flora
Subject: Re: Mixing Zone Legislation Update

Thank-you for this very clear chart and information.

Three concerns

1. Can the word "may" be replaced with "will" ; and
2. focus should be expanded to include not only spawning and redds but also incubation and rearing for instance: (please see attachment)
3. Possibly add smelt and Angayukaksurak chart

Thank-you for your consideration

Nancy Hillstrand
Coal Point Seafoods
bear@alaska.net
907-235-9772

P.S. Are they taking public comment on Friday 27?

Sec. 46.03.065 Prohibition of mixing zones in spawning waters. (a) Except as provided in (b) of this section, the department **will** not authorize a mixing zone for lakes, streams, rivers, or other flowing fresh water in an area **that supports spawning, incubation, or rearing** of

- (1) anadromous fish; or
- (2) the resident fish
 - (A) Arctic **and Angayukaksurak** chart;
 - (B) Arctic grayling;
 - (C) brook trout;
 - (D) burbot;
 - (E) cutthroat trout;
 - (F) Dolly Varden;

(G) lake trout;

(H) landlocked coho, king, and sockeye salmon;

(I) northern pike;

(J) rainbow trout;

(K) sheefish;

(L) smelt; or

(M) whitefish.

(c) In this section,

(1) "area" means the physical location where spawning, incubation, and rearing occurs:

Ian Laing

From: Marion Nelson [mmkn@ptialaska.net]
Sent: Thursday, January 26, 2006 2:09 PM
To: Rep. Paul Seaton
Subject: No mixing zones on the K Peninsula.

No mixing zones on the K Peninsula.

Marion K. Nelson
P.O. Box 1535
Kenai AK 99611
Office Phone (907) 283-4632
Fax (907) 283-4643
Cell 398-8669
E-mail: mmkn@ptialaska.net

Ian Laing

From: Jeff and Kathy Mitchell [mitchell @seward.net]
Sent: Tuesday, January 24, 2006 8:21 PM
To: Louie Flora
Subject: Hold the line Paul

Hi, I just want to commend representative Seaton for supporting and enlarging the protection of spawning areas of all species. As I understood from the newspaper, he would be supporting legislation to protect trout as well as salmon. I totally agree with not allowing mixing zones in any water that contains fish that can be consumed. Coming from WI., I understand how the entire fishery can become contaminated if mixing zones are allowed and undefined/unknown pollutantants are introduced into the ecosystem. I wish that it was safe to eat fish from everywhere in the US and it's our job to make sure no other ecosystems get contaminated.

Jeff Mitchell 907-288-5006
35905 Seward Highway
Seward,AK 99664

Ian Laing

From: on behalf of Rep. Paul Seaton
Subject: FW: HB 328

Sent: Friday, January 20, 2006 2:03 PM
To: Katie Shows
Subject: HB 328

Protect Alaska Salmon!

I was disappointed to learn the House Fisheries Committee will not be taking public testimony on HB 328 on January 20.

This important legislation will ban mixing zone pollution in areas where Alaska wild salmon and other fish spawn.

The Murkowski Administration has ignored the calls of thousands of Alaskans to protect our fish streams. ADEC's recently adopted mixing zone rule is riddled with legal loopholes that will allow pollution dumping in areas used by salmon and other fish to spawn.

Clean and healthy Alaska salmon are important to combat farmed salmon on world markets, and sport, commercial and subsistence fishermen depend on fresh, healthy fish. Wholesome Alaska salmon support countless families and communities across the state.

Please register my strong support for HB 328, and I hope you will take public testimony on this important bill in the near future.

David, Julie & Adi Jo Davis
PO Box 114
Homer, AK 99603

Ian Laing

From: MJacobs13@aol.com
Sent: Monday, January 30, 2006 8:07 PM
To: Rep. Paul Seaton
Subject: Mixing Zones

Dear Representative,

Just wanted to take a minute and let you know that my husband and I both support a **permanent and total** ban on mixing zones on **all bodies of water** where **any and all** fish spawn (not just salmon) **everywhere** in our magnificent state. Our pristine waterways and the precious fish they contain and nurture are too precious to waste. Once polluted, a waterway is never the same again. It is important that there is one state in the United States where pristine waters and pure fish can be found.

Thank you,

Marcia Jacobs

Bill Cook

Soldotna

Louie Flora

From: Rep. Paul Seaton
Sent: Tuesday, January 31, 2006 11:08 AM
To: louis_flora@legis.state.ak.us
Subject: FW: HB 328

From: Nina Faust [mailto:fausball@xyz.net]
Sent: Tuesday, January 31, 2006 9:27 AM
To: Rep. Paul Seaton
Subject: HB 328

P.O. Box 2994
Homer, AK 99603

January 12, 2006

House Resources
State Capitol, Room 102
Juneau, Alaska 99801

Dear Paul:

We support HOUSE BILL NO. 328, "An Act prohibiting mixing zones in freshwater spawning waters." A legislative fix is needed to prevent looser State regulations that would allow pollution in our streams and rivers. No matter how the State has tried to present its new regulations on mixing zones, it still comes back to the bottom line, which is that the new rules relax water quality standards in Alaska. The State appears to be scrambling to loosen controls on water quality to benefit pending big, new mines and timber operations. Alaska is the only state in the U.S. that can boast about its amazingly clean streams and lakes, but this will not last if the state allows relaxed mixing zone standards. We are adamantly oppose^d to doing this!

The Department of Environmental Conservation presented testimony to the House Special Committee on Fisheries on January 27, 2006. If the Legislature listens to DEC, Alaska water quality will likely go the way of so many streams, rivers, and lakes of the Lower 48 and elsewhere in the world. They will begin the gradual decline that will destroy our fisheries just as has happened most everywhere else. Already the State has granted roughly 32 questionable permits in salmon or other fish bearing waterbodies. These permits should be upgraded to require effluent to meet current state water quality standards or better.

Mixing Zones in streams supporting anadromous and other freshwater fisheries must be protected. Dumping pollution in Alaskan waters during times when fish are not spawning is not a solution. Over time, pollution accumulates in these waters. Somewhere it settles out, or fish slowly ingest the pollution. Without highly sophisticated testing programs, we will never know where the pollution goes, where it settles, or how it is slowly affecting the plants and animals in the water. Like elsewhere, it is a slow process of poisoning that someday shows up in fish in various ways. Why even allow this? The technology is available to make the effluent at the end of the pipe meet water quality standards. We

believe this is what Alaskans want!

Our fisheries are the envy of the nation and comprise a vital and sustainable part of Alaska's economy. Allowing mixing zones threatens commercial, subsistence, and sport fisheries, all-important components of many Alaskan communities. How can the State promote fresh, wild salmon through a marketing campaign emphasizing the clean, healthy, organic qualities of Alaskan salmon if we relax mixing zone regulations? The State can try to dress it up anyway it wants but it is still an outmoded and discredited method of handling waste and should not be allowed.

The Legislature must act to set high, permanent water quality standards. Leaving these standards open to changes of convenience to accommodate cheaper development of other natural resources is not reasonable. The State would be providing a cheap, convenient way for industry to dispose of its wastes to develop a non-renewable resource at the expense of clean water and rich fisheries, which are diminishing riches in an increasingly polluted world.

Alaskans have been very clear on this topic—they do not support mixing zones! We still oppose mixing zones and urge the State to keep high water quality standards to protect our fisheries and the health of Alaskans. Please pass House Bill 328 without watering it down!

Sincerely,

Nina Faust and Edgar Bailey

Rep. Paul Seaton

From: Robbie Stell [robbiestell@gci.net]
Sent: Monday, January 09, 2006 9:26 PM
To: Rep. Paul Seaton
Subject: HB 328

Representative Seaton: I have read your bill and support passage of this important legislation. Put my count into the support side for this bill.
Roberta Stell
Juneau, Alaska

Gustavus, Alaska
Jan. 9, 2006

Representative Paul Seaton
State Capitol, Room 102
Juneau, AK 99801

Dear Senator Seaton:

I fully support your bill to prohibit mixing zones in fish spawning waters. I am one of the many people who commented (twice) on the Dept. of Environmental Conservation proposals to allow mixing zones. Like the overwhelming majority, I oppose allowing mixing zones in spawning streams and lakes. It has been disheartening to see the Administration forge ahead with this proposal against the clear disapproval of Alaska residents. In addition to raising concerns for fish habitat and for the marketing of Alaska's fish, this situation suggests that the citizen participation in a democracy has become irrelevant. Thank you, Rep. Seaton, for rescuing democratic representative government in this instance!

Salmon streams in Alaska ought to be as protected and cherished as anything we have. They are the source of immense productivity, not just of salmon, but also of the surrounding ecosystems, terrestrial, coastal and marine.

A reduction in water quality standards for spawning streams could threaten the sustainability certification of Alaska salmon. It can result in loss of the market advantage of wild Alaska salmon and cause a deep reduction in price. It has been a struggle to educate consumers on the health advantages and environmental soundness of eating wild salmon instead of farmed fish. These efforts are paying off, rescuing the fishing industry from a terrible price situation. It is amazing that the Administration would consider tossing this market recovery aside.

The safeguards claimed for the DEC proposal would require monitoring far-flung streams beyond anything the state is prepared to do. The mining industry, for example, is notorious for spotty compliance with environmental regulations. When the A.J. Mine was preparing to reopen, despite all the scrutiny on this mine in the center of Juneau, it released illegal effluent into a stream that flows right through town, released it secretly only at night! This deceit was discovered not by state regulators, but by local citizens.

In theory, under the DEC proposal, mixing of pollutants in spawning streams would be allowed only when there are no fish spawning in the streams. It's pretty hard to find that little window when there are no eggs, alevins or spawners. An old-time Southeast Alaska fisherman - Jack O'Donnell - told me a funny true story about some logging operators and Forest Service representatives meeting with Petersburg fishermen. Tired of hearing fishermen complain about the mess that logging made of spawning streams (this was before buffer strips), the timber men came to talk about a new piece of heavy equipment that promised to clean it all up: the Riffle Sifter. They showed a film of the Riffle Sifter tracking up a stream, processing the gravel and spewing the unwanted mud and debris out on the stream banks. After the film, some fishermen asked "When do you plan to use this - in what season?" The presenters said "Oh, that's where your expertise comes in. You tell us when is the best time." So the fishermen began to explain the life cycle of salmon. The presenters left and nothing was ever heard again about the Riffle Sifter. May the same fate befall the DEC mixing zone proposal.

Yours truly,

Judy Brakel
Box 94, Gustavus, Alaska 99826 e-mail at grigori@gustavus.ak.us

**United Southeast Alaska Gillnetters**

P.O. Box 23378, Ketchikan, AK 99901 Phone & Fax (907) 247-2471 Email: usa_gillnetters@att.net

January 11, 2006

The Honorable Paul Seaton
House of Representatives
State Capitol, Room 102
Juneau, AK 99801

Sent Via Fax to: 907 465-3472

Dear Representative Seaton,

The United Southeast Alaska Gillnetters (USAG) is an association of about 150 small business owners who catch salmon by drift gillnetting in Southeast Alaska and market salmon throughout the United States. Many of our members also participate in other fisheries such as crab, shrimp, dive and longline. We have steadfastly opposed the Department of Environmental Conservation's (DEC) efforts to change the current ban on mixing zones in salmon spawning and rearing streams. We strongly support HB 328 which will prohibit mixing zones in freshwater spawning waters. We believe that if the current ban was lifted, regardless of the restraints placed in new regulations controlling future mixing zones, the use of these zones will become a license to pollute the fresh water systems of Alaska. The best example of this is in DEC's own survey of the status of mixing zones in other states. Of those responding, 21 of 23 allowed mixing zones of some kind. Every one of the 21 that had responded that they permitted mixing zones had issued fish consumption warnings to their citizens for fish caught in their local waters. Of the 2 that did not permit mixing zones, neither had issued such warnings. From this experience it is clear that mixing zones are a license to pollute and they harm fish populations and can result in harm to humans. If mixing zones were permitted in Alaska, they could cause grave harm to Alaska's efforts to market our salmon to the rest of the world and attract tourists to the "pristine environment" of our great land. Attached to this letter is a copy of our earlier letters to DEC expressing our opposition to lifting the ban on mixing zones and more detailed reasons for that opposition.

USAG wishes to thank you, Representative Seaton and the other legislators who have joined with you to introduce this legislation. The economic health and future of our state depends on our maintaining a healthy environment and our reputation for resource protection. Two of Alaska's largest industries, commercial fishing and tourism, depend in part on us maintaining our commitment to protect our environment and to use our resources wisely.

Yours truly

Kenneth Duckett
Executive Director