

ALASKA LEGISLATURE COMMITTEE FILES 1991-1992 8672
7147 HOUSE RESOURCES

OTHER ISSUES:

The proposed revisions address other important issues that merit study. These include new provisions for natural pollutant levels and whole effluent toxicity, and modifications to existing criteria for sediment, fecal coliform bacteria, color, total hydrocarbons, and Alaska-specific criteria. The Department would be pleased to receive and address any concerns anyone may have regarding these proposals.

PUBLIC PROCESS:

The State is conducting this public review in an open manner. Because of the complexity of the issues, and the impact on all Alaskans, additional time for comment has also been granted.

This Triennial Review process began in 1990. The Department has communicated widely with interested parties from communities, industry and environmental groups. Department staff prepared eight questionnaires on potential revision topics and distributed them to a "working group" list of about 80 individuals, inside and outside of DEC. Issue papers were also prepared that addressed every major topic in the proposed revisions. These were then circulated to working group members prior to the public review period.

The present public review period process began July 1. Because of the level of interest in this issue and requests for extension of time, DEC extended the end of the comment period from August 10 until September 30 for a total of 92 days. The Department widely publicized the proposed regulations by newspapers, radio and other media announcements. Public hearings were scheduled in various parts of the state. A special teleconference in 15 locations was also conducted.

Finally, the Department extended the public comment period for another month (to October 31, 1992). This extension will also enable the DEC to consider technical proposals for change by the Environmental Protection Agency and others during this same period of time. The Department has been assured our time extension will not jeopardize the State's ability to proceed with the development of human health criteria through imposition of the Draft National Toxics Rule on the State of Alaska in the midst of our Triennial Review.

SUMMARY:

In conclusion, let me emphasize two points. First, failure on the part of the State to promulgate "reasonable" standards will result in federal imposition of standards that DEC's analysis finds insupportable for the level of stringency proposed. As a note of interest, there are 14 other states and territories which, like Alaska, are still doing the research that leads to the selection of defensible human health standards. Nineteen states, having completed these analyses, have selected the 10-5 number (one in 100,000 risk level) that Alaska proposes (23 states have chosen the 10-6 number).

The second point is that the State has a significant number of major water permits under development and the permittees should know what standard is being proposed. Undue delay in the adoption of a standard could result in the imposition of federal standards on our state, and effectively deny Alaska the opportunity to develop standards already in place in many other states.

Because of the public review process underway, the citizens of Alaska will have had a significant voice in the final outcome. That is good.

Our intent is to develop effective Water Quality Standards and Regulations based on sound scientific analyses. At the same time, the standards should protect Alaska's unique environment and afford Alaskans the opportunity to safely develop new revenue sources. The Department is attempting to strike a balance between environmental protection and economic opportunity.

Each one of us will likely have different views on what is the best balance between environmental protection and economic opportunity. I believe that by working together, the people of Alaska can protect water quality and other environmental values. At the same time, we can strengthen Alaska's economy so that environmental health problems like the water and sanitation conditions of rural Alaska can be solved. By protecting the environment and strengthening the economy, we will be able to improve the quality of life for all Alaskans.

Your views and those of the public at large will enable us to achieve that balance.

Thank you for the opportunity to participate in your conference.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 10

SEATTLE, WASHINGTON 98101

September 25, 1992

*1. Fairbanks N.S.P.
Residents/Boro
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50/50 chan.*

REPLY TO AOO/A
ATTN OF:

MEMORANDUM

SUBJECT:

Weekly Significant Issues

FROM:

[Signature]
Alvin L. Ewing
Assistant Regional Administrator

TO:

John A. Sandor, Commissioner
Alaska Department of Environmental Conservation

COMPLETED

ALASKA WATER QUALITY STANDARDS - HAINES HEARING

- The public expressed their outrage and frustration getting up and waling out of the hearing prior to the public testimony, all 80 or so in the audience
- The public was frustrated over a variety of issues, mostly concerning issues of public policy for which they expected policy level agency participation.
- The public in this instance had researched many of the references quoted in ADEC issue papers, contacted national experts on various issues, had done additional research at the technical and policy level; apparently there are a number of people who are well educated professionals turned fishermen
- The public repeatedly indicated concern that ADEC has been so busy defending its proposals that ADEC is sending the message that they are intransigent about considering an open discussions on the pros and cons of the issues and that decisions have already been made; opportunity for the public affecting these issues has the appearance of being limited
- Strong message that the public has not been asked to face this type of risk discussion in the past and the public is unwilling to accept that ADEC needs to fast track such important issues with such long term potential impacts
- Strong message that even when folks don't understand the words in the issue papers, they certainly understand the tone and attitude of bias which is exhibited in some of the papers
- The public asked many times why ADEC is extremely protective on the PSP issue, to the point of causing cancellations of contracts because of the labelling, but ADEC is unwilling to apply the same degree of protection through the water quality standards
- Many were concerned that the process for public input will be cut off, that ADEC will not have a public process to

2

address the issues raised by the public and that ADEC will go ahead and adopt their proposals regardless of the public comments; this is apparently fostered to some extent by ADEC's public defense of their positions as opposed to being open for discussion

- Display of the public trying to impact a public policy decision and the process of making that decision and feeling shut out; one person made a comment to the effect that outrage occurs when the public doesn't believe they are getting the straight scoop; clearly the public doesn't believe ADEC did a fair, unbiased evaluation and provided the reasons 'why' it came to the conclusions it did.
(Deborah Verrelli, 907-586-7619)

OUTREACH

None



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Thank you for the opportunity to appear before this committee.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 REGION 10
 1200 Sixth Avenue
 Seattle, Washington 98101

NOV 09 1992

Reply To
 Attn of: WD-139

Commissioner John Sandor
 Alaska Department of Environmental Conservation
 410 Willoughby Avenue, Suite 105
 Juneau, Alaska 99801-1795

Dear Commissioner Sandor:

We have been notified by Environmental Protection Agency (EPA) headquarters that Administrator Reilly is expected to sign the proposed "Toxic Rule" (58 FR 58420) no later than December 1, 1992. In anticipation of rule publication, we would like to offer you an opportunity to designate the risk level that will be used as a basis for promulgating human health carcinogen criteria for Alaska.

When EPA issued the draft Toxic Rule last November, it applied a 10^{-6} risk level for all affected states. Subsequent discussions with the Office of Management and Budget led EPA to modify the rule to reflect state preference. In ascertaining Alaska's state preference, EPA used your recently proposed water quality standards (WQS) regulations for dioxin and chloroform. These proposed criteria were based on a 10^{-5} risk level.

Using this kind of evidence to identify state preference is consistent with national practice. We discussed this with members of your staff and they agreed that this approach was appropriate. As a result of this decision, the draft Toxic Rule currently includes a 10^{-5} risk level for Alaska.

In light of your state's recent decision to extensively review and possibly reopen for public comment your proposed WQS regulations, we would like to confirm that your preferred risk level of 10^{-5} has not changed. If your preference has changed, and we promptly receive a letter from you indicating an alternate preferred risk of 10^{-6} or higher, we can change the risk level in the Toxics Rule for Alaska.

The window of opportunity for modifying the Toxics Rule is narrow. As I indicated, above, the Rule is expected to be finalized December 1, 1992. All paperwork should be final well before this date in order to obtain necessary signatures in a timely manner. Although EPA headquarters is not able to give us

AX TRANSMITTAL

TO: *ONE Sturdevant*

FROM: *Sally Margolis*

DATE: *ADec*

NOV 09 1992

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206 553 2116

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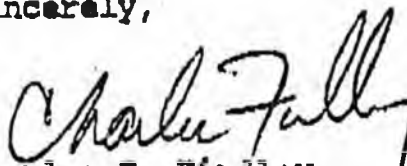
GENERAL SERVICES ADMINISTRATION

a firm date within which changes can be made to the rule, we are certain that a letter received by November 16, 1992 will meet the deadline. After the Rule is published, we anticipate that there may be an additional opportunity of 30 days to make certain further changes.

We will fax this letter to your office today. If we receive a response from you, we will fax it to our headquarters office immediately. If we do not hear from you, we will assume that the 10^{-5} risk level is acceptable to your state and will promulgate the rule on that basis.

Thank you for your attention to this matter. Please call me if you have any questions.

Sincerely,



Charles E. Findley
Director, Water Division

United States
Environmental Protection
Agency

Region 10
1200 Sixth Avenue
Seattle WA 98101

Alaska
Idaho
Oregon
Washington



OCT 05 1992

Reply To
Attn Of: WD-139

MEMORANDUM

SUBJECT: Comments to Proposed Water Quality Standards
Regulations

FROM: Sally Marquis *Sally*
Water Quality Standards Coordinator

TO: Dave Sturdevant
Water Quality Standards Coordinator

Attached are Region 10's draft comments to the Department of Environmental Conservation's proposed water quality standards regulations. Normally, we would wait to send out comments until the close of the public comment period. But, in anticipation of our discussions over the next month, we felt that our concerns might be more easily resolved if both parties fully understood our position. We are hoping that we can resolve many of these concerns during the remainder of the public comment period. We will provide our final comments to you at the close of the comment period.

10/5/92

Comments to Alaska's Proposed Water Quality Standards

17 AAC 70.010(c) Natural characteristics of water

The state is proposing to administratively approve natural levels as applicable criteria where ambient levels exceed criteria 'naturally'. We can appreciate this need. However, this regulation must be applied only in the few situations where conditions are truly natural, that is not human caused. Ambient waters affected by a discharger should not automatically through operation of this clause, become the default criteria. Please define 'natural' in your regulations so as to clearly exclude human caused pollution. The state of Washington, for example, is currently proposing a definition of natural in its water quality standards (WQS) regulations as follows:

"natural conditions" or "natural background levels" means surface water quality that was present before any human-caused pollution.

18 AAC 70.020(b) Fecal coliform

The state is proposing adoption of a bacterial standard based on a 1976 federal criteria recommending 200 FC/100 ml. EPA has replaced the 1976 criteria with one recommending the use of *E. coli* or enterococci.

We have the following concerns with this proposal.

1) The proposed standard is not consistent with federal criteria. EPA recommended the use of fecal coliform bacteria as indicator organisms until 1986, when the Agency published revisions recommending use of *E. coli* or enterococci. The revisions were based on studies showing significantly better statistical correlations between the incidence of swimming-related gastroenteritis and either *E. coli* or enterococci at fresh water beaches and enterococci at marine beaches than between gastroenteritis and total or fecal coliform.

The agency's new bacterial criteria superceed previous criteria. Therefore, if the state wishes to adopt the 1976 criteria, it must present a scientifically defensible argument that the proposed criteria are fully protective of recreational uses. We agree with the state that this might better be considered when more time allows, perhaps later during the triennial review.

compared to TAH. As ADEC noted in the position paper, the ratio of all phases of TH to TAH in Alyeska's effluent is greater than 560 to 1. These numerous and complex technical difficulties render the TH standard inaccurate, but not inoperative altogether.

2) A further complication with the existing TH standard is the stipulated analytical method. The method required for measurement of the TH standard is method 503B (partition infrared). The detection limit of method 503B is 200 ppb which is significantly higher than the TH standard of 10 ppb.

Given the above difficulties with the standard it is appropriate that the numeric standard be revised, but NOT eliminated as has been proposed. The methodology for derivation of the standard should be reviewed and a more scientifically defensible limitation should be included in the Alaska WQS revisions. A first step may be to review the TH standard present in other state standards.

In closing, we suggest you revisit the TH standard to derive an appropriate replacement rather than to eliminate the it altogether. It is important to have a scientifically defensible and enforceable standard. Our office would be pleased to offer assistance in this endeavor.

18 AAC 70.020(b) Sediment

The state is proposing to substitute "settleable solids" for "sediment" and to add, "as measured by the volumetric Imhoff cone method." It suggests in its issue paper that turbidity and settleable solids together provide adequate protection and that the Imhoff method offers advantages of low cost and ability to be measured on-site. We offer the following concerns with this proposal (please see the attachment "Comments on proposed change in Alaska's water quality standard (WQS) for sediment" from Burney Hill to Sally Marquis, for further information):

1) Sediment is generally thought to incorporate settleable solids and total suspended solids (see 18 AAC 70.110(37)). The proposed language essentially removes total suspended solids from consideration in the sediment criteria.

There are circumstances under which a standard for total suspended solids is important to the protection of the biotic integrity of receiving waters. While settleable solids have particularly significant impacts in the suffocation and burial of life on the bottoms of water bodies, and turbidity has impacts on primary production and visual acuity, suspended solids may affect aquatic life

CORRECTION

**THIS DOCUMENT
HAS BEEN REPHOTOGRAPHED
TO ASSURE LEGIBILITY**

10/5/92

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3) Alaska Department of Environmental Conservation (ADEC) is currently proposing a criterion limiting less than 10% of samples to exceed 400 FC/100 ml. Is the illness rate for this level of fecal contamination acceptable given that 200 FC/100 ml results in an estimated 19 illnesses/1000 recreational contacts with the water.

4) The table attached to the Alaska issue paper listing state standards is considerably out of date. I have attached a 1992 summary. For your information, the summary includes the following observations: 38 states rely on the 1968 200 FC/100 ml standard; six states and one trust territory have adopted *E. coli* standard for freshwater; eight states, one tribe and two trust territories have adopted enterococci standards for fresh and/or saline waters; and eleven states/territories have fecal and/or total coliform standards more stringent than 200 FC, including Idaho (50), California (20 for selected waters), Oregon (14 for marine waters), and Washington (50 for Class AA and lake waters, 100 for Class A waters, and 14 for marine waters).

18 AAC 70.020(b) Petroleum Hydrocarbons, Oils, and Grease

The state proposes to eliminate the total hydrocarbon (TH) numeric standard of 15 ug/l. The existing TH standard has been acknowledged by ADEC to be "problematic due to the inappropriate method of measurement and has been little used in practice" (p. 10, TH issue paper). The problems with the standard are essentially two-fold: 1) the scientific basis for the numeric limitation is flawed, and 2) the analytical method for measuring compliance with the standard is inappropriate. We believe that these problems should be the impetus for revising, rather than discarding, the numeric standard. Each problem is addressed, below.

1) The scientific basis for the numeric limitation of 15 ug/l for TH, derived from the total aromatic hydrocarbon (TAH) standard, is flawed. Toxicity testing data for a sensitive Alaskan species was used to develop the TAH standard. An average lethal value of 1.0 ppm was measured and the now outdated safety factor of 100:1 was applied. The TAH standard of 10 ug/l was then calculated.

The TH standard was in turn derived from the TAH standard using a TH:TAH ratio of 1.5:1. However, this ratio was inappropriately low, generating a very conservative TH standard. The 1.5:1 ratio is generally accurate when comparing the concentrations of soluble TH and TAH in a given solution. However, the ratio does not apply when all phases of TH (soluble, dissolved, and particulate) are

compared to TAH. As ADEC noted in the position paper, the ratio of all phases of TH to TAH in Alyeska's effluent is greater than 560 to 1. These numerous and complex technical difficulties render the TH standard inaccurate, but not inoperative altogether.

2) A further complication with the existing TH standard is the stipulated analytical method. The method required for measurement of the TH standard is method 503B (partition infrared). The detection limit of method 503B is 200 ppb which is significantly higher than the TH standard of 10 ppb.

Given the above difficulties with the standard it is appropriate that the numeric standard be revised, but NOT eliminated as has been proposed. The methodology for derivation of the standard should be reviewed and a more scientifically defensible limitation should be included in the Alaska WQS revisions. A first step may be to review the TH standard present in other state standards.

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There are circumstances under which a standard for total suspended solids is important to the protection of the biotic integrity of receiving waters. While settleable solids have particularly significant impacts in the suffocation and burial of life on the bottoms of water bodies, and turbidity has impacts on primary production and visual acuity, suspended solids may affect aquatic life

(especially eggs, larvae, filter feeding invertebrates and fishes) in ways which would not be protected by standards for settleable solids and turbidity. Perhaps 10 percent of the environmental impacts involving the three parameters could be better controlled with the support of a WQS for suspended solids. Thus, a WQS criterion for total suspended solids should be an integral part of a standard for sediments in the water column.

2) Although the state said in its issue paper that "total" methods are time-consuming and expensive relative to the Imhoff cone, it did not expand on this point to give the reviewer sufficient information to weigh whether this advantage is great enough to warrant omitting total suspended solids.

3) Alternative language might be, "No significant increase in concentrations of sediment, including both settleable solids and total suspended solids, above natural conditions", without explicit reference to an analytical method. The term "significant" replaces the proposed term "measurable" in providing, along with state mixing zone policies, professional discretion in the analysis of site-specific conditions and variability. If you use the term significant, we would suggest providing a definition so as to minimize ambiguity in applying the standard.

18 AAC 70.020(b) No Observed Effects Concentration

We believe that it is appropriate for the state to move away from the .01 times the 96 hour LC50 to the no observable effects concentration (NOEC) approach to limit whole effluent toxicity. Because proposed language uses "based on the NOEC of chronic toxicity as determined through toxicity testing..." freely, it is essential that ADEC spell out in implementation guidance exactly how this will be done. (Note: it must be understood that the NOEC protocols are very species specific and few of the test species are endemic to Alaska.)

Related to this provision, we also strongly encourage the state to adopt a narrative free from criterion for toxics. This general provision provides the state with the authority to regulate any chemical/toxic pollutant which threatens human health or the environment. This provision is necessary as a basis to regulate toxics where the state has not adopted a numeric criterion and there is not an adequate basis to calculate a NOEC. In addition, the free from criterion can be used to protect human health where there is no state-adopted numeric criterion. (The NOEC approach proposed by the state does not apply to human health protection.)

18 AAC 70.022 Human Health Criteria

Application of criteria

The proposed language states that the "following water quality criteria for the protection of human health apply to waters where the department determines that there is a reasonable expectation of human exposure through ingestion of contaminated water and aquatic life." The regulations then list criteria for arsenic, dioxin and chloroform. We have two concerns with this language:

- 1) One could misinterpret this language to assume that these are the only human health criteria adopted by the state. This is clearly not the case; Alaska has adopted human health criteria for non-carcinogens.

- 2) The proposed regulation states that application of these criteria is at the department's discretion. This is vague. The state should clearly apply the criteria to specific uses in its regulation as it has other criteria. Furthermore, to be consistent with 303(c)(2)(B) and EPA's proposed Toxic Rule, the state should apply the criteria using the same "rules" followed by EPA in writing the requirements for the Toxic Rule. For example, "In the absence of such an approved State determination (a use attainability analysis), EPA has proposed fish consumption criteria for all aquatic life segments." (56 FR 58432).

Groundwater

We suggest clarifying the proposed narrative to identify which human health criteria apply, for example, criteria for the consumption of water plus organisms or for consumption of organisms only.

Arsenic

To achieve compliance with Section 303(c)(2)(B) of the Clean Water Act (CWA), EPA requires states to adopt EPA's human health criteria using a risk level of 10^{-5} , 10^{-6} , or 10^{-7} or to present other scientifically defensible numbers. Alaska has proposed numbers that it considers scientifically defensible: 50 ug/l for water supply and 190 ug/l for other human health protection categories for freshwater, and 36 ug/l not to be exceeded on the average over a four day period for saltwater. We do not believe that the state's position adequately presents a scientifically defensible position. Our concerns are presented, below. Please

refer to the attached memo by David Frank for additional comments.

(A) The state reasons that because arsenic occurs only in a predominantly non-bioavailable organic form in fish, fish consumption should not be considered in criterion development.

1) The available scientific data do not prove that arsenic is completely absent from fish and other seafood such as shellfish. In fact, the issue paper itself refers to a Canadian study which indicates that freshwater fish contain 10% inorganic arsenic.

Also, it is likely some shellfish (e.g., bivalves and some mollusks) are less able to convert inorganic arsenic to the organic form because they lack the liver-like organ needed for detoxification. In support of this are the results of a study done at the University of Washington in which urinary inorganic arsenic was measured in human subjects after eating mussels. The results of this showed that a large percentage of the arsenic found in the urine of these test subjects is in the low molecular weight form and not in the high molecular weight species (e.g., arsenobetaines) expected from seafood.

2) Very little is known about what happens to seafood (organic) arsenic once it enters the human gastrointestinal tract. The stomach is very acidic and contains enzymes specific for degrading proteins. Therefore, it is conceivable that the form of arsenic available for absorption in the gastrointestinal tract is not the organic arsenic species that was originally ingested.

(B) The state cites epidemiological studies in Lane County, Oregon and Fairbanks, Alaska which do not show toxicological effects even at ambient levels that exceed EPA's drinking water standard (Maximum Contaminant Level, or MCL). It concludes that the lack of toxicological effects in Fairbanks is evidence that EPA's human health criteria are too stringent and that a freshwater criterion based on a MCL is adequately protective.

1) The issue paper questions the validity of the Taiwan data because of (1) genetic differences between the Taiwanese and Americans, and (2) the low protein diet of the Taiwanese. These criticisms are not supported by data from other populations, including the Germans and the Mexicans.

EPA's cancer potency factor for ingestion of arsenic is based upon data of increased skin cancer incidence in people exposed to arsenic contaminated drinking water in Taiwan. An increased cancer risk as a result of ingestion of arsenic in drinking water and medicines has also been shown in

Mexico and Germany. EPA used the Taiwanese studies to calculate the cancer potency factor because it was the best of all of the studies. However, when EPA compared the German and Mexican data to the Taiwanese data they concluded that the German data, and especially, the Mexican data were consistent with EPA's potency number calculated using the Taiwan data.

There is no data to suggest that the Germans or the Mexicans are genetically different from people in the U.S. Also, there is no evidence that the German and Mexican populations studied had diets low in protein.

2) The issue paper uses negative results from epidemiological studies done in the U.S. to question the Taiwanese data. This issue was addressed by EPA's Scientific Advisory Board (SAB) in their review of arsenic issues related to the required development of a new Drinking Water Standard by EPA. The SAB concluded that "part of the basis for the absence of association in the U.S. studies is insufficient statistical power, given the magnitude of the exposure of the U.S. cohorts". In other words, the numbers of people and/or the levels of exposures in the U.S. studies were too low to be able to detect an increased cancer risk.

3) Numeric standards for contaminants are different under the Safe Drinking Water Act and the CWA. MCLs are based on feasibility considerations, including the availability of technology to achieve the regulatory level and the cost of such treatment. Standards/criteria developed under the CWA are based strictly on the basis of health effects, and do not consider feasibility considerations. The methods used to derive the human health values under both Acts are generally considered protective of human health.

EPA's proposed "Toxics Rule" (56 FR 58420) has identified the following guideline for applying its human health criteria to public water supplies: "If the State has public water supplies where aquatic life uses have not been designated, ... the "water + organisms only" criteria in Column D(I) ... are promulgated." To be consistent with this guideline, the state needs to revise its proposed drinking water supply criterion of 50 ug/l based on a drinking water MCL, to 0.018 ug/l, a human health criterion assuming consumption of "water + organisms."

The state could argue that applying a MCL to a water supply use is reasonable, given that fish consumption is not associated with the use. However, such an application would be appropriate only in those waterbodies where the state has clearly demonstrated that no potential for fish consumption exists.

Like EPA's human health criteria, MCLs are based on risk assessments and have risk values associated with them. The drinking water MCL for arsenic of 50 ug/l has an associated cancer risk of 10^{-3} . A new study published this summer in the journal *Environmental Health Perspective* (volume 97, pg. 259-267), "Cancer Risks from Arsenic in Drinking Water", authored by experts including researchers from biomedical, environmental and epidemiological university departments, concluded that at 50 ug/l, "the lifetime risk of dying from cancer of the liver, lung, kidney, or bladder from drinking 1 L/day of water could be as high as 13 per 1,000 persons", or 10^{-2} .

In 1962, the Public Health Service published drinking water standards. The documentation on arsenic in this publication states, "The U.S. Public Health Service Drinking Water Standards for 1946 established an arsenic limit of 0.05 mg/l. In light of our present knowledge concerning the potential health hazard from the ingestion of inorganic arsenic, the concentration of arsenic in drinking water should not exceed 0.01 mg/l and concentrations in excess of 0.05 mg/l are grounds for rejection of the supply."

EPA is publishing proposed new drinking water regulations for arsenic next summer. Information from studies on internal cancers will be used to reexamine the arsenic MCL. Although the regulatory language will not, of course, be known until the rule is final, we expect the arsenic MCL to be much lower than 50 ug/l. We also expect the rule to assign arsenic a maximum contaminant level goal close to or equal to zero. (This level reflects the level of contamination where "no known or anticipated adverse effects on the health of persons occurs and which allows an adequate margin of safety.") In light of the anticipated changes, it may be appropriate for the state to wait for rule completion before endorsing a MCL value.

(C) The state suggests that trivalent, inorganic arsenic rather than total arsenic should be regulated. It also states that this form of inorganic arsenic is not being discharged to the Alaskan environment as it is in other areas of the U.S.

1) Arsenic has an extremely complicated chemistry. The state's emphasis on trivalent arsenic as the only inorganic form of concern is a serious oversimplification of arsenic solubility, toxicity, and oxidation-reduction reactions.

Although acute toxicity studies indicate that trivalent forms of arsenic are more toxic than the pentavalent form, this may not be the case with longer term chronic studies. In fact, exposures to the both the trivalent and pentavalent

forms occurred in the people involved in several of the studies of carcinogenicity. In addition, inorganic arsenic (+5) can be interconverted in the blood of humans with the (+3) species, which is then methylated.

Both pentavalent and trivalent forms are soluble and toxic. Conversion of one form of arsenic to another by reduction or oxidation may occur in the environment. Although studies of inorganic forms of arsenic indicate that pentavalent arsenic is less soluble and less toxic than trivalent arsenic, one should neither conclude nor imply, that pentavalent arsenic is therefore insoluble and non-toxic.

Emphasis on trivalent arsenic alone in waste discharge regulation would neglect the potential for redox reactions when wastewater or a receiving stream enters reducing environments. Consequently, total arsenic would be the important parameter to regulate for adequate protectiveness.

2) The state's argument that trivalent arsenic is not being discharged to the Alaskan environment has a weak basis. We agree that there are no smelters operating in Alaska. However, many other mining facilities exist or are proposed for extracting, grinding, and treating ore in order to mobilize and concentrate metals. Ore processing certainly can modify arsenic speciation.

(D) The state argues that because the proposed saltwater criterion of 36 ug/l is lower than the drinking water MCL of 50 ug/l, and that fish are not a significant source of inorganic trivalent arsenic, the aquatic life trivalent criterion of 36 ug/l should be adopted as the human health saltwater criterion.

1) See above for our position that fish may be a significant source of inorganic arsenic.

2) See above for our position that the complexity of arsenic speciation argues for a human health criterion based on total arsenic.

3) The state proposes to protect human health based on a number designed to protect aquatic life. What is the rationale for this approach?

(E) The state proposes for adoption 190 ug/l for human health protection in freshwater use classes other than water supply.

1) Although no supporting argument is presented, we assume that this criterion is based on EPA's aquatic life freshwater chronic criterion for trivalent arsenic. If so, see above for our arguments that a total arsenic criterion is more reasonable, that fish consumption should be

considered and that protecting human health based on aquatic life protection is questionable.

(F) In conclusion, because of scientific uncertainties regarding the toxicology of arsenic, its chemical complexities, anticipated new rulemaking, and the relatively high intake of fish and other seafood in Alaskan diets, we recommend adoption of EPA's human health criteria.

Dioxin

EPA's proposed "Toxics Rule" (56 FR 58420) has identified the following guideline for applying its human health criteria to public water supplies: "If the State has public water supplies where aquatic life uses have not been designated, ... the "water + organisms only" criteria in Column D(I) ... are promulgated." To be consistent with this guideline, the state needs to revise its proposed drinking water supply criterion of 30 parts per quadrillion (ppq) based on a drinking water MCL, to a human health criterion assuming consumption of "water + organisms."

The state could argue that applying a MCL to a water supply use is reasonable, given that fish consumption is not associated with this use and that the avenue of exposure for dioxin via water is minimal. However, such an application would be appropriate only in those waterbodies where the state has clearly demonstrated that no potential for fish consumption exists.

The state has not designated human health dioxin criteria for the remaining fresh water uses. The state must designate criteria for these uses to be in compliance with Section 303(c)(2)(B). We believe that these should be designated assuming consumption of "organisms only."

The proposed human health criterion for marine waters is 1.2 ppq. As you are aware, EPA has approved state dioxin criteria ranging from 0.00051 ppq to 1.2 ppq. Criteria of 1.2 ppq have been approved for the states of Virginia, Maryland, Georgia, South Carolina, and Alabama. Several other states have adopted a criteria of 1.0 ppq (Mississippi, New Hampshire, New York, Tennessee.) However, we have two concerns relating to the proposed criterion, as follows:

- 1) The proposed state standard is based upon a fish consumption rate of 6.5 grams per day. While the majority of states with EPA-approved human health criteria have based them on this consumption rate, the Alaska Department of Fish and Game has collected information specific to Southeast Alaska which indicates that residents eat significantly more seafood than this amount. In addition, certain groups of individuals, such as Native Americans, appear to eat much

larger amounts of fish. A recent survey of fish consumption by Native Americans in the Columbia River basin found that adult members of one tribal group (the Nez Perce Tribe) eat an average of 80 grams of fish per day (see attached memo from Harold Sheppard of the Columbia River Intertribal Fish Commission dated April 5, 1992). The survey also indicated that Nez Perce children consume an average of 20 grams of fish per day. The 90th percentile consumption rate for Nez Perce Tribal members is 435 grams per day.

The following states used fish consumption rates greater than 6.5 grams per day in deriving dioxin criteria:

<u>State</u>	<u>Consumption Rate (grams per day)</u>
Arizona	7.5
Delaware	37
Hawaii	19.9
Illinois	20
Louisiana	20
Minnesota	30
Texas	10/15 (freshwater/saltwater)
Wisconsin	20

These rates were primarily derived based upon consumption of fish by recreational fishermen.

2) The State of Alaska, like EPA, has no dioxin criterion for the protection of aquatic life in marine waters. Thus, if the state adopts a criterion of 1.2 ppq for the protection of human health, that will be the only criterion used in the development of dioxin limitations required to meet WQS. (This is likewise true for all the states having adopted dioxin criteria of 1.2 ppq.)

Attached are several documents concerning the effects of dioxin on fish and wildlife. We encourage the state to consider this information in the context of protection of the use described in 18 ACC 70.020(2)(C) for marine waters ("Growth and propagation of fish, shellfish, other aquatic life, and wildlife").

■ Declaration of Dr. Steven P. Bradbury, U.S. EPA, dated February 12, 1992. This document was an enclosure to a letter to the U.S. Fish and Wildlife Service (FWS) in which EPA determined that a dioxin concentration of .013 ppq in the Columbia River would not adversely affect bald eagles. This information was sent to the FWS as part of a formal consultation under section 7 of the Endangered Species Act concerning the establishment

(using a 10^{-5} risk level). For drinking water supply, the state is proposing to adopt EPA's MCL of 100 ug/l for total trihalomethanes which include chloroform, and applying it to chloroform.

It is appropriate to apply EPA's numbers as proposed for all uses except drinking water supply. We have the following concerns with the proposed drinking water criterion:

1) EPA's proposed "Toxics Rule" (56 FR 58420) has identified the following guideline for applying its human health criteria to public water supplies: "If the State has public water supplies where aquatic life uses have not been designated, ... the "water + organisms only" criteria in Column D(I) ... are promulgated." To be consistent with this guideline, the state needs to revise its proposed level of 100 ug/l to 5.7 or 57 ug/l at 10^{-6} and 10^{-5} risk levels, respectively.

The state may argue that using a MCL for drinking water supply is reasonable, given that fish consumption is not associated with the use. However, application of this criterion to specific waters would be reasonable only where the state has clearly demonstrated that there is no potential for fish consumption.

2) Numeric standards for contaminants are different under the Safe Drinking Water Act and the CWA. The methods used to derive the human health values under both Acts are generally considered protective of human health. (Like EPA's human health criteria, MCLs are based on risk assessments and have risk values associated with them. At 60 ug/l of chloroform, for example, the MCL risk level is 10^{-5} .) But MCLs also incorporate feasibility considerations, including the availability of technology to achieve the regulatory level and the cost of such treatment.

2) The drinking water standard of 100 ug/l for Total Trihalomethanes (TTHMs) is currently undergoing negotiated rulemaking (beginning September 28, 1992). The revision may include specific levels for each of the four trihalomethanes as well as a total level for the sum of the trihalomethanes found. Specific levels for each THM and the total are not yet known.

At the present time only public water systems serving greater than 10,000 persons are subject to this regulation. The new regulation will probably be applicable to all public water systems. The proposed regulation is currently scheduled to be published in the federal register in June 1993. The final rule is scheduled for promulgation in June

1995 and the effective date of the regulation would be 18 months after promulgation, or January 1997.

18 AAC 70.023. Chronic Toxicity of an Effluent

We support the proposed change. However, effluent toxicity is not typically "measured" at the boundary of a mixing zone, and a measurement in the receiving water cannot reliably determine compliance. Therefore, we suggest replacing "measured" in the first sentence of this section as follows:

"The chronic toxicity of an effluent discharged to state water, either at the point of discharge or at the boundary of a mixing zone authorized by the department in a permit or certification, shall not exceed 1.0 chronic toxic unit (TUC)."

18 AAC 70.032 Mixing Zones

As outlined below, proposed mixing zone language does not alleviate EPA concerns about the lack of clear guidelines for mixing zones in Alaska. Without such guidelines, EPA and the state could experience major delays and possible conflicts in the permit issuance process.

Most NPDES permits have a need for mixing zone determinations, and the size of the mixing zone is often a source of controversy. EPA often proposes mixing zones to the state in draft permits, based on its interpretation of the standards. The state then must either certify the proposed mixing zones or make a different determination. Unfortunately, the lack of a straightforward guideline causes major delays in permit issuance; new source permittees are particularly frustrated with the delays.

EPA does have the authority to issue permits without final state 401 certification if certain time constraints are exceeded. In some instances of major delays, EPA has made this determination and issued permits without waiting for state certification. The final permit then reflected EPA's interpretation of an appropriate mixing zone.

EPA would like to avoid this breakdown in cooperation and effectiveness, but believes this is possible only if the standards contain mixing zone guidelines that are clear and straightforward.

(a) (1)

The state needs to develop some guidelines for what are "adverse effects" and "significant risk to human health".

Otherwise, the standard will be very difficult, if not impossible, to implement. The state will find itself in the position of engaging in endless debates with permittees over whether or not there will be effects, whether any expected effects are "significant," etc.

(a) (3)

The added language appears to be out of context. We suggest moving the added language to section (b) (4).

We are concerned with the statement "mixing zones applied for and granted after permit issuance...." Granting a mixing zone after permit issuance could create problems with antibacksliding or antidegradation, and added workloads associated with permit modifications.

The language in the section is a bit confusing. The statement that the mixing zone will be based on the "level of treatment defined in the permit" implies that no mixing zones will be granted after permit issuance because, if no mixing zone is specified prior to permit issuance, the level of treatment required in the permit will be sufficient to meet water quality criteria at end-of-pipe. Also, by referencing (e) (3) only, rather than all requirements under (e), an impression may be created that (e) (1) and (e) (2) are not relevant.

(e) (3) (A)

The statement "mixing zones . . . may not exceed aquatic life criteria . . ." is confusing. If, as it appears, the meaning is that water within the mixing zone may not exceed aquatic life criteria, we suggest stating that mixing zones for aquatic life are prohibited in these cases.

Is the statement, "...effluent flow is greater than 25% of the stream flow" based on upstream or downstream flow? For example, if the streamflow is 75 MGD upstream, can the permittee discharge 25 MGD, or does upstream flow have to be 100 MGD to allow a discharge of 25 MGD? The standard also should specify the flow: average, critical low, high, etc.

(e) (3) (D)

This paragraph is confusing. Does this mean, for example, if the copper in a discharge exceeds the aquatic life criterion and the turbidity is more than 5 NTU but less than 25 NTU, the permittee can't get a mixing zone for turbidity?

(Note that Option 2 (e) (3) (iv) in the discussion paper on mixing zones is also unclear. Do you intend to mean that if the natural level of copper in the receiving water exceeds the criteria, permittees are prohibited from getting mixing

zones for any pollutants? The wording under option 1 is at least more clear, in that it specifies end-of-pipe.)

A final comment is to suggest that the state add a provision prohibiting acute toxicity in mixing zones.

18 AAC 70.110(46) "Water"

The language of the definition exempts several types of waters from protection as waters of the state. The exemptions are too broad and may result in significant disagreements between the federal and state levels when dealing with specific waterbodies. For example, under your language, Silver Bay, Gastineau channel or Wards Cove might be identified as treatment systems. Therefore, the present language, leaving the decision as to what does or does not constitute waters that are covered by the CWA to the discretion of the department is not acceptable.

An example of language that would address our concern is, "...impoundments, or other surface water bodies that are either integral parts of wastewater treatment and disposal systems ~~approved by the department, or that are~~ designed, constructed and operated to meet the requirements of the federal CWA."

***** ANNOUNCEMENT *******CONCERNING REVISIONS TO WATER QUALITY STANDARDS:***To Jay
from
Heather***Consultation Meetings, November 9-13;
Formation of a Citizens' Advisory Group;
Process for Completing Revisions to Water Quality Standards**

Alaska Department of Environmental Conservation
November 5, 1992

On July 1, the Alaska Department of Environmental Conservation (DEC) initiated a public review and comment period on proposed revisions to the Alaska Water Quality Standards regulation, 18 AAC 70. The focus of proposed revisions is the adoption of human health criteria for dioxin, chloroform and arsenic; other significant topics also are addressed. In response to public requests, the comment period has been extended three times, and presently ends November 15. Public comments must be postmarked or submitted to DEC by Close of Business on that date.

During the week of November 9-13, the Department of Environmental Conservation will hold a series of consultation meetings with a variety of entities who have expressed interest in proposed revisions to Water Quality Standards. The purpose of these meetings is to present the status of DEC's work on revisions to standards, to discuss the formation of a citizens' advisory group, and to discuss the process proposed for completing revisions to standards, as described below.

The schedule of consultation meetings follows. The meetings will be held in the conference room on the first floor of the DEC building, 410 Willoughby Avenue, Juneau, Alaska.

Monday, November 9

1:30 - 4:30 p.m. -- Oil and Gas Interests

Tuesday, November 10

9 - 12 a.m. -- Mining Interests

1:30 - 4:30 p.m. -- Commercial and Fish Processing Interests

Thursday, November 12

9 - 12 a.m. -- Timber and Pulp Mill Interests

Friday, November 13

9 - 12 a.m. -- Municipalities

1:30 - 4:30 p.m. -- Environmental and Tourism Interests

Over 1,000 public comments already have been received. DEC expects evaluation of public comments to take at least until December 31. During that time, DEC will continue working with the Environmental Protection Agency and other sources to complete a review of technical and scientific issues contained within the comments.



OCT 05 1992

Reply To
Attn of: WD-139

MEMORANDUM

SUBJECT: Comments to Proposed Water Quality Standards
Regulations

FROM: Sally Marquis *Sally*
Water Quality Standards Coordinator

TO: Dave Sturdevant
Water Quality Standards Coordinator

Attached are Region 10's draft comments to the Department of Environmental Conservation's proposed water quality standards regulations. Normally, we would wait to send out comments until the close of the public comment period. But, in anticipation of our discussions over the next month, we felt that our concerns might be more easily resolved if both parties fully understood our position. We are hoping that we can resolve many of these concerns during the remainder of the public comment period. We will provide our final comments to you at the close of the comment period.

OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL

of pages 17

To Jay Nelson	From Sally Marquis
Dept/Agency	PHONE 206 5532112
Fax # 206/561-7812	Fax #

USN 7540-01-317-7368

5099-101

GENERAL SERVICES ADMINISTRATION

DRAFT

DRAFT

Comments to Alaska's Proposed Water Quality Standards

17 AAC 70.010(c) Natural characteristics of water

The state is proposing to administratively approve natural levels as applicable criteria where ambient levels exceed criteria 'naturally'. We can appreciate this need. However, this regulation must be applied only in the few situations where conditions are truly natural, that is not human caused. Ambient waters affected by a discharger should not automatically through operation of this clause, become the default criteria. Please define 'natural' in your regulations so as to clearly exclude human caused pollution. The state of Washington, for example, is currently proposing a definition of natural in its water quality standards (WQS) regulations as follows:

"natural conditions" or "natural background levels" means surface water quality that was present before any human-caused pollution.

18 AAC 70.020(b) Fecal coliform

The state is proposing adoption of a bacterial standard based on a 1976 federal criteria recommending 200 FC/100 ml. EPA has replaced the 1976 criteria with one recommending the use of *E. coli* or enterococci.

We have the following concerns with this proposal.

1) The proposed standard is not consistent with federal criteria. EPA recommended the use of fecal coliform bacteria as indicator organisms until 1986, when the Agency published revisions recommending use of *E. coli* or enterococci. The revisions were based on studies showing significantly better statistical correlations between the incidence of swimming-related gastroenteritis and either *E. coli* or enterococci at fresh water beaches and enterococci at marine beaches than between gastroenteritis and total or fecal coliform.

The agency's new bacterial criteria superceed previous criteria. Therefore, if the state wishes to adopt the 1976 criteria, it must present a scientifically defensible argument that the proposed criteria are fully protective of recreational uses. We agree with the state that this might better be considered when more time allows, perhaps later during the triennial review.

3) Alaska Department of Environmental Conservation (ADEC) is currently proposing a criterion limiting less than 10% of samples to exceed 400 FC/100 ml. Is the illness rate for this level of fecal contamination acceptable given that 200 FC/100 ml results in an estimated 19 illnesses/1000 recreational contacts with the water.

4) The table attached to the Alaska issue paper listing state standards is considerably out of date. I have attached a 1992 summary. For your information, the summary includes the following observations: 38 states rely on the 1968 200 FC/100 ml standard; six states and one trust territory have adopted *E. coli* standard for freshwater; eight states, one tribe and two trust territories have adopted enterococci standards for fresh and/or saline waters; and eleven states/territories have fecal and/or total coliform standards more stringent than 200 FC, including Idaho (50), California (20 for selected waters), Oregon (14 for marine waters), and Washington (50 for Class AA and lake waters, 100 for Class A waters, and 14 for marine waters).

18 AAC 70.020(b) Petroleum Hydrocarbons, Oils, and Grease

The state proposes to eliminate the total hydrocarbon (TH) numeric standard of 15 ug/l. The existing TH standard has been acknowledged by ADEC to be "problematic due to the inappropriate method of measurement and has been little used in practice" (p. 10, TH issue paper). The problems with the standard are essentially two-fold: 1) the scientific basis for the numeric limitation is flawed, and 2) the analytical method for measuring compliance with the standard is inappropriate. We believe that these problems should be the impetus for revising, rather than discarding, the numeric standard. Each problem is addressed, below.

1) The scientific basis for the numeric limitation of 15 ug/l for TH, derived from the total aromatic hydrocarbon (TAH) standard, is flawed. Toxicity testing data for a sensitive Alaskan species was used to develop the TAH standard. An average lethal value of 1.0 ppm was measured and the now outdated safety factor of 100:1 was applied. The TAH standard of 10 ug/l was then calculated.

The TH standard was in turn derived from the TAH standard using a TH:TAH ratio of 1.5:1. However, this ratio was inappropriately low, generating a very conservative TH standard. The 1.5:1 ratio is generally accurate when comparing the concentrations of soluble TH and TAH in a given solution. However, the ratio does not apply when all phases of TH (soluble, dissolved, and particulate) are

compared to TAH. As ADEC noted in the position paper, the ratio of all phases of TH to TAH in Alyeska's effluent is greater than 560 to 1. These numerous and complex technical difficulties render the TH standard inaccurate, but not inoperative altogether.

2) A further complication with the existing TH standard is the stipulated analytical method. The method required for measurement of the TH standard is method 503B (partition infrared). The detection limit of method 503B is 200 ppb which is significantly higher than the TH standard of 10 ppb.

Given the above difficulties with the standard it is appropriate that the numeric standard be revised, but NOT eliminated as has been proposed. The methodology for derivation of the standard should be reviewed and a more scientifically defensible limitation should be included in the Alaska WQS revisions. A first step may be to review the TH standard present in other state standards.

In closing, we suggest you revisit the TH standard to derive an appropriate replacement rather than to eliminate the it altogether. It is important to have a scientifically defensible and enforceable standard. Our office would be pleased to offer assistance in this endeavor.

18 AAC 70.020(b) Sediment

The state is proposing to substitute "settleable solids" for "sediment" and to add, "as measured by the volumetric Imhoff cone method." It suggests in its issue paper that turbidity and settleable solids together provide adequate protection and that the Imhoff method offers advantages of low cost and ability to be measured on-site. We offer the following concerns with this proposal (please see the attachment "Comments on proposed change in Alaska's water quality standard (WQS) for sediment" from Burney Hill to Sally Marquis, for further information):

1) Sediment is generally thought to incorporate settleable solids and total suspended solids (see 18 AAC 70.110(37)). The proposed language essentially removes total suspended solids from consideration in the sediment criteria.

There are circumstances under which a standard for total suspended solids is important to the protection of the biotic integrity of receiving waters. While settleable solids have particularly significant impacts in the suffocation and burial of life on the bottoms of water bodies, and turbidity has impacts on primary production and visual acuity, suspended solids may affect aquatic life

(especially eggs, larvae, filter feeding invertebrates and fishes) in ways which would not be protected by standards for settleable solids and turbidity. Perhaps 10 percent of the environmental impacts involving the three parameters could be better controlled with the support of a WQS for suspended solids. Thus, a WQS criterion for total suspended solids should be an integral part of a standard for sediments in the water column.

2) Although the state said in its issue paper that "total" methods are time-consuming and expensive relative to the Imhoff cone, it did not expand on this point to give the reviewer sufficient information to weigh whether this advantage is great enough to warrant omitting total suspended solids.

3) Alternative language might be, "No significant increase in concentrations of sediment, including both settleable solids and total suspended solids, above natural conditions", without explicit reference to an analytical method. The term "significant" replaces the proposed term "measurable" in providing, along with state mixing zone policies, professional discretion in the analysis of site-specific conditions and variability. If you use the term significant, we would suggest providing a definition so as to minimize ambiguity in applying the standard.

18 AAC 70.020(b) No Observed Effects Concentration

We believe that it is appropriate for the state to move away from the .01 times the 96 hour LC50 to the no observable effects concentration (NOEC) approach to limit whole effluent toxicity. Because proposed language uses "based on the NOEC of chronic toxicity as determined through toxicity testing..." freely, it is essential that ADEC spell out in implementation guidance exactly how this will be done. (Note: it must be understood that the NOEC protocols are very species specific and few of the test species are endemic to Alaska.)

Related to this provision, we also strongly encourage the state to adopt a narrative free from criterion for toxics. This general provision provides the state with the authority to regulate any chemical/toxic pollutant which threatens human health or the environment. This provision is necessary as a basis to regulate toxics where the state has not adopted a numeric criterion and there is not an adequate basis to calculate a NOEC. In addition, the free from criterion can be used to protect human health where there is no state-adopted numeric criterion. (The NOEC approach proposed by the state does not apply to human health protection.)

18 AAC 70.022 Human Health Criteria

Application of criteria

The proposed language states that the "following water quality criteria for the protection of human health apply to waters where the department determines that there is a reasonable expectation of human exposure through ingestion of contaminated water and aquatic life." The regulations then list criteria for arsenic, dioxin and chloroform. We have two concerns with this language:

- 1) One could misinterpret this language to assume that these are the only human health criteria adopted by the state. This is clearly not the case; Alaska has adopted human health criteria for non-carcinogens.
- 2) The proposed regulation states that application of these criteria is at the department's discretion. This is vague. The state should clearly apply the criteria to specific uses in its regulation as it has other criteria. Furthermore, to be consistent with 303(c)(2)(B) and EPA's proposed Toxic Rule, the state should apply the criteria using the same "rules" followed by EPA in writing the requirements for the Toxic Rule. For example, "In the absence of such an approved State determination (a use attainability analysis), EPA has proposed fish consumption criteria for all aquatic life segments." (56 FR 58432).

Groundwater

We suggest clarifying the proposed narrative to identify which human health criteria apply, for example, criteria for the consumption of water plus organisms or for consumption of organisms only.

Arsenic

To achieve compliance with Section 303(c)(2)(B) of the Clean Water Act (CWA), EPA requires states to adopt EPA's human health criteria using a risk level of 10^{-5} , 10^{-6} , or 10^{-7} or to present other scientifically defensible numbers. Alaska has proposed numbers that it considers scientifically defensible: 50 ug/l for water supply and 190 ug/l for other human health protection categories for freshwater, and 36 ug/l not to be exceeded on the average over a four day period for saltwater. We do not believe that the state's position adequately presents a scientifically defensible position. Our concerns are presented, below. Please

refer to the attached memo by David Frank for additional comments.

(A) The state reasons that because arsenic occurs only in a predominantly non-bioavailable organic form in fish, fish consumption should not be considered in criterion development.

1) The available scientific data do not prove that arsenic is completely absent from fish and other seafood such as shellfish. In fact, the issue paper itself refers to a Canadian study which indicates that freshwater fish contain 10% inorganic arsenic.

Also, it is likely some shellfish (e.g., bivalves and some mollusks) are less able to convert inorganic arsenic to the organic form because they lack the liver-like organ needed for detoxification. In support of this are the results of a study done at the University of Washington in which urinary inorganic arsenic was measured in human subjects after eating mussels. The results of this showed that a large percentage of the arsenic found in the urine of these test subjects is in the low molecular weight form and not in the high molecular weight species (e.g., arsenobetanes) expected from seafood.

2) Very little is known about what happens to seafood (organic) arsenic once it enters the human gastrointestinal tract. The stomach is very acidic and contains enzymes specific for degrading proteins. Therefore, it is conceivable that the form of arsenic available for absorption in the gastrointestinal tract is not the organic arsenic species that was originally ingested.

(B) The state cites epidemiological studies in Lane County, Oregon and Fairbanks, Alaska which do not show toxicological effects even at ambient levels that exceed EPA's drinking water standard (Maximum Contaminant Level, or MCL). It concludes that the lack of toxicological effects in Fairbanks is evidence that EPA's human health criteria are too stringent and that a freshwater criterion based on a MCL is adequately protective.

1) The issue paper questions the validity of the Taiwan data because of (1) genetic differences between the Taiwanese and Americans, and (2) the low protein diet of the Taiwanese. These criticisms are not supported by data from other populations, including the Germans and the Mexicans.

EPA's cancer potency factor for ingestion of arsenic is based upon data of increased skin cancer incidence in people exposed to arsenic contaminated drinking water in Taiwan. An increased cancer risk as a result of ingestion of arsenic in drinking water and medicines has also been shown in

Mexico and Germany. EPA used the Taiwanese studies to calculate the cancer potency factor because it was the best of all of the studies. However, when EPA compared the German and Mexican data to the Taiwanese data they concluded that the German data, and especially, the Mexican data were consistent with EPA's potency number calculated using the Taiwan data.

There is no data to suggest that the Germans or the Mexicans are genetically different from people in the U.S. Also, there is no evidence that the German and Mexican populations studied had diets low in protein.

2) The issue paper uses negative results from epidemiological studies done in the U.S. to question the Taiwanese data. This issue was addressed by EPA's Scientific Advisory Board (SAB) in their review of arsenic issues related to the required development of a new Drinking Water Standard by EPA. The SAB concluded that "part of the basis for the absence of association in the U.S. studies is insufficient statistical power, given the magnitude of the exposure of the U.S. cohorts". In other words, the numbers of people and/or the levels of exposures in the U.S. studies were too low to be able to detect an increased cancer risk.

3) Numeric standards for contaminants are different under the Safe Drinking Water Act and the CWA. MCLs are based on feasibility considerations, including the availability of technology to achieve the regulatory level and the cost of such treatment. Standards/criteria developed under the CWA are based strictly on the basis of health effects, and do not consider feasibility considerations. The methods used to derive the human health values under both Acts are generally considered protective of human health.

EPA's proposed "Toxics Rule" (56 FR 58420) has identified the following guideline for applying its human health criteria to public water supplies: "If the State has public water supplies where aquatic life uses have not been designated, ... the "water + organisms only" criteria in Column D(I) ... are promulgated." To be consistent with this guideline, the state needs to revise its proposed drinking water supply criterion of 50 ug/l based on a drinking water MCL, to 0.018 ug/l, a human health criterion assuming consumption of "water + organisms."

The state could argue that applying a MCL to a water supply use is reasonable, given that fish consumption is not associated with the use. However, such an application would be appropriate only in those waterbodies where the state has clearly demonstrated that no potential for fish consumption exists.

Like EPA's human health criteria, MCLs are based on risk assessments and have risk values associated with them. The drinking water MCL for arsenic of 50 ug/l has an associated cancer risk of 10^{-3} . A new study published this summer in the journal *Environmental Health Perspective* (volume 97, pg. 259-267), "Cancer Risks from Arsenic in Drinking Water", authored by experts including researchers from biomedical, environmental and epidemiological university departments, concluded that at 50 ug/l, "the lifetime risk of dying from cancer of the liver, lung, kidney, or bladder from drinking 1 L/day of water could be as high as 13 per 1,000 persons", or 10^{-2} .

In 1962, the Public Health Service published drinking water standards. The documentation on arsenic in this publication states, "The U.S. Public Health Service Drinking Water Standards for 1946 established an arsenic limit of 0.05 mg/l. In light of our present knowledge concerning the potential health hazard from the ingestion of inorganic arsenic, the concentration of arsenic in drinking water should not exceed 0.01 mg/l and concentrations in excess of 0.05 mg/l are grounds for rejection of the supply."

EPA is publishing proposed new drinking water regulations for arsenic next summer. Information from studies on internal cancers will be used to reexamine the arsenic MCL. Although the regulatory language will not, of course, be known until the rule is final, we expect the arsenic MCL to be much lower than 50 ug/l. We also expect the rule to assign arsenic a maximum contaminant level goal close to or equal to zero. (This level reflects the level of contamination where "no known or anticipated adverse effects on the health of persons occurs and which allows an adequate margin of safety.") In light of the anticipated changes, it may be appropriate for the state to wait for rule completion before endorsing a MCL value.

(C) The state suggests that trivalent, inorganic arsenic rather than total arsenic should be regulated. It also states that this form of inorganic arsenic is not being discharged to the Alaskan environment as it is in other areas of the U.S.

1) Arsenic has an extremely complicated chemistry. The state's emphasis on trivalent arsenic as the only inorganic form of concern is a serious oversimplification of arsenic solubility, toxicity, and oxidation-reduction reactions.

Although acute toxicity studies indicate that trivalent forms of arsenic are more toxic than the pentavalent form, this may not be the case with longer term chronic studies. In fact, exposures to the both the trivalent and pentavalent

forms occurred in the people involved in several of the studies of carcinogenicity. In addition, inorganic arsenic (+5) can be interconverted in the blood of humans with the (+3) species, which is then methylated.

Both pentavalent and trivalent forms are soluble and toxic. Conversion of one form of arsenic to another by reduction or oxidation may occur in the environment. Although studies of inorganic forms of arsenic indicate that pentavalent arsenic is less soluble and less toxic than trivalent arsenic, one should neither conclude nor imply, that pentavalent arsenic is therefore insoluble and non-toxic.

Emphasis on trivalent arsenic alone in waste discharge regulation would neglect the potential for redox reactions when wastewater or a receiving stream enters reducing environments. Consequently, total arsenic would be the important parameter to regulate for adequate protectiveness.

2) The state's argument that trivalent arsenic is not being discharged to the Alaskan environment has a weak basis. We agree that there are no smelters operating in Alaska. However, many other mining facilities exist or are proposed for extracting, grinding, and treating ore in order to mobilize and concentrate metals. Ore processing certainly can modify arsenic speciation.

(D) The state argues that because the proposed saltwater criterion of 36 ug/l is lower than the drinking water MCL of 50 ug/l, and that fish are not a significant source of inorganic trivalent arsenic, the aquatic life trivalent criterion of 36 ug/l should be adopted as the human health saltwater criterion.

1) See above for our position that fish may be a significant source of inorganic arsenic.

2) See above for our position that the complexity of arsenic speciation argues for a human health criterion based on total arsenic.

3) The state proposes to protect human health based on a number designed to protect aquatic life. What is the rationale for this approach?

(E) The state proposes for adoption 190 ug/l for human health protection in freshwater use classes other than water supply.

1) Although no supporting argument is presented, we assume that this criterion is based on EPA's aquatic life freshwater chronic criterion for trivalent arsenic. If so, see above for our arguments that a total arsenic criterion is more reasonable, that fish consumption should be

considered and that protecting human health based on aquatic life protection is questionable.

(F) In conclusion, because of scientific uncertainties regarding the toxicology of arsenic, its chemical complexities, anticipated new rulemaking, and the relatively high intake of fish and other seafood in Alaskan diets, we recommend adoption of EPA's human health criteria.

Dioxin

EPA's proposed "Toxics Rule" (56 FR 58420) has identified the following guideline for applying its human health criteria to public water supplies: "If the State has public water supplies where aquatic life uses have not been designated,... the "water + organisms only" criteria in Column D(I) ... are promulgated." To be consistent with this guideline, the state needs to revise its proposed drinking water supply criterion of 30 parts per quadrillion (ppq) based on a drinking water MCL, to a human health criterion assuming consumption of "water + organisms."

The state could argue that applying a MCL to a water supply use is reasonable, given that fish consumption is not associated with this use and that the avenue of exposure for dioxin via water is minimal. However, such an application would be appropriate only in those waterbodies where the state has clearly demonstrated that no potential for fish consumption exists.

The state has not designated human health dioxin criteria for the remaining fresh water uses. The state must designate criteria for these uses to be in compliance with Section 303(c)(2)(B). We believe that these should be designated assuming consumption of "organisms only."

The proposed human health criterion for marine waters is 1.2 ppq. As you are aware, EPA has approved state dioxin criteria ranging from 0.00051 ppq to 1.2 ppq. Criteria of 1.2 ppq have been approved for the states of Virginia, Maryland, Georgia, South Carolina, and Alabama. Several other states have adopted a criteria of 1.0 ppq (Mississippi, New Hampshire, New York, Tennessee.) However, we have two concerns relating to the proposed criterion, as follows:

- 1) The proposed state standard is based upon a fish consumption rate of 6.5 grams per day. While the majority of states with EPA-approved human health criteria have based them on this consumption rate, the Alaska Department of Fish and Game has collected information specific to Southeast Alaska which indicates that residents eat significantly more seafood than this amount. In addition, certain groups of individuals, such as Native Americans, appear to eat much

larger amounts of fish. A recent survey of fish consumption by Native Americans in the Columbia River basin found that adult members of one tribal group (the Nez Perce Tribe) eat an average of 80 grams of fish per day (see attached memo from Harold Sheppard of the Columbia River Intertribal Fish Commission dated April 5, 1992). The survey also indicated that Nez Perce children consume an average of 20 grams of fish per day. The 90th percentile consumption rate for Nez Perce Tribal members is 435 grams per day.

The following states used fish consumption rates greater than 6.5 grams per day in deriving dioxin criteria:

<u>State</u>	<u>Consumption Rate (grams per day)</u>
Arizona	7.5
Delaware	37
Hawaii	19.9
Illinois	20
Louisiana	20
Minnesota	30
Texas	10/15 (freshwater/saltwater)
Wisconsin	20

These rates were primarily derived based upon consumption of fish by recreational fishermen.

2) The State of Alaska, like EPA, has no dioxin criterion for the protection of aquatic life in marine waters. Thus, if the state adopts a criterion of 1.2 ppq for the protection of human health, that will be the only criterion used in the development of dioxin limitations required to meet WQS. (This is likewise true for all the states having adopted dioxin criteria of 1.2 ppq.)

Attached are several documents concerning the effects of dioxin on fish and wildlife. We encourage the state to consider this information in the context of protection of the use described in 18 ACC 70.020(2)(C) for marine waters ("Growth and propagation of fish, shellfish, other aquatic life, and wildlife").

■ Declaration of Dr. Steven P. Bradbury, U.S. EPA, dated February 12, 1992. This document was an enclosure to a letter to the U.S. Fish and Wildlife Service (FWS) in which EPA determined that a dioxin concentration of .013 ppq in the Columbia River would not adversely affect bald eagles. This information was sent to the FWS as part of a formal consultation under section 7 of the Endangered Species Act concerning the establishment

(using a 10^{-5} risk level). For drinking water supply, the state is proposing to adopt EPA's MCL of 100 ug/l for total trihalomethanes which include chloroform, and applying it to chloroform.

It is appropriate to apply EPA's numbers as proposed for all uses except drinking water supply. We have the following concerns with the proposed drinking water criterion:

1) EPA's proposed "Toxics Rule" (56 FR 58420) has identified the following guideline for applying its human health criteria to public water supplies: "If the State has public water supplies where aquatic life uses have not been designated, ... the "water + organisms only" criteria in Column D(I) ... are promulgated." To be consistent with this guideline, the state needs to revise its proposed level of 100 ug/l to 5.7 or 57 ug/l at 10^{-6} and 10^{-5} risk levels, respectively.

The state may argue that using a MCL for drinking water supply is reasonable, given that fish consumption is not associated with the use. However, application of this criterion to specific waters would be reasonable only where the state has clearly demonstrated that there is no potential for fish consumption.

2) Numeric standards for contaminants are different under the Safe Drinking Water Act and the CWA. The methods used to derive the human health values under both Acts are generally considered protective of human health. (Like EPA's human health criteria, MCLs are based on risk assessments and have risk values associated with them. At 60 ug/l of chloroform, for example, the MCL risk level is 10^{-5} .) But MCLs also incorporate feasibility considerations, including the availability of technology to achieve the regulatory level and the cost of such treatment.

2) The drinking water standard of 100 ug/l for Total Trihalomethanes (TTHMs) is currently undergoing negotiated rulemaking (beginning September 28, 1992). The revision may include specific levels for each of the four trihalomethanes as well as a total level for the sum of the trihalomethanes found. Specific levels for each THM and the total are not yet known.

At the present time only public water systems serving greater than 10,000 persons are subject to this regulation. The new regulation will probably be applicable to all public water systems. The proposed regulation is currently scheduled to be published in the federal register in June 1993. The final rule is scheduled for promulgation in June

1995 and the effective date of the regulation would be 18 months after promulgation, or January 1997.

18 AAC 70.023. Chronic Toxicity of an Effluent

We support the proposed change. However, effluent toxicity is not typically "measured" at the boundary of a mixing zone, and a measurement in the receiving water cannot reliably determine compliance. Therefore, we suggest replacing "measured" in the first sentence of this section as follows:

"The chronic toxicity of an effluent discharged to state water, either at the point of discharge or at the boundary of a mixing zone authorized by the department in a permit or certification, shall not exceed 1.0 chronic toxic unit (TUC)."

18 AAC 70.032 Mixing Zones

As outlined below, proposed mixing zone language does not alleviate EPA concerns about the lack of clear guidelines for mixing zones in Alaska. Without such guidelines, EPA and the state could experience major delays and possible conflicts in the permit issuance process.

Most NPDES permits have a need for mixing zone determinations, and the size of the mixing zone is often a source of controversy. EPA often proposes mixing zones to the state in draft permits, based on its interpretation of the standards. The state then must either certify the proposed mixing zones or make a different determination. Unfortunately, the lack of a straightforward guideline causes major delays in permit issuance; new source permittees are particularly frustrated with the delays.

EPA does have the authority to issue permits without final state 401 certification if certain time constraints are exceeded. In some instances of major delays, EPA has made this determination and issued permits without waiting for state certification. The final permit then reflected EPA's interpretation of an appropriate mixing zone.

EPA would like to avoid this breakdown in cooperation and effectiveness, but believes this is possible only if the standards contain mixing zone guidelines that are clear and straightforward.

(a) (1)

The state needs to develop some guidelines for what are "adverse effects" and "significant risk to human health".

Otherwise, the standard will be very difficult, if not impossible, to implement. The state will find itself in the position of engaging in endless debates with permittees over whether or not there will be effects, whether any expected effects are "significant," etc.

(a) (3)

The added language appears to be out of context. We suggest moving the added language to section (b) (4).

We are concerned with the statement "mixing zones applied for and granted after permit issuance...." Granting a mixing zone after permit issuance could create problems with antibacksliding or antidegradation, and added workloads associated with permit modifications.

The language in the section is a bit confusing. The statement that the mixing zone will be based on the "level of treatment defined in the permit" implies that no mixing zones will be granted after permit issuance because, if no mixing zone is specified prior to permit issuance, the level of treatment required in the permit will be sufficient to meet water quality criteria at end-of-pipe. Also, by referencing (e) (3) only, rather than all requirements under (e), an impression may be created that (e) (1) and (e) (2) are not relevant.

(e) (3) (A)

The statement "mixing zones . . . may not exceed aquatic life criteria . . ." is confusing. If, as it appears, the meaning is that water within the mixing zone may not exceed aquatic life criteria, we suggest stating that mixing zones for aquatic life are prohibited in these cases.

Is the statement, "...effluent flow is greater than 25% of the stream flow" based on upstream or downstream flow? For example, if the streamflow is 75 MGD upstream, can the permittee discharge 25 MGD, or does upstream flow have to be 100 MGD to allow a discharge of 25 MGD? The standard also should specify the flow: average, critical low, high, etc.

(e) (3) (D)

This paragraph is confusing. Does this mean, for example, if the copper in a discharge exceeds the aquatic life criterion and the turbidity is more than 5 NTU but less than 25 NTU, the permittee can't get a mixing zone for turbidity?

(Note that Option 2 (e) (3) (iv) in the discussion paper on mixing zones is also unclear. Do you intend to mean that if the natural level of copper in the receiving water exceeds the criteria, permittees are prohibited from getting mixing

10-10-52 14:00 PA 200 550 0100 WATER DIVISION 4/01/7017

zones for any pollutants? The wording under option 1 is at least more clear, in that it specifies end-of-pipe.)

A final comment is to suggest that the state add a provision prohibiting acute toxicity in mixing zones.

18 AAC 70.110(46) "Water"

The language of the definition exempts several types of waters from protection as waters of the state. The exemptions are too broad and may result in significant disagreements between the federal and state levels when dealing with specific waterbodies. For example, under your language, Silver Bay, Gastineau channel or Wards Cove might be identified as treatment systems. Therefore, the present language, leaving the decision as to what does or does not constitute waters that are covered by the CWA to the discretion of the department is not acceptable.

An example of language that would address our concern is, "...impoundments, or other surface water bodies that are either integral parts of wastewater treatment and disposal systems ~~approved by the department, or that are~~ designed, constructed and operated to meet the requirements of the federal CWA."



Official Business

Alaska State Legislature

P.O. BOX V
State Capitol
Juneau, Alaska 99811

September 15, 1992

John Sandor
Commissioner
Department of Environmental Conservation
410 Willoughby Avenue
Juneau, Alaska 99801

Dear Commissioner Sandor:

Your department's recent effort to allow greater levels of pollution in Alaska's waters concerns us greatly. As you know, clean water is vital to Alaska's economy - especially to two of our largest industries, fishing and tourism. Clean water is no less vital to the personal health and well-being of individual Alaskans, to the viability of communities and to a way of life admired throughout the world. We are dismayed that the Department of Environmental Conservation, which is charged with ensuring a healthy environment, would propose regulations to substantially degrade water quality in Alaska. DEC's efforts, and the manner in which they have been presented to the public, have raised many concerns which we would like to discuss with you.

Public Process

Alaska has developed a strong tradition of involving the public in governmental decision making. We have observed that the resulting exchange not only produces better informed decisions on the part of government, it builds a supporting consensus among citizens. However, these laudable goals can only be achieved when the public is both well informed and able to participate. Unfortunately, DEC's efforts undermine both of these conditions.

Alaskans are traditionally busiest during the summer months, earning a living, putting up food for the winter and recreating. The expedited schedule for review of these proposals leaves insufficient time for adequate public participation. While the extension of the comment period until the end of September is appreciated, many of those most affected - commercial fishing people and rural Alaskans come immediately to mind - still cannot participate in any meaningful way. To avoid this disenfranchisement of Alaskans with a large stake in the outcome, we suggest DEC extend the public hearing process until December.

Commissioner John Sandor
September 15, 1992
Page Two

In order to ensure a well-informed discussion, the background knowledge and rationale for a proposed decision must be clearly explained to the public. Unfortunately, DEC's discussion papers fail in this regard. They are internally inconsistent and rely upon careful omissions of fact to make their case. Quite often, they are simply misleading.

The dioxin paper serves as an example.

Given the EPA's current reassessment in the Office of Research and Development of its dioxin standard and risk assessment model for suspected and proven carcinogens, it is possible EPA's recommended limits for dioxin could change in the near future. The Water Quality Standards staff recommends the adoption of dioxin limits that are protective of human health and incorporate recent scientific findings.

Nowhere in the discussion proceeding this recommendation is there mention that many researchers now regard dioxin as potentially far more dangerous than previously suspected. As your staff can confirm, the national press has reported upon recent research indicating serious effects to immune systems from even very small exposures to dioxin. Moreover, new discoveries point to mechanisms for carcinogenicity which explain the inconsistent results of earlier testing. These considerations render DEC's attempt to debunk the older research meaningless and call into question the department's commitment to base its regulations on "recent scientific findings."

Other papers reveal even more startling omissions. Regarding hydrocarbons, the assertion is made that measurements need only be made of soluble forms. This approach completely ignores filter feeders, which can concentrate particulate hydrocarbons. There is simply no discussion of the effect your proposals would have on this important variety of aquatic life, or how food chains might be affected as a result. DEC offers no explanation in the documents we have received.

Timing

DEC is currently engaged in the triennial review of its water quality regulations as mandated by the federal Clean Water Act. This review, intended to be comprehensive, is not yet complete. Why then is DEC advancing these proposals now? A hurried and disjointed approach only invites inconsistencies, confusion and, very possibly, needless and costly litigation.

Commissioner John Sandor
September 15, 1992
Page Three

The only pressing time deadline appears to be the imminent adoption of the National Toxics Rule by the Environmental Protection Agency, which would set criteria in the absence of any already established by the state. A large segment of the public perceives your action at this time as an effort to beat the clock, to the advantage mostly of pulp mills, mining concerns and the Alyeska terminal. DEC has done little in the public hearing process to convince Alaskans otherwise.

The discussion papers acknowledge the possibility that EPA standards will change in the near future, which would argue against DEC's adoption of new standards at this time. Instead, the department rushes ahead. Again, the dioxin paper:

If the adopted criteria prove not to be protective [of human health] then the Water Quality Standards staff recommends revisiting the dioxin human health limits in a future Water Quality Standards amendment.

This recommendation does nothing to reassure the public that human health is indeed being protected by these proposals and further underscores the lack of wisdom in taking action at this time.

Toxics

The Environmental Protection Agency identifies 128 toxic compounds as priorities for regulation because of their potential to harm living organisms. Why then, have you chosen to expedite action on just four: dioxin, chloroform, arsenic and total hydrocarbons?

Level of risk

We are sure you will agree that Alaskans deserve to be free from the assaults of pollution experienced by less fortunate people elsewhere. EPA publishes figures based upon three levels of risk. However, throughout DEC's review of toxics, you choose to accept the highest risk factor in your calculations, 10^{-5} . From the absence of any rationale, DEC appears to have simply assumed that Alaskans wish to be subjected to the greatest possible risk anticipated by federal law. We do not share this assumption. Indeed, we believe that Alaskans fervently desire to be treated as deserving of the high level of protection which modern methods and technology make possible.

DEC's calculation of acceptable levels of exposure also suffers from unrealistic assumptions regarding the amount of fish consumed by Alaskans. The national average is 15 lbs. per year. Alaskans outside the urban areas consume many times more than this. Indeed, many rural residents consume hundreds of

Commissioner John Sandor
September 15, 1992
Page Four

pounds per year - averaging over 700 lbs. in some villages. Data provided to DEC by the Department of Fish and Game make this clear. As you can see, the national average is wildly inaccurate if applied to Alaska. Inexplicably, DEC proposes to adopt this inappropriate measure, again without rationale.

DEC's assumptions in regard to bioconcentration are equally questionable. Your staff appears to have ignored the possibility that salmon, the most commonly eaten Alaskan species, being fatty, would contain a higher level of toxins than other species. Again, no explanation is given.

This combination of factors could yield disturbingly high levels of exposure. Public discussion has centered around the choice of 1 in one million cancers vs. 1 in one hundred thousand. However, if more realistic assumptions are made, the actual incidence of cancer which we are choosing to accept in these regulations could be as high as 3 in one hundred. We believe that Alaskans are not prepared to accept this level of risk.

Alaska specific toxicity standards

The subject of what level of exposure to a pollutant results in chronic toxicity has been the subject of much research and will no doubt continue to be studied. We do not expect that a definitive answer for all time will be established for each chemical in our environment. We do expect, and Alaska statutes mandate, that the Department set levels protective of both human health and the environment. The draft regulations propose to establish standards based upon actual effects observed on Alaskan species. On its face, this sounds reasonable. On closer examination, questions arise.

DEC anticipates that in many cases, testing will use protocols and methods already established by EPA. DEC goes on to say, however,

Because of Alaskan conditions, site-specific considerations, or policy issues, the state may wish to use alternative protocols.

What "policy issues" do you foresee as affecting the choice of protocols guiding scientific research? We would like assurance that this provision will not allow political agendas to drive science. How does the Department plan to develop its own protocols?

We are also concerned that the Department will have insufficient resources to develop protocols or to oversee testing. During a public hearing, Dave Sturdevant indicated that DEC has not estimated how much testing will be involved in establishing Alaska specific standards, and that DEC has made no calculation of

Commissioner John Sandor
September 15, 1992
Page Five

what the effect might be upon DEC's budget. With recent drastic reductions to DEC's lab, we are concerned that the Department lacks the ability to do its own testing or to verify the results of any tests conducted by a regulated facility.

Definition of Water

These proposals would make it possible for an operator to escape regulation simply by impounding a stream, thereby making it a part of "a wastewater treatment and disposal system." Moreover, current regulations aim directly at the problem of toxic metals and other pollutants seeping into groundwater. In redefining "water" DEC would strip requirements for water quality from all unlined waste disposal sites.

The position papers mention that "difficulties have occurred" in applying regulations given the present definition. It is hard to imagine that whatever these "difficulties" might be, they would justify abandoning the state's commitment to protect its waters. DEC is proposing an inappropriate solution to its problem. The damage appears to outweigh the good, rather like watering a thirsty house plant with a fire hose.

Mixing Zones

Current regulations prohibit a mixing zone when the discharge contains substances which "could bioaccumulate; concentrate or persist in the environment; cause carcinogenic, mutagenic, or teratogenic effects; or otherwise present a risk to human health." DEC proposes to modify the carcinogenic, mutagenic or teratogenic effects standard by limiting it to "human health at the location." This new standard, as other provisions of these draft regulations, simply fails to address real life problems, hence, effectively eviscerates meaningful protection. Does the Department no longer feel it necessary to consider the effect upon those who harvest a resource in one location and then consume it in another? Most Alaskans fall into this category.

The ambiguity of the proposed language presents further problems. If it is difficult to specify the acceptable boundaries of mixing zones, imagine the struggle to define "location." Similarly, who will determine, and upon what basis, what is a "significant" risk to human health and what is insignificant? The introduction of such ambiguity does little to clarify standards for the regulated industries or reassure the public that their health or the environment will be adequately protected. It does much to assure lawyers of future employment.

Commissioner John Sandor
September 15, 1992
Page Six


Commissioner, Alaskans everywhere, in all occupations, depend upon clean water. Any regulatory action should have at its core the aim of protecting human health and the environment. As members of the House subcommittee charged with oversight of the Department's budget, we have had ample opportunity over the years to observe DEC's activities. Never, in our experience, has there been disagreement over that fundamental principle. The regulations DEC is now proposing appear to do little or nothing to advance public protection. Indeed, they appear to retreat. The technical and scientific justification for your proposals seem insufficient for such a sweeping retrenchment.

We are concerned that we are being presented a politically driven document, designed to aid certain industries at the expense of other industries and the public interest in general. While no one would argue against encouraging economic health, we would hope that such a policy would apply equally to everyone. These regulations could very well threaten at the very least the commercial and sport fishing industries - which employ more Alaskans than any other - subsistence activities, the nascent mariculture industry, and tourism. Moreover, every member of the public, however they make a living, deserves to be protected from the health threat, the cost and lost opportunities of a degraded environment.

Government and industry have long promised that economic development can occur in an environmentally sound manner. Indeed, we Alaskans understand that a healthy economy depends upon a healthy environment. We urge you to reconsider the draft regulations, and look forward to continuing this discussion.

Sincerely,


Representative Nita Koponson


Representative Kay Brown

STATE OF ALASKA
House of Representatives
District 27

Representative Cliff Davidson
Chairman
House Resources Committee



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29 October 1992

John Sandor, Commissioner
Department of Environmental Conservation
410 Willoughby Avenue Suite 105
Juneau, AK 99801

Dear Commissioner Sandor,

Your proposed revisions to the State of Alaska's water quality standards cause me great concern. After the House Resources Committee hearing and a thorough review of your department's draft revisions, I have come to the conclusion that you must scrap them in their original form and offer new regulations that properly reflect a commitment to clean water.

The purpose of these water quality regulations should be to maintain and improve water quality throughout the state. The regulations as originally proposed would instead sanction the degradation of water in Alaska, a position that I believe most Alaskans would emphatically reject.

By now the Department is well aware of which portions of the new regulations are unacceptable to many water users and the public. However, I would like to mention two areas in particular need of substantial revision.

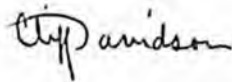
The mixing zone concept was originally an interim provision written to gradually bring existing industries into compliance with provisions of the Clean Water Act. It was expected that all users would eventually meet the water quality standards at the "end of the pipe." In other words, mixing zones were to be a temporary "fix" not a permanent solution. However, under these regulations, the concept of mixing zones has been extended, allowing the Department a

virtually unlimited ability to create new and expand existing mixing zones to the detriment of clean water in Alaska.

I am also concerned that the proposed regulations lack precision and are generally written to allow far too much discretion to the Department. While regulations should not be so rigid as to remove all administrative flexibility, these regulations will likely prevent the Department from operating from a firm foundation and may subject the Department to needless litigation. I believe that the current language will facilitate attempts by polluters to seek exemptions from legitimate and otherwise effective provisions.

Commissioner Sandor, the Department of Environmental Conservation must be an advocate for clean water. That advocacy does not come through in these draft regulations. I would strongly request that you withdraw these regulations and offer new proposals that better meet the objections of clean water users, the public and the EPA. With best regards,

Sincerely,

A handwritten signature in cursive script that reads "Cliff Davidson".

Representative Cliff Davidson, Chairman
House Resources Committee

cc: Al Ewing, EPA
Sally Marquis, EPA

REPRESENTATIVE DAVE DONLEY

ALASKA STATE LEGISLATURE
DISTRICT ELEVEN
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MEMBER

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LABOR AND COMMERCE COMMITTEE

October 7, 1992

Commissioner John Sandor
Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801-1795

Re: Proposed Water Quality Standards Regulations

Dear Commissioner Sandor:

The proposed revisions to the state's water quality regulations are inconsistent with state law, and as such, exceed the scope of the Department's regulatory authority. In addition, the regulations loosen Alaska's water quality standards to such a large degree that, if adopted, they are likely to have a negative impact on our tourism and fishing industries. Finally, independent experts (including the federal Environmental Protection Agency), have reviewed the regulations and concluded that they are based on extremely faulty scientific data.

For all of these reasons, I strongly recommend that you abandon the current draft regulations, and restart the process of updating the state's water quality standards from scratch. I am aware that some have suggested that you merely extend the comment period until December. However, given that the regulations are inconsistent with the state water quality statute (see attached opinion), and given the number of problems with the proposed regulations that have been identified by EPA and others (the comments of former Assistant Attorney General Michael J. Frank on the proposed regulations are particularly enlightening), I think it is only fair that the public has a full opportunity to comment on any revised regulations. This can only be accomplished if a full opportunity for public comment is given after the regulations are totally rewritten.

When making revisions to the draft regulations, and when deciding the degree to which you involve the public in reviewing the revisions, I urge you to keep the interests of all Alaskans and all segments of our diverse economy in mind.

Very truly yours,

A handwritten signature in cursive script that reads "Dave Donley".

Representative Dave Donley

DD:lc

JUNEAU OFFICE

(During Legislative Session January through May)

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Dept.	Phone #	
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LEGAL SERVICES**AFFAIRS AGENCY
OF ALASKA**130 Seward Street, Suite 409
Juneau, Alaska 99801-2105**MEMORANDUM**

October 7, 1992

SUBJECT: Proposal to modify the definition of "water" in regulations setting out the state's water quality program (Work Order No. 8-LS0116A)

TO: Representative Dave Donley

FROM: Jack Chenoweth
Legislative Counsel

QUESTION PRESENTED: In the context of water quality program standard regulation changes (18 AAC 70), what is the effect of a proposal by the Department of Environmental Conservation to revise the definition of the term "water" so as to maintain or continue its inconsistency with the definition of the substantially similar term set out in and applicable to the body of statutes that are purportedly interpreted or implemented by the regulation?

SHORT ANSWER: The department's proposed revision of the regulatory definition maintains its inconsistency with the statutory definition of a like term. The inconsistency between the regulation and the statute raises a serious possibility that, if challenged, the regulatory scheme of the department may be invalidated.

DISCUSSION:

The Department of Environmental Conservation proposes to amend the state's water quality regulations set out in 18 AAC 70 and, among other changes, the regulatory definition of "water" applicable in that chapter.

The **current** regulatory definition of the term set out in 18 AAC 70.110(46) reads as follows:

"water" means lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, straits, passages, canals, the Pacific Ocean, Gulf of Alaska, Bering Sea, and Arctic Ocean, in the state's territorial limits, and all other bodies of

Representative Dave Donley

October 7, 1992

Page 2

surface or underground water that are wholly or partially under state jurisdiction; "water" does not include ponds or lagoons or parts of wastewater treatment systems that are lined or constructed so that seepage into the ground is not allowed.

The proposed regulatory change would add and delete language as follows:

"water" means lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, straits, passages, canals, the Pacific Ocean, Gulf of Alaska, Bering Sea, and Arctic Ocean, in the state's territorial limits, and all other bodies of surface or underground water that are wholly or partially under state jurisdiction; "water" does not include ponds, [OR] lagoons, impoundments or other surface water bodies that are either integral [OR] parts of wastewater treatment and disposal systems approved by the department, or that are designed, constructed, and operated in accordance with valid state or federal disposal permits [THAT ARE LINED OR CONSTRUCTED SO THAT SEEPAGE INTO THE GROUND IS NOT ALLOWED].

I

Both the current definition set out in regulation and the proposed change in language of that regulation cite as authority various provisions of AS 46.03, the general conservation chapter of the Alaska Statutes. However, AS 46.03.110(35) already sets out a definition of the term "waters" ^{1/} applicable to the use of the term within that chapter. The statutory definition of "waters" ^{2/} is broader than either the existing

^{1/} This phraseology of the definition of "waters" appears to have been taken without change from former AS 46.05.240, the Water Pollution Control Act, enacted by sec. 1, ch. 117, SLA 1949. The state's Water Pollution Control Act was repealed by sec. 4, ch. 120, SLA 1971, but various references to "state waters" and "waters of the state" and the substance of the definition of the word "waters" were carried forward into the replacement provisions, codified as AS 46.03.

^{2/} AS 46.03.110(35) reads as follows:

(35) "waters" includes lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, straits, passages, canals, the Pacific Ocean, Gulf of Alaska, Bering Sea, and Arctic Ocean, in the territorial limits of the state, and all other bodies of surface or underground water, natural or artificial, public or private, inland or coastal, fresh or salt, which are wholly or partially in or bordering the state or under the jurisdiction of the state.

(continued...)

Representative Dave Donley
October 7, 1992
Page 3

regulatory definition of the term "water" or the proposed revision of the regulatory definition. The statutory definition was intended to apply to the term "waters" as it is used throughout AS 46.03.^{3/}

As a drafting matter, it would seem that nothing of substance may be made to turn on the difference between the use of "waters" in the 1971 statute (derived from an earlier 1949 enactment), codified as AS 46.03.900(35), and later efforts of the department to develop and enforce regulations using "water" (without the "s"). The use of "waters" (with an "s") to refer to a mass of matter to distinguish it from water was liquid was once typical, but has become archaic. Contemporary statutory drafting techniques would favor the use of the word in the singular--"water"--over use of the plural "waters" in the drafting of statutes. If subject to redrafting, the various references to "waters" set out in AS 46.03 would all appear as "water," that is, in the singular.^{4/}

II

For purposes of the department's authority to regulate, the statute in question provides a complete definition of the word. Consequently, the efforts of the Department of Environmental Conservation to interpret and implement AS 46.03 by relying on a reworked, narrower definition for the word "water"--both as revised before now and as proposed for further amendment in the water quality standards revision that prompted your inquiry--must be seriously questioned. Arguably, substitution of the definition in order to achieve a substantive distinction risks the violation of two key provisions of the state's Administrative Procedure Act,

^{2/}(...continued)

The significant language in the statutory definition of "waters" that has been omitted from the department's revision of the regulatory definition of "water" is highlighted.

^{3/} The word "waters" is used in ten sections of AS 46.03--AS 46.03.050; 46.03.070; 46.03.080; 46.03.100; 46.03.120(b); 46.03.740; 46.03.750; 46.03.755(b); 46.03.780; and in two other definitions of AS 46.03.900, paragraphs (16) and (19). The word "waters" is consistently used only as a noun and only in the context of reference to a body of water, or to the aggregate of bodies of water, that would be subject to AS 46.03, as distinguished from "water" in the context of a liquid commodity. In the latter context, the word "water" has been used in these and other sections of AS 46.03.

^{4/} Similarly, the department's use of "water" (without the "s") is consistent with the vocabulary of drafting regulations followed in the late 1970's when the Department of Environmental Conservation first thought to insert the term into 18 AAC 70 and to revise the definition.

Representative Dave Donley
October 7, 1992
Page 4

AS 44.62.020 ^{5/} and 44.62.030, ^{6/} calling into question the validity of the provision, Madison v. Alaska Department of Fish & Game, 696 P.2d 168, 176 (Alaska 1985), and its presumptive enforceability, State v. Alyeska Pipeline Service Co., 723 P.2d 76 (Alaska 1986). ^{7/}

Our courts have advised that "[t]o ignore a definition section is to refuse to give legal effect to a part of the statutory law of the state." Cleland v. State, 759 P.2d 553, 555 (Alaska App. 1988), citing 1A Sutherland Statutory Construction, sec. 27.02 (4th ed. 1974). To the extent the Department of Environmental Conservation intends to draw regulatory distinctions, it should respect the caution set out in the most recent version of the Department of Law's "Drafting Manual for Administrative Regulations" that

^{5/} AS 44.62.020's second sentence reads as follows:

. . . To be effective, each regulation adopted must be within the scope of authority conferred and in accordance with standards prescribed by other provisions of law.

^{6/} AS 44.62.030 provides:

Sec. 44.62.030. CONSISTENCY BETWEEN REGULATION AND STATUTE. If, by express or implied terms of a statute, a state agency has authority to adopt regulations to implement, interpret, make specific or otherwise carry out the provisions of the statute, a regulation adopted is not valid or effective unless consistent with the statute and reasonably necessary to carry out the purpose of the statute.

The authority to adopt regulations to implement AS 46.03 has been explicitly given. See AS 46.03.020(10).

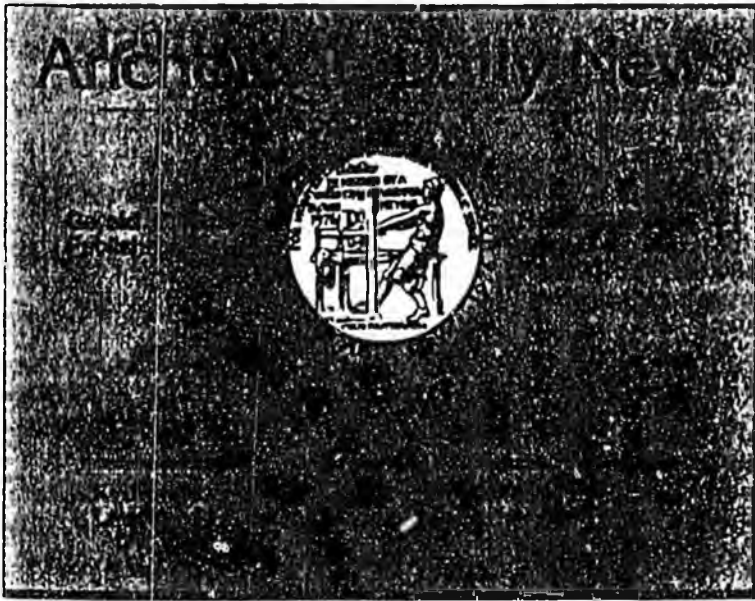
^{7/} The water quality standards chapter, 18 AAC 70, and the definition of "water" in 18 AAC 70.110(46) is not the only instance in which the Department of Environmental Conservation has substituted a narrower regulatory definition for the statutory definition of "waters." The department cites relevant sections of AS 46.03, including, presumably, the definition of "waters," as the statutory basis for two other regulatory programs--those dealing with solid waste management (18 AAC 60) and with the siting of solid waste management facilities (18 AAC 63)--but, for each of the programs, it has substituted the definition of "water" that includes the "does not apply to" exception for lined containers. See 18 AAC 60.910(55) [definition of "surface water" added in October, 1983], and 18 AAC 63.900(23) [definition of "water" or "waters".] The department has not made the substitution in conjunction with its regulations for the oil and hazardous substance pollution control program (18 AAC 75). Instead, its regulation for that program, 18 AAC 75.900(62) and (70) cites the relevant statute, AS 46.04.900, directly.

Representative Dave Donley
October 7, 1992
Page 5

"[o]perative provisions of a regulation must not be hidden in definitions." ^{B/} Rather than continue to draw distinctions within definitions that are not congruent with the legislative construction of the term in question, the agency should forthrightly set out the significant operative distinctions it proposes to make in separate substantive sections.

JBC:gc
92-490.glc

^{B/} Drafting Manual for Administrative Regulations, 10th Edition, July, 1989, at p. 77.



Cleaner water?

Revisions may come too late

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Here's the deal:

The federal government also is issuing a set of pollution standards, expected to be ready by Dec. 1. In writing the rules, the feds allowed each state, Alaska included, to specify what level of risk it is willing to accept for the release of toxic dioxin into its waters.

The federal rules will likely go into effect before the state Department of Environmental Conservation can review its own standards. So the federal rules will set Alaska's acceptable dioxin discharge at the higher risk level initially backed by the state — unless DEC Commissioner John Sandor tells the federal government otherwise.

He has until Monday to do so.

In the meantime, the permits for Southeast's two big pulp mills, which discharge dioxin as a byproduct, are up for renewal now. Because the new permits will likely be based on what the state tells the federal government, they will be issued at the higher risk rate. And because the permits are good for five years, the pulp mills may be able to continue dumping that level of dioxin, at least for that long, even if the state ultimately decides to make the standards more stringent.

Chubb - FYI.

In ADW yesterday.

Heather

So, yes, the public will get its say. But not until after the pulp mills — and the Hickel administration — get their way.

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But here in Alaska, the two big pulp mills in Southeast claim that meeting the EPA's more stringent risk level would force one of them out of business. That's what prompted the state to rush through its proposal to set the state standard at the higher one death per 100,000 risk level.

When it heard about the state's decision to review its own standards, the EPA this week sent the state a letter, giving Alaska one more chance to change its mind about its preferred risk level.

While the bureaucratic process behind all this is mind-numbingly complex, the outcome affects you, us and the fish we eat.

Deciding what risk level to accept is a legitimate debate. But Alaskans haven't been allowed to finish that debate. Many of us could mount a powerful argument that the most rigid standards of safety should apply in this state. So many residents depend on fish for subsistence, and the fishing industry counts on wild and natural fish as its biggest selling point in an increasingly competitive market.

But the highest standards won't apply, at least not right away, no matter what our public hearings and public advisory groups say. Unless, that is, DEC Commissioner John Sandor says otherwise. By Monday.

State picks less stringent water-quality standard

DEC said the decision would allow pulp mills in Ketchikan and Sitka to continue operating. More stringent standards would have cost the mills about \$300 million for pollution control devices.

By JAY STANGE

State Department of Environmental Conservation Commissioner John Sandor has sided against conservationists and chosen a 1-in-100,000 probability as the acceptable cancer risk from pollutants in Alaska waters.

Sandor's decision would allow industry to discharge 10 times more suspected carcinogens in the state's water bodies than the more stringent 1-in-1 million level that the U.S. Environmental Protection Agency had planned to implement earlier this year.

"The (DEC) is attempting to develop the toughest and most complete health and water standards that Alaska has ever had, but at the same time develop standards that are technically feasible for business and communities," DEC said Monday in a prepared statement.

The standards would be used in deciding permits for industrial plants, mines and other operations that discharge wastewater into Alaska waters.

The department said Sandor's decision would allow the two pulp mills in Southeast Alaska to continue operating - a more stringent level would have required additional pollution control devices that could have cost the mills in Ketchikan and Sitka about \$300 million total.

The state also said the EPA's more stringent tier of protection was a poor choice since it was higher

than background levels of natural arsenic pollution in some parts of Alaska.

Sandor's choice came in response to an EPA request Nov. 9 for the state to designate which set of pollutant limits EPA would implement this winter as part of the National Toxics Rule, a required section of the 1987 Clean Water Act. Each state sets its own levels, and EPA said it would accept a range of risk levels from one in 100,000 to the one in 10 million.

The risk level is defined as the likelihood that a person could contract a disease or illness from pollutants in the water.

As part of a rewrite of its water-quality standards, DEC had proposed the 1-in-100,000 level in its draft in July. But recently - partly due to public outcry and partly from heavy EPA criticism of its scientific arguments - the department postponed a decision until advisory groups and the Legislature could participate early next year.

DEC's delay prompted an EPA letter requesting clarification on the state's preference for cancer risk - separate from the other standards still to be decided, perhaps next year.

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Rick Albright of the EPA's Region 10 office in Seattle said Friday any permits that are issued between Dec. 1 and early next summer, when the state expects to finalize its full set of standards, could end up being modified.

"Whatever standards are more stringent would guide those permits. That's the most likely scenario," he said.

However, Albright also said it is also possible permits could be locked in for five more years at the less stringent risk level.

Sandor said he would favor extending existing permits until next year, when the state's final rules are in place. "It would seem to me it would make common sense to extend (the permit reviews) and issue them in May or June or July when the state regulations are out and final."

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CORRECTION

**THIS DOCUMENT
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TO ASSURE LEGIBILITY**

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Anchorage Daily News Wednesday, November 18, 1992 B5

Acceptable risk?

House committee must get answers

John Sandor, commissioner of the state Department of Environmental Conservation, had until Monday of this week to change his mind about what level of health risk Alaskans are willing to accept when it comes to water pollution. Mr. Sandor decided — for all of us — that Alaska will stay with a higher rate of risk from toxic pollutants than that recommended by the federal Environmental Protection Agency.

Thursday afternoon in Anchorage, the House Resources Committee will have a chance to ask DEC officials why.

Why, for example, did the DEC announce it would reconsider its proposed new water-pollution regulations, then tell the federal government to go ahead and use that same controversial risk level in new federal rules about to be issued?

Did the DEC think no one would notice it was saying one thing and doing another?

Did the DEC consider any of the public comments that came in, right up to the day Mr. Sandor gave the federal government the go-ahead?

Can the DEC explain what the higher level of pollution will mean to two crucial industries here in Alaska: fishing and tourism?

Finally, the committee might want to ask a general, philosophical question about the mission of the DEC. The agency recently announced it would take into account businesses and jobs when considering environmental regulations. Somebody needs to think about the economy, no doubt about it. But if the DEC puts the economy first, just who is left thinking about the environment?

Right now, it looks like the House Resources Committee.

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Pollution rules get 2nd look

State scraps plan to ease water rules

By KIM FARARO
Daily News business reporter

The state has decided to scrap proposed revisions to its water-pollution rules that would have allowed some of Alaska's biggest businesses to dump significantly more pollutants into waterways than the federal government recommends.

Department of Environmental Conservation official Dave Sturdevant said his agency would start the process of revising the rules again, and he expects the next set of proposed regulations will allow less pollution.

Sturdevant said it was especially likely that limits for discharges of toxic dioxin and carcinogenic arsenic would be stiffened. He said the new proposed rules would not be issued until next year.

The DEC had suggested the looser standards to help companies and developers who complained that many environmental regulations were overly protective and could

needlessly cost them millions of dollars and force layoffs.

The state initially started the review to provide relief to the large Sitka and Ketchikan pulp mills, but then broadened the changes to help other businesses.

The original proposal would have:

- Allowed the pulp mills to dump 85 times more dioxin than federal regulators recommended.

- Permitted two proposed Juneau-area gold mines to release 250 times more arsenic than the EPA recommended.

- Allowed Alyeska Pipeline Service Co. to continue to release hydrocarbons that could include carcinogens into Port Valdez from its giant oil-tanker terminal.

Even though the state is rethinking its revisions, it may already have helped the pulp mills escape the toughest regulations they faced — the rules written into draft federal permits issued in March.

As a result, the mills may be allowed to discharge significantly more dioxin than the federal government wanted although less

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than the state's proposed water-pollution rules would have permitted.

The federal and state governments share responsibility for water-pollution permits. The U.S. Environmental Protection Agency writes the permits based on state water-pollution limits.

Because Alaska doesn't have a dioxin limit for discharges into marine waters, the EPA picked a number that would have been expected to result in one extra case of cancer in every 1 million people. The state recently asked the EPA to loosen the limit to a level that would result in one extra case of cancer for every 100,000 people — at least until the

state comes up with its own standard.

The EPA agreed to try because the agency encourages states to decide what risks they want their residents exposed to. But the number is part of a broad package of standards called the National Toxics Rule, which has yet to receive the Bush administration's blessing.

Harold Goren of the EPA's Seattle office said that if the Toxics Rule is adopted, the agency will issue the pulp mill permits based on the looser dioxin limit. Although the state can choose a stiffer limit when it rewrites its own water-pollution rules next year, Goren said it could take years to change the permits.

Gregory Kellogg, another EPA official said the agency wants to issue the new permits as soon as possible, in part because they will allow less pollution overall than now and put controls on dioxin for the first time.

The mills had said complying with the EPA's original draft permits would have cost them tens of millions of dollars and

Spokesmen for the two mills could not be reached Friday night.

The state's own proposed dioxin limit — part of the suggested water-pollution revisions — was even looser than the one that it picked for the National Toxics Rule. DEC officials said it would likely have allowed the mills to continue to release as much dioxin as before.

But that proposed limit and others drew loud criticism from some fishermen, legislators and a large group of environmentalists. Later, the EPA also criticized the revisions saying the state had ignored recent scientific studies.

It was that statement that recently spurred Gov. Wally Hickel to ask the DEC to reconsider its decisions and make sure it could justify its choices. The agency said it would, and then announced Friday that it wanted to start over again.

This time, the agency says, it will consult with a panel of business people, fishermen, environmentalists and others when revising the rules. The agency said it will take nominations for committee members until

PUBLIC WALKS OUT ON WATER QUALITY HEARING

HAINES — Residents here unanimously got up and walked out of a recent Department of Environmental Conservation public hearing on proposed changes to state water quality standards.

The walkout by about 75 conservationists, gillnetters and Native leaders occurred during an explanation of the changes by DEC representative Dave Sturdevant.

Critics fear DEC's proposals would put human health and valuable fisheries at risk.

Gillnetter Norm Blank called for the walkout to "show the state of Alaska and the governor what we think of what they're trying to do."

Later, Blank said the protest was unplanned.

"People are angry and frustrated," he said. "It occurred to me, here we are at another hearing. We all have our little speeches and they're not going to listen. . . . This may get their attention in Juneau."

The most controversial proposals would redefine standards allowing industrial mixing zones and establish lower "human health criteria" for some chemical compounds than those set by the federal Environmental Protection Agency.

The mixing zone proposals would affect permits issued for the Kensington gold mine, located 35 miles south of Haines and adjacent to the Point Sherman fishery.

Haines' city and borough governments are opposed to the changes. So are Native, fishing and conservation organizations.

Residents also oppose a DEC proposal to base pollutant limits on an increased risk of cancer of 1 in 100,000. Sturdevant said the risk of getting hit by lightning is three times as great as the risk of getting cancer under the pollutant limits the state proposes.

A tighter standard "is not bad for the average citizen, but is bad for industry," Sturdevant said. "It will cost them more."

Haines residents questioned that balance.

"Whose idea is it to minimize impacts on industry and maximize impacts on public health?" Peter Goll asked.

— Bonnie Hedrick
Chilkat Valley News

6 OCTOBER 1992
Anchorage Daily News

EPA opposes looser water regulations

The Associated Press

JUNEAU — Federal officials reviewing the Hickel administration's proposal to ease state water-quality standards say several elements of the plan are inadequate.

In a memo sent to the state Department of Environmental Conservation last week, officials of the Environmental Protection Agency in Seattle outlined several problem areas:

- A proposal to use 5.2 pounds a year as the average fish-consumption rate for Alaskans in a complicated formula that assesses the danger of eating dioxin-contaminated fish. Dioxin is a carcinogen. State fisheries officials say 73 pounds is more realistic, and that people in subsistence communities often eat more than 400 pounds of fish annually.

- A proposal to allow 250 times more arsenic in waters than is suggested by EPA guidelines. The state said the EPA arsenic levels are more strict than the standards for half the wells in Fairbanks.

- Unclear language in regulations governing "mixing zones" — areas where a pollutant is mixed with clean water in a channel or other body of water to dilute its toxicity.

Sally Marquis of the EPA in Seattle said the agency hopes the state will reconsider some issues. Some of the regulations cannot be approved as they are written, she said.

Within days after receiving the document, state officials extended the public comment period on the regulations for the second time, to Oct. 31. The old deadline had been Friday.

The rewrite of the standards has been under way for two years. State officials have said they want the standards to balance economic and environmental concerns, but critics have claimed they represent a wholesale sellout of environmental protection to industry.

Anchorage Daily News

Gerald E. Grilly
Publisher



Howard Weaver
Editor

Michael Carey, Editorial Page Editor
Patrick Dougherty, Managing Editor

Katherine Fanning, Editor and Publisher 1971 to 1983
Lawrence Fanning, Editor and Publisher 1967 to 1971

Founded in 1946 by Norman C. Brown

Polluted waters

Let us eat clean fish

What a strange land we live in, where the state government would push to allow the maximum possible level of poisons in our waters.

That, plainly, is what the Alaska Department of Environmental Conservation has proposed.

You might ask why. Surely our state leaders care about the amount of cancer-causing agents in our waters. Here's the explanation two state legislators, Democrats Kay Brown of Anchorage and Niilo Koponen of Fairbanks, came up with in a letter to the department:

"DEC appears to have simply assumed that Alaskans wish to be subjected to the greatest possible risk anticipated by federal law. We do not share this assumption."

Nor do we.

Those who would benefit from the state's proposals include pulp mills, two gold mines and Alyeska Pipeline Service Co. Does it sound like a good idea yet?

Federal Environmental Protection Agency officials are meeting with state officials this week to talk about the federal agency's concerns — that proposed state standards for arsenic are too lenient, and that the threat of exposure to cancer-causing dioxin is worse than the state believes.

One of the state's assumptions is that individuals are unlikely to eat more than five pounds annually of contaminated fish. That's based on Fish and Game estimates that Alaskans eat between 30 and 300 pounds of fish a year.

Should we have to worry about where the fish we eat is coming from?

And most of all, should the state push the limits of our tolerance of cancer-causing agents in order to benefit industry? The answer seems obvious.

The federal EPA can override state rules, but that could be a lengthy process. Instead of forcing the national government to step in to protect Alaska's citizens, the state regulators should change the regulations to reflect proper priorities: human health first, help for industry second.

Dmitry Shok / 10/22/92 Anchorage Daily News



Current Alaska water quality.



Proposed new DEC standards.

Anchorage Daily News 10/22/92

Critics pan looser rules on pollution

By HUGH CURRAN

Daily News reporter

The Hickel administration's proposed loosening of water pollution rules will either give wings to Alaska industries trapped in environmental red tape or endanger animal and human life and ruin the state's fishing industry, depending on whom you listened to at a public hearing Saturday.

The Department of Environmental Conservation has recommended relaxing state water pollution regulations in an effort to minimize the effect environmental rules have on jobs and businesses.

The move was made after timber mills in Sitka and Ketchikan complained in March that tough new EPA draft permits could force them out of business.

The House Resources Committee scheduled the hearing after the proposed rules set off a flurry of protest around the state, and those who testified split into familiar battle lines.

Businesses that would benefit most from the changes, including the pulp mills and the coal industry, roundly supported the DEC plan. Environmental groups and representatives from the fishing industry called for greater legislative involvement in the plan and asked the DEC to scrap a proposal seen by opponents as scientifically shoddy and biased and to return to the drawing board.

Opponents and legislators also questioned DEC health-risk evaluations based on EPA estimates of five pounds of fish consumed

Please see Page B-2. HEARING

HEARING: Proposed changes in water-quality regulations bring debate

per person per year. They said the figure did not represent the reality of Alaska fish consumption that averages about 78 pounds a year.

"These proposals are the most poorly justified departmental changes I've ever seen," said Mike Wenig of the environmental group Trustees for Alaska. "The cost analysis is a joke. Much of it is based on the claims of the pulp mills. The legislature ought to pressure the DEC to go back to the drawing board and the legislature ought to get involved more directly."

"If there are certain problems, we can work within the system," said Karl Hanne-man with the mining group Alaska Placer Development. "To ignore the whole package would be a shame."

"I think this dialogue is important, even though it'll all probably end up in court," said Becky Gay with the Resource Development Council.

DEC commissioner John Sandor defended the proposal as a way to balance the concerns of a clean environment with those of jobs and industry.

"This is a balancing act between economic impact and health impact," Sandor said.

The proposed changes would:

- Allow large pulp mills in Sitka and Ketchikan to dump 85 times more cancer-

causing dioxin than federal regulators recommend.

- Permit the proposed A-J and Kensington gold mines in Southeast to release 250 times more toxic arsenic than the federal government is expected to suggest.

- Let Alyeska Pipeline Service Co. continue to release hydrocarbons that could include cancer-causing compounds into Port Valdez from its giant tanker terminal.

The changes would allow an increase in dioxin discharges to a level expected to cause one case of cancer for every 100,000 people. The state regulation would supersede proposed federal rules limiting dioxin discharges to the levels expected to cause one case of cancer in a million people.

"The DEC believes the cancer risk level of one case per 100,000 people is an acceptable risk," Sandor said.

Many of the estimated risk factors used by the DEC are based on EPA national estimates of five pounds of fish consumed by the average person in a year. Rep. David Finkelstein, D-Anchorage, was one of many who questioned the figure at Saturday's hearing.

"I know I and a lot of Alaskans eat a lot more fish than that," Finkelstein said. "It almost seems absurd how low the estimate is."

DEC and EPA officials said a new estimate of the amount of fish consumed was

under consideration.

George Yaska of the Tanana Chiefs Conference, which represents 43 Native communities in the Interior, said more than just fish consumption should be considered.

"The water quality standards proposed provide tremendous concern on the part of the people of our region," Yaska said. "Beaver, muskrat, moose; I consider these absolutely necessary for any consideration."

Fish contamination would make the DEC's business and job concern pointless by ruining one of the state's largest industries, said Gerry McCune, president of the United Fishermen of Alaska.

"We're really concerned that the proposal will lead to the decrease of fish habitat and the erosion of the fish population," McCune said. "The UFA believes the plan lacks balance and foresight."

"Fish are like little sponges soaking up the pollution in the water," said Riki Ott with the UFA. "The cleaner the water, the cleaner the fish. It's as simple as that."

Ed Oetken of the Alaska Pulp Corp. said unless the state approves more lenient standards, proposed federal standards could ruin or close the Sitka and Ketchikan pulp mills, which provide jobs in southeast Alaska.

"The proposed limits would require the two mills to change their production process, which would cost millions of dollars and take years," Oetken said. "And there's no guarantee that we'd be able to make a product that anyone would want to buy after we're done."

A suggestion by Sandor that easing regulations on businesses now could help pay for an estimated \$1.4 billion toward better sanitation facilities in rural communities was met with confusion by Finkelstein.

"I don't get it," Finkelstein said. "We're losing money on it. Something like the mining industry doesn't contribute to the state budget."

Replied Sandor: "The task force report shows that one of the most important ways to pay for something like this is for communities to have a strong economy. That can happen when some of these businesses pay property taxes."

"We don't even have property taxes in most of those communities," Finkelstein said. "I have no idea what you're talking about."

The state will not make a final decision on water-quality changes until the public comment period, which has been repeatedly extended, ends later this month.

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Keep Alaska clean

Don't water down regulations

The state of Alaska is entering dangerous territory with its decision to change environmental regulation from an effort to preserve a clean and healthy environment into a balancing act between pollution and employment.

Basically, state regulators want to reject the long-standing notion that a clean environment is the overriding, No. 1 priority. Instead, they propose a slippery balancing act that seeks to test whether jobs are worth trading for pollution.

You will hear extended debate about whether it makes any real difference to lower water-quality standards from one cancer death per million to one cancer death per 100,000. You will hear proponents of the change talk about "choices," about letting citizens decide whether to allow greater pollution — at a pulp mill, for example — in exchange for more jobs.

Those arguments are too short-sighted to control this debate. Indeed, the whole point of broad environmental standards is recognition of the fact that such decisions cannot be made on a short-term jobs-vs.-smokestacks debate. Environmental policy is genuinely effective only when applied across borders, across industries, across regulatory departments.

Developers may be able to convince citizens or regulators that dirtier discharge from their mill will be more than compensated by additional jobs for local

Indeed, the whole point of broad environmental standards is recognition of the fact that such decisions cannot be made on a short-term jobs-vs.-smokestacks debate.

residents. But that may ignore downstream impacts on salmon fishermen, or the loss of tourism when trees near the plant turn brown and die, or the fact that pollution from their mill, when combined with the shipping terminal up the bay, adds up to far more than either individually might pollute.

Such decisions often ignore the fact that environmental damage is cumulative — that we may be trading jobs today for environmental health problems extending far into the future and lasting for generations.

In the long run, case-by-case pollution decisions have almost always resulted in widespread environmental damage. The Lower 48 states and most of the industrialized world tried that approach and it failed miserably. Enormous amounts of money and resources are now being expended attempting to fix those mistakes. (Some of the damage and death, of course, can never be remedied.)

Alaska has a chance to do better. Since we are starting out with a relatively clean slate, we can avoid those environmental consequences simply by insisting that we are not willing to trade our long-term environmental health for short-term development.

Does that mean there should be no development? Of course not. There must be — and, evidence firmly demonstrates, there will be.

Sensible environmental regulation stops dirty and damaging development, but doesn't close the door to reasonable progress. Mills, factories and mines all over the world have shown that they can develop the expertise to operate within the guidelines of strict environmental controls — but they also demonstrate that they probably won't do so unless they're forced to.

If the Hickel administration is allowed to dilute Alaska's tough environmental standards and turn the debate into case-by-case trades of cleaner water for more jobs, the inexorable result will be a patchwork quilt of environmental damage where we might have preserved broad regions of environmental health.

This is no modest or casual change in regulatory strategy. This is a fundamental shift in Alaska's commitment to environmental health. Alaskans should insist on sticking with strict, broad standards to preserve what is most precious about our state.

What you can do

The state Department of Environmental Conservation is accepting public comment until Sept. 30 on its proposed changes to Alaska water-quality standards. You may send your comments to the DEC, 410 Willoughby Ave., Suite 105, Juneau, 99801-1795.

Pollution philosophy changing

DEC wants to weigh jobs, danger to health

By KIM FARARO
Daily News business reporter

The state is proposing to loosen rules governing water pollution, reflecting a radical change in philosophy about how much pollution Alaskans should tolerate.

Instead of writing rules based merely on how pollutants will affect the environment,

state environmental leaders have decided the effect on businesses and jobs also must be considered.

■ **VALUES:** Economists weigh bottom line against environmental gains. A-9

The proposed water-quality rules are being cheered by some of Alaska's existing and proposed businesses. But environmentalists warn that the state is giving up its goal not to repeat the environmental mistakes other states made by allowing too much pollution to sully their waterways.

The rules are designed to protect waterways, fish and people from harmful pollution. In their proposed form, they would, among other things:

- Allow large pulp mills in Sitka and Ketchikan to dump 85 times more cancer-causing dioxin than federal regulators recommend.

- Permit the proposed A-J and Kensington gold mines to release 250 times more toxic arsenic than the federal government is expected to suggest.

WATER: State agency changes philosophy on acceptable pollution

Continued from Page A-1

Let Alyeska Pipeline Service Co. continue to release hydrocarbons that could include cancer-causing compounds into Port Valdez from its giant tanker terminal.

The state's Department of Environmental Conservation says the rules should be loosened in some cases because the DEC questions the federal Environmental Protection Agency's science.

In other cases, as with dioxin, officials say they believe more stringent standards would bankrupt businesses. What that means, a top DEC official acknowledges, is that the agency is willing to allow people to take more of a chance of developing cancer or other illnesses in order to help companies that provide jobs — in many cases for the same people they expose to pollutants.

The DEC's Dave Sturdevant said that in revising the rules the DEC considered that people make choices every day — whether to eat meat or smoke cigarettes — that increase their chances of getting sick. The agency leaders, he said, feel this is just another choice: Is it worth providing the highest level of protection against industrial pollutants if that eventually means industry disappears or is weakened? He said the DEC has decided it isn't most of the time.

That philosophy should be as no surprise. Since 1975, Wally Hickel took office two years ago, department leaders he appointed have often said that economic factors must be considered in making decisions about the environment. If not, they said, the state would risk driving companies out of business and chasing away prospective developers at a time when one of Alaska's biggest employers — the oil industry — is slicing jobs.

For industry supporters, like Rollo Pool, the shift in attitude is a welcome change.

Pool, the spokesman for the Sitka pulp mill, said: "Until the Hickel administration came in in 1990 it was always, 'If we're going left, let's err on the side of the environment.' (Now) people think the state is going to give the pulp mills everything they want. In our view, what the governor is trying to give us is balance."

But environmental activists say the state's past stance was prudent, providing a high degree of protection to humans and the state's fisheries. They also worry the state may be a sucker for exaggerated claims of impending doom from companies that simply want to maximize profits.

"We're really concerned that the department is becoming the department of economic conservation, not environmental conserva-

Economists seek environment's bottom line

By WILLIAM K. STEVENS

The New York Times

Does environmental protection hurt the economy or help it?

The question is under no dispute in the presidential campaign. The Democratic vice presidential nominee, Sen. Al Gore, argues that environmental protection boosts the economy and creates jobs; Vice President Dan Quayle, whose White House Council on Competitiveness has sought to reduce environmental regulations, says the Democrats' environmental policies would cost jobs.

But the answer to the economy-vs.-ecology question, says an emerging group of environmental economists, is far more elusive.

An Environmental Protection Agency analysis for example, puts the cost of controlling and cleaning up pollution under federal regulations at more than \$100 billion a year, or about 2 percent of the nation's total annual output of goods and services.

But like a number of other analyses, the study does not take into account the economic benefits of cleaner air and water. An analysis of benefits is under way, but not yet complete.

Nor does the study include protection measures that do not involve pollution control, like conserving the ecosystems that underlie all economic activity, such as water, soil, forests, fisheries, wetlands, wild plant species and the complex biological web that supports life itself. Gauging the costs and benefits of such measures is hard but essential.

Environmental economists argue that the economy is merely a subsystem of the planet's ecology, on which it depends for materials, energy and

general sustenance.

"To me it's just as plain as the nose on your face," says Herman Daly, an economist at the World Bank and a proponent of the view that economies can flourish at steady state, without growth. Traditional economists, he and others contend, ignore this relationship, and with it the economic cost of depleting natural resources, degrading soils and otherwise insulting nature.

Until these "external" costs are reflected both in company balance sheets and calculations of national wealth, say Daly and his allies, the benefits of environmental protection will be seriously underestimated and the health of the economy will be overestimated.

This line of thought is starting to make some headway, as both the United Nations and the U.S. Department of Commerce move to include the costs of natural resource depletion as an adjunct to conventional accountings of national wealth.

Also, regulatory commissions in New York and other states are starting to require electric utilities to factor in the cost of emitting heat-trapping carbon dioxide when deciding how to generate energy.

Including such external costs favors Gore's side of the argument. But economic studies in general are not so clear cut. A number of economists say the value of environmental protection measures can be assessed only on a case-by-case basis.

Among the "good buys" are the air pollution controls enacted in the first Clean Air Act of 1970, according to a cost-benefit analysis by Dr. Paul Portney, an economist at Resources for the Future, a Washington research institute. The act placed the first

limits on air pollution from smokestacks and motor vehicles. Portney found the benefits of the Clean Air Act have exceeded the costs.

His preliminary estimate suggests that the same is not true of the 1990 amendments to the Clean Air Act, designed to curb acid rain and air pollution in urban areas. Costs will be \$29 billion to \$38 billion a year by the year 2005, but benefits will probably range from \$0 billion to \$25 billion, he found.

Another good buy, in Portney's view, is the phasing out of chlorofluorocarbons that destroy the earth's protective ozone layer, which he calls "a small price to pay for insurance against what could be a pretty serious problem." Bad buys, in his book, include some toxic waste sites that pose little risk but will require tens of millions of dollars apiece to clean up.

The issue of economy vs. ecology is also complicated by the fact that environmental regulation distributes both costs and benefits unevenly.

On costs, for instance, Dr. Dale Jorgenson of Harvard University and Dr. Peter Wilcoxon of the University of Texas estimate that all federal environmental regulations adopted before 1990 will reduce the national economic output by 2.5 percent by the year 2000.

But the economy does not suffer uniformly, they found; the burden is being borne disproportionately by the chemical, coal mining, motor vehicle, refining, primary metals and paper industries.

Jorgenson and Wilcoxon calculate, for instance, that the long-run output of the automobile industry has been cut by 15 percent as a consequence of controls on motor vehicle pollution.

mining wastes.

The change is expected to help the A-J and Kensington mines in their fight to create lakes to dump the rocks left over after the gold is extracted. The lakes would contain a toxic soup of heavy metals released when the rocks are ground up and cyanide added to the rocks to pull out hard-to-get gold.

DEC officials said the department knows that environmentalists who oppose the mines argue that the lakes fit the definition of water and should be regulated. They said the department hoped the wording changes would avoid time-consuming legal battles.

Yet another revision of the water-pollution rules will aid Alyeska, which operates the Valdez oil tanker terminal for British Petroleum, Arco, Exxon and four other oil companies.

Alyeska discovered through studies last year that it was probably discharging too much of a type of oily waste from the tanker terminal. Alyeska then wrote to the state to notify regulators that it felt the waste standard was too stringent based on current science and that the tests it was being asked to do weren't valid.

Alyeska also said in its letter that many other states allow significantly more of the waste in their waters.

The group of compounds worrying the company include some that a scientific panel has been pushing the DEC to carefully monitor — and limit if discharges were found to be high. The scientists on the panel advise the government on the Valdez terminal's water treatment plant. Their fear is that the oily waste includes carcinogenic Poly Nuclear Aromatic Hydrocarbons.

Sturdevant said the DEC took Alyeska's arguments to heart, although it never checked out the company's claims that other states are more lenient. The department agreed the hydrocarbon limit is outdated, and officials say that more current science endorsed by the EPA suggests it is more stringent than necessary.

As a result, the DEC proposes dropping the rule for those compounds entirely and possibly setting a limit it deems more reasonable later.

At least two of the scientists have strongly objected to the state's proposal. One of them, Dor Lyyry, agreed the original standard was very stringent, but said that is a virtue in a state that relies so heavily on its fishing industry. He doesn't think Alaska should adopt other states' regulations because many of them already have severely polluted watersways.

"The fact that somebody's killing himself doesn't say you should do the same thing," Lyyry said.

tion," said Kevin Harun, the new director of the Alaska Center for the Environment. "Who's going to stick up for the environment if the DEC won't?"

He and other activists also say the DEC may be helping the state's economic health in the short-term, but mortgaging its future by dirtying the pristine waters Alaska's fishermen have bragged about in marketing campaigns.

The state will not finalize the water-quality rule changes until it finishes receiving comments from the public at the end of this month.

The DEC has not been coy about why it decided to publish proposed water-pollution rules now.

The new rules were born at the same time at least one of two Southeast pulp mills predicted it was literally being regulated to death.

That doomday scenario was inspired by the EPA's proposal to crack down on pollutants the mill discharges by proposing new, stricter permits.

In drawing up the permits, the EPA relied on the state's existing water-quality rules. In the case of dioxin, the EPA imposed its own standard on the mills because the state has none. The EPA's proposed limit would

have forced cutbacks in dioxin discharges.

Dioxin is best known for forcing the evacuation of the contaminated community of Times Beach, Mo., a decade ago. Since then, scientists have begun to question if dioxin is as potent a carcinogen as they once thought, but new animal studies suggest that even if it isn't, it might cause frightening changes in immune systems.

The EPA's draft permits, issued in March, set off panic at the mills. Company officials protested to the DEC that the rules would cost them each more than \$100 million and might put at least one out of business. According to Sturdevant, the DEC's water-quality standards coordinator, that raised "a high level of concern" at the agency because the mills are major Southeast employers.

A month later, DEC Commissioner John Sandoz, several staff members and two state lawyers traveled to EPA offices in Seattle. During those meetings, Sturdevant said, the agencies devised a set of possible fixes to the mills' problems.

Among the remedies they came up with was loosening state limits on dioxin, which is left over after the mills bleach pulp used to make

rayon fabric.

Federal regulators told the state that it could set its own dioxin standard if it did so quickly. The EPA generally prefers that states decide how much cancer risk they will allow residents to bear, within certain limits.

The state had been considering changes to its water pollution rules for two years, but decided to speed up the review of the dioxin limit to help the mills. Regulators also ordered an independent study of how much the tougher regulations would cost the mills, but that analysis is not expected to be finished until the end of this month.

In the end, the state decided it would recommend boosting the discharge allowed to a level expected to cause one case of cancer for every 100,000 people. The proposed federal rules would limit dioxin discharges to an amount that could cause one case of cancer in a million people.

If the DEC also follows through on this and other proposals, the mills probably would not need to cut their dioxin discharges.

Once the state decided to speed up the dioxin review, Sturdevant said, officials figured that would also suggest changes in several other standards, especially those

expected to help the A-J and Kensington gold mines.

The mines are wending their way through a complex permit process, and the department decided its new ideas would help move the projects along. The two Juneau-area mines would be among the state's largest if they are developed.

One state proposal would allow more arsenic to be discharged and, consequently, increase the risk to people who eat fish that pick up the pollutant. The arsenic would be released into Gastineau Channel, the water body bordering Juneau, where there is recreational fishing, and Lynn Canal, which supports a sockeye fishery within a mile of Kensington's proposed discharge pipe.

Sturdevant said that while the state wanted to help the mines, it based its proposal on science. The DEC argues that the EPA overestimated the dangers from arsenic in Alaska fish because the federal agency relied on studies of a more harmful form of arsenic.

The DEC also proposed changing the definition of water that can be regulated to make clear it wished to exempt waters containing certain industrial wastes, including oil-industry and

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BY GARRY TRUDEAU



DEAR, IF YOU

By ERIC HOLLE and KATEY PALMER

Alaska has always been a place of clean water and abundant fish. Alaskans' health, subsistence lifestyles and much of the state's economy, especially tourism and commercial fishing, depend upon maintaining its waters in pristine condition.

However, if Gov. Walter J. Hickel and the Alaska Department of Environmental Conservation have their way, Alaska will go the way of Boston Harbor, the Great Lakes and other infamous toxic wastelands.

Our water and fish will become polluted with dangerous and illegal concentrations of dioxin, heavy metals, arsenic, chloroform and other toxic chemicals.

DEC is "expediting" the current public review of Alaska water-quality standards for the benefit of pulp mills, mines and other polluting industries that are not willing to meet more stringent standards soon to be imposed by the federal Environmental Protection Agency.

Many of the new, weakened standards are those proposed by the industries themselves, like Alaska Pulp Corp., which routinely dumps illegal concentrations of dioxins into the salmon-rich waters near Sitka.

Public outrage has forced DEC to hold more public hearings and to extend the public comment period until Sept. 30. However, this will still exclude commercial fishermen from the review process, even through their livelihoods will be severely impacted by weakened water-quality standards.

DEC Commissioner John Sandor

The state is expediting its review of water-quality standards for the benefit of pulp mills, mines and other polluting industries unwilling to meet more stringent federal standards.

claims the proposed lowering of water-quality standards is justified in light of "new scientific evidence." DEC's issue papers on the changes, however, more closely resemble promotional literature for polluters than scientific documents.

They state, for example, that "it is not possible to propose dioxin human-health criteria without taking both political and public perception into account. Science clearly is only part of the dioxin dilemma."

Called "one of the most toxic materials known" by Dow Chemical Co., dioxin is well known to Vietnam veterans who are suffering the effects of exposure to Agent Orange. DEC's issue papers on dioxin rely heavily on the work of the Center for Disease Controls' Dr. Vernon Houk, the man notorious for suppressing scientific studies of veterans exposed to the defoliant.

Houk's "work on the CDC study has been thoroughly discredited," according to Admiral Elmo Zumwalt, commander of U.S. Naval Forces in Vietnam.

In calculating human health criteria for pollutants, DEC uses unrealistic values for various factors in order to arrive at the highest pollutant concentration they think the public will tolerate.

They use a cancer risk factor 10 times higher than EPA's and a bioconcentration factor 70 times higher than that used by the state of Minnesota. DEC uses a per capita annual fish consumption rate of five pounds, in spite of Alaska Department of Fish and Game data that show Alaska's fish consumption to be six to 60 times higher.

Using realistic values for such factors, independent toxicologists predict three cases of cancer for every 100 people exposed to the DEC's proposed dioxin concentration. The cumulative or synergistic effects of dioxin with other pollutants could lead to even higher cancer rates.

In its attempt to accommodate mining interests, DEC is redefining "mixing zones," the euphemism for aquatic industrial sewers. These are currently prohibited if "pollutants could bioaccumulate; cause carcinogenic, mutagenic, or teratogenic effects; or otherwise present a risk to human health."

DEC proposes to allow pollutants to bioaccumulate in food chains up to a level that causes human health effects at the location of the mixing zone. Although Alaska spent \$13.6 million last year to promote Alaska seafood, they now propose changes

in law that would allow fish to become tumor-ridden and laced with heavy metals.

Moreover, the DEC is setting the stage for a public health catastrophe that will continue unabated until victims can prove that mixing zone pollutants caused their diseases.

Other proposed changes are equally disturbing. Unlined toxic wastewater-treatment ponds would be exempt from water-quality regulations. Placer miners could dump arsenic into freshwater mixing zones at concentration 2,778 times higher than that recommended by the EPA.

Water-quality standards for total hydrocarbons have simply been deleted, and groundwater standards have been weakened.

DEC justifies many of their proposed changes for pollutant standards by comparing them to standards in polluted states that are trying to clean up their water. By a few simple changes in law, pollution that today is considered toxic and illegal would tomorrow be considered safe and legal.

Since 1949, Alaska has had the most stringent water-quality standards and the cleanest water in the nation. DEC has a mandate to safeguard our water, food and fisheries, our lives and livelihoods. They must not weaken laws to open a door for irresponsible industries or redefine today's toxics as tomorrow's food.

Public health policy must not be based on the profit margins of pulp mills and gold mines. Water is life.

Eric Holle and Katey Palmer are biologists living in Haines.

LETTER

Sign ordinance fairly serves the public interest

Dear editor:
Because I was personally involved with the recent review and revision of the city-borough sign ordinance, I would like to offer your readers some additional information that was omitted from the

improvement.

In addition, the old ordinance was overly restrictive.

For example, it regulated what business owners could display on the inside of their store windows. Local merchants invest considerable time, effort and money to develop attractive and pleasing window displays. It's in their best interest to ensure that their business looks pleasing and attractive to the public - both inside and outside. Business owners should have the right to make

nance for the downtown area and historic district.

The newspaper article failed to mention that the revised ordinance was the product of more than nine months of consensus building, discussion and interaction between the staff, and numerous public meetings. That was reflected in the fact that only one person expressed concern or opposition to the assembly during the public hearing on the new sign ordinance.

"... I went on to complete that statement by saying "... now that businesses have the flexibility and incentive to invest in professionally done signs, replacing some of the existing signs that were not professionally done and aren't particularly pleasing."

I supported this ordinance because I honestly believe that it will result in improvements to the quality, appearance and aesthetics of many of the

CORRECTION

**THIS DOCUMENT
HAS BEEN REPHOTOGRAPHED
TO ASSURE LEGIBILITY**

WATER: State agency changes philosophy on acceptable pollution

Continued from Page A-1

Let Alyeska Pipeline Service Co. continue to release hydrocarbons that could include cancer-causing compounds into Port Valdez from its giant tanker terminal.

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In other cases, as with asbestos, officials say they believe more stringent standards would bankrupt businesses. What that means, a top DEC official acknowledges, is that the agency is willing to allow people to take more of a chance of developing cancer or other illnesses in order to help companies that provide jobs — in many cases for the same people they expose to pollutants.

The DEC's Dave Sturdevant said that in revising the rules the DEC considered that people make choices every day — whether to eat meat or smoke cigarettes — that increase their chances of getting sick. The agency leaders, he said, feel this is just another choice: Is it worth providing the highest level of protection against industrial pollutants if that eventually means industry appears or is weakened? He said the DEC has decided it isn't most of the time.

That philosophy should be as no surprise. Since 1987, Wally Hickei took over the two years ago, department leaders he appointed have often said that economic factors must be considered in making decisions about the environment. If not, they said, the state would risk driving companies out of business and chasing away prospective developers at a time when one of Alaska's biggest employers — the oil industry — is slicing jobs.

For industry supporters, like Rollo Pool, the shift in attitude is a welcome change.

Pool, the spokesman for the Sitka pulp mill, said: "Until the Hickei administration came in in 1990 it was always, 'If we're going err, let's err on the side of the environment.' (Now) people think the state is going to give the pulp mills everything they want. ... In our view, what the governor is trying to give us is balance."

But environmental activists say the state's past stance was prudent, providing a high degree of protection to humans and the state's fisheries. They also worry the state may be a sucker for exaggerated claims of impending doom from companies that simply want to maximize profits.

"We're really concerned that the department is becoming the department of economic conservation, not environmental conserva-

Economists seek environment's bottom line

By WILLIAM K. STEVENS
The New York Times

Does environmental protection hurt the economy or help it?

The question is under no dispute in the presidential campaign. The Democratic vice presidential nominee, Sen. Al Gore, argues that environmental protection boosts the economy and creates jobs; Vice President Dan Quayle, whose White House Council on Competitiveness has sought to reduce environmental regulations, says the Democrats' environmental policies would cost jobs.

But the answer to the economy-vs.-ecology question, says an emerging group of environmental economists, is far more elusive.

An Environmental Protection Agency analysis, for example, puts the cost of controlling and cleaning up pollution under federal regulations at more than \$100 billion a year, or about 2 percent of the nation's total annual output of goods and services.

But like a number of other analyses, the study does not take into account the economic benefits of cleaner air and water. An analysis of benefits is under way, but not yet complete.

Nor does the study include protection measures that do not involve pollution control, like conserving the ecosystems that underlie all economic activity, such as water, soil, forests, fisheries, wetlands, wild plant species and the complex biological web that supports life itself. Gauging the costs and benefits of such measures is hard but essential.

Environmental economists argue that the economy is merely a subsystem of the planet's ecology, on which it depends for materials, energy and

general sustenance.

"To me it's just as plain as the nose on your face," says Herman Daly, an economist at the World Bank and a proponent of the view that economies can flourish at steady state, without growth. Traditional economists, he says, often ignore this relationship, and with it the economic cost of depleting natural resources, degrading soils and otherwise insulting nature.

Until these "external" costs are reflected both in company balance sheets and calculations of national wealth, say Daly and his allies, the benefits of environmental protection will be seriously underestimated and the health of the economy will be overestimated.

This line of thought is starting to make some headway, as both the United Nations and the U.S. Department of Commerce move to include the costs of natural resource depletion as an adjunct to conventional accounting of national wealth.

Also, regulatory commissions in New York and other states are starting to require electric utilities to factor in the cost of emitting heat-trapping carbon dioxide when deciding how to generate energy.

Including such external costs favors Gore's side of the argument. But economic studies in general are not so clear cut. A number of economists say the value of environmental protection measures can be assessed only on a case-by-case basis.

Among the "good buys" are the air pollution controls enacted in the first Clean Air Act of 1970, according to a cost-benefit analysis by Dr. Paul Portney, an economist at Resources for the Future, a Washington research institute. The act placed the first

limits on air pollution from smokestacks and motor vehicles. Portney found the benefits of the Clean Air Act have exceeded the costs.

His preliminary estimate suggests that the same is not true of the 1990 amendments to the Clean Air Act, designed to curb acid rain and air pollution in urban areas. Costs will be \$29 billion to \$36 billion a year by the year 2005, but benefits will probably range from \$8 billion to \$25 billion, he found.

Another good buy, in Portney's view, is the phasing out of chlorofluorocarbons that destroy the earth's protective ozone layer, which he calls "a small price to pay for insurance against what could be a pretty serious problem." Bad buys, in his book, include some toxic waste sites that pose little risk but will require tens of millions of dollars apiece to clean up.

The issue of economy vs. ecology is also complicated by the fact that environmental regulation distributes both costs and benefits unevenly.

On costs, for instance, Dr. Dale Jorgenson of Harvard University and Dr. Peter Wilcoxon of the University of Texas estimate that all federal environmental regulations adopted before 1990 will reduce the national economic output by 2.5 percent by the year 2000.

But the economy does not suffer uniformly, they found; the burden is being borne disproportionately by the chemical, coal mining, motor vehicle, refining, primary metals and paper industries.

Jorgenson and Wilcoxon calculate, for instance, that the long-run output of the automobile industry has been cut by 15 percent as a consequence of controls on motor vehicle pollution.

tion," said Kevin Harun, the new director of the Alaska Center for the Environment. "Who's going to stick up for the environment if the DEC won't?"

He and other activists also say the DEC may be helping the state's economic health in the short-term, but mortgaging its future by dirtying the pristine waters Alaska's fishermen have bragged about in marketing campaigns.

The state will not finalize the water-quality rule changes until it finishes receiving comments from the public at the end of this month.

The DEC has not been coy about why it decided to publish proposed water-pollution rules now.

The new rules were born at the same time at least one of two Southeast pulp mills predicted it was literally being regulated to death.

That doomsday scenario was inspired by the EPA's proposal to crack down on pollutants the mill discharges by proposing new, stricter permits.

In drawing up the permits, the EPA relied on the state's existing water-quality rules. In the case of dioxin, the EPA imposed its own standard on the mills because the state has none. The EPA's proposed limit would

have forced cutbacks in dioxin discharges.

Dioxin is best known for forcing the evacuation of the contaminated community of Times Beach, Mo., a decade ago. Since then, scientists have begun to question if dioxin is as potent a carcinogen as they once thought, but new animal studies suggest that even if it isn't, it might cause frightening changes in immune systems.

The EPA's draft permits, issued in March, set off panic at the mills. Company officials protested to the DEC that the rules would cost them each more than \$100 million and might put at least one out of business. According to Sturdevant, the DEC's water-quality standards coordinator, that raised "a high level of concern" at the agency because the mills are major Southeast employers.

A month later, DEC Commissioner John Sandor, several staff members and two state lawyers traveled to EPA offices in Seattle. During those meetings, Sturdevant said, the agencies devised a set of possible fixes to the mills' problems.

Among the remedies they came up with was loosening state limits on dioxin, which is left over after the mills bleach pulp used to make

rayon fabric.

Federal regulators told the state that it could set its own dioxin standard if it did so quickly. The EPA generally prefers that states decide how much cancer risk they will allow residents to bear, within certain limits.

The state had been considering changes to its water pollution rules for two years, but decided to speed up the review of the dioxin limit to help the mills. Regulators also ordered an independent study of how much the tougher regulations would cost the mills, but that analysis is not expected to be finished until the end of this month.

In the end, the state decided it would recommend boosting the discharge allowed to a level expected to cause one case of cancer for every 100,000 people. The proposed federal rules would limit dioxin discharges to an amount that could cause one case of cancer in a million people.

If the DEC also follows through on this and other proposals, the mills probably would not need to cut their dioxin discharges.

Once the state decided to speed up the dioxin review, Sturdevant said, officials figured they would also suggest changes in several other standards, especially those

expected to help the A-J and Kensington gold mines.

The mines are wending their way through a complex permit process, and the department decided its new ideas would help move the projects along. The two Juneau-area mines would be among the state's largest if they are developed.

One state proposal would allow more arsenic to be discharged and, consequently, increase the risk to people who eat fish that pick up the pollutant. The arsenic would be released into Gaslineau Channel, the water body bordering Juneau, where there is recreational fishing, and Lynn Canal, which supports a sockeye fishery within a mile of Kensington's proposed discharge pipe.

Sturdevant said that while the state wanted to help the mines, it based its proposal on science. The DEC argues that the EPA overestimated the dangers from arsenic in Alaska fish because the federal agency relied on studies of a more harmful form of arsenic.

The DEC also proposed changing the definition of water that can be regulated to make clear it wished to exempt waters containing certain industrial wastes, including oil industry and

mining wastes.

The change is expected to help the A-J and Kensington mines in their fight to create lakes to dump the rocks left over after the gold is extracted. The lakes would contain a toxic soup of heavy metals released when the rocks are ground up and cyanide added to the rocks to pull out hard-to-get gold.

DEC officials said the department knows that environmentalists who oppose the mines argue that the lakes fit the definition of water and should be regulated. They said the department hoped the wording changes would avoid time-consuming legal battles.

Yet another revision of the water-pollution rules will aid Alyeska, which operates the Valdez oil tanker terminal for British Petroleum, Arco, Exxon and four other oil companies.

Alyeska discovered through studies last year that it was probably discharging too much of a type of oily waste from the tanker terminal. Alyeska then wrote to the state to notify regulators that it felt the waste standard was too stringent based on current science and that the tests it was being asked to do weren't valid.

Alyeska also said in its letter that many other states allow significantly more of the waste in their waters.

The group of compounds worrying the company include some that a scientific panel has been pushing the DEC to carefully monitor — and limit if discharges were found to be high. The scientists on the panel advise the government on the Valdez terminal's water treatment plant. Their fear is that the oily waste includes carcinogenic Poly Nuclear Aromatic Hydrocarbons.

Sturdevant said the DEC took Alyeska's arguments to heart, although it never checked out the company's claims that other states are more lenient. The department agrees the hydrocarbon limit is outdated, and officials say that more current science endorsed by the EPA suggests it is more stringent than necessary.

As a result, the DEC proposes dropping the rule for those compounds entirely and possibly setting a limit it deems more reasonable later.

At least two of the scientists have strongly objected to the state's proposal. One of them, Don Lysy, agreed the original standard was very stringent, but said that is a virtue in a state that relies so heavily on its fishing industry. He doesn't think Alaska should adopt other states' regulations because many of them already have severely polluted waters.

"The fact that somebody's killing himself doesn't say you should do the same thing," Lysy said.

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BY GARRY TRUDEAU



WELL, IF YOU ASK ME, THE ONLY THING IT VALIDATES IS HIS FAILURE AT HOME

DEAR, IF YOU

By ERIC HOLLE and KATEY PALMER

Alaska has always been a place of clean water and abundant fish. Alaskans' health, subsistence lifestyles and much of the state's economy, especially tourism and commercial fishing, depend upon maintaining its waters in pristine condition.

However, if Gov. Walter J. Hickel and the Alaska Department of Environmental Conservation have their way, Alaska will go the way of Boston Harbor, the Great Lakes and other infamous toxic wastelands.

Our water and fish will become polluted with dangerous and illegal concentrations of dioxin, heavy metals, arsenic, chloroform and other toxic chemicals.

DEC is "expediting" the current public review of Alaska water-quality standards for the benefit of pulp mills, mines and other polluting industries that are not willing to meet more stringent standards soon to be imposed by the federal Environmental Protection Agency.

Many of the new, weakened standards are those proposed by the industries themselves, like Alaska Pulp Corp., which routinely dumps illegal concentrations of dioxins into the salmon-rich waters near Sitka.

Public outrage has forced DEC to hold more public hearings and to extend the public comment period until Sept. 30. However, this will still exclude commercial fishermen from the review process, even through their livelihoods will be severely impacted by weakened water-quality standards.

DEC Commissioner John Sandor

The state is expediting its review of water-quality standards for the benefit of pulp mills, mines and other polluting industries unwilling to meet more stringent federal standards.

claims the proposed lowering of water-quality standards is justified in light of "new scientific evidence." DEC's issue papers on the changes, however, more closely resemble promotional literature for polluters than scientific documents.

They state, for example, that "it is not possible to propose dioxin human-health criteria without taking both political and public perception into account. Science clearly is only part of the dioxin dilemma."

Called "one of the most toxic materials known" by Dow Chemical Co., dioxin is well known to Vietnam veterans who are suffering the effects of exposure to Agent Orange. DEC's issue papers on dioxin rely heavily on the work of the Center for Disease Controls' Dr. Vernon Houk, the man notorious for suppressing scientific studies of veterans exposed to the defoliant.

Houk's "work on the CDC study has been thoroughly discredited," according to Admiral Elmo Zumwalt, commander of U.S. Naval Forces in Vietnam.

In calculating human health criteria for pollutants, DEC uses unrealistic values for various factors in order to arrive at the highest pollutant concentration they think the public will tolerate.

They use a cancer risk factor 10 times higher than EPA's, and a bioconcentration factor 70 times higher than that used by the state of Minnesota. DEC uses a per capita annual fish consumption rate of five pounds, in spite of Alaska Department of Fish and Game data that show Alaska's fish consumption to be six to 60 times higher.

Using realistic values for such factors, independent toxicologists predict three cases of cancer for every 100 people exposed to the DEC's proposed dioxin concentration. The cumulative or synergistic effects of dioxin with other pollutants could lead to even higher cancer rates.

In its attempt to accommodate mining interests, DEC is redefining "mixing zones," the euphemism for aquatic industrial sewers. These are currently prohibited if "pollutants could bioaccumulate; cause carcinogenic, mutagenic, or teratogenic effects; or otherwise present a risk to human health."

DEC proposes to allow pollutants to bioaccumulate in food chains up to a level that causes human health effects at the location of the mixing zone. Although Alaska spent \$13.6 million last year to promote Alaska seafood, they now propose changes

in law that would allow fish to become tumor-ridden and laced with heavy metals.

Moreover, the DEC is setting the stage for a public health catastrophe that will continue unabated until victims can prove that mixing zone pollutants caused their diseases.

Other proposed changes are equally disturbing. Unlined toxic wastewater-treatment ponds would be exempt from water-quality regulations. Placer miners could dump arsenic into freshwater mixing zones at concentration 2,778 times higher than that recommended by the EPA.

Water-quality standards for total hydrocarbons have simply been deleted, and groundwater standards have been weakened.

DEC justifies many of their proposed changes for pollutant standards by comparing them to standards in polluted states that are trying to clean up their water. By a few simple changes in law, pollution that today is considered toxic and illegal would tomorrow be considered safe and legal.

Since 1949, Alaska has had the most stringent water-quality standards and the cleanest water in the nation. DEC has a mandate to safeguard our water, food and fisheries, our lives and livelihoods. They must not weaken laws to open a door for irresponsible industries or redefine today's toxics as tomorrow's food.

Public health policy must not be based on the profit margins of pulp mills and gold mines. Water is life.

Eric Holle and Katey Palmer are biologists living in Haines.

LETTER

Sign ordinance fairly serves the public interest

Dear editor: Because I was personally involved with the recent review and revision of the city-borough sign ordinance, I would like to offer your readers some additional information that was omitted from the...

improvement. In addition, the old ordinance was overly restrictive.

For example, it regulated what business owners could display on the inside of their store windows. Local merchants invest considerable time, effort and money to develop attractive and pleasing window displays. It's in their best interest to ensure that their business looks pleasing and attractive to the public - both inside and outside. Business owners should have the right to make...

nance for the downtown area and historic district.

The newspaper article failed to mention that the revised ordinance was the product of more than nine months of consensus building, discussion and interaction between the staff, and numerous public meetings. That was reflected in the fact that only one person expressed concern or opposition to the assembly during the public hearing on the new sign ordinance.

"I went on to complete that statement by saying "... now that businesses have the flexibility and incentive to invest in professionally done signs, replacing some of the existing signs that were not professionally done and aren't particularly pleasing."

I supported this ordinance because I honestly believe that it will result in improvements to the quality, appearance and aesthetics of many of the existing...

LETTERS / FORUM

Hickel's advice to Earth Summit ignored at home

By RIKI OTT

CORDOVA — The Hickel administration is proposing revisions to Alaska's water quality standards that will lead to statewide degradation of Alaska's waters.

The Department of Environmental Conservation has gone on record stating that these new water quality standards are being implemented and expedited for the benefit of the timber, mining and oil industries.

Without strong standards, the high quality of Alaska's waters will deteriorate — along with the high quality of Alaska's fisheries resources. Gov. Hickel recognized this when he told the board of United Fishermen of Alaska in February that maintaining strong water quality standards was "a protection of one of the greatest industries Alaska has."

Seafood is Alaska's No. 1 export. Alaska's seafood



production ranks first among states and fifth among nations. The seafood industry is Alaska's largest private sector employer, providing jobs for one in 20 Alaskans (or 70,000 seasonal or 33,000 year-round jobs). The seafood industry is Alaska's second-largest revenue generator (\$31.1 million in taxes in 1991).

In February this year, the state went to bat for its seafood industry when Consumer Reports published an article titled "Is Our Fish Fit to Eat?" The report advised against eating salmon, among other fish, because of contamination with PCBs and heavy metals. The state spent \$13.5 million last year to market "pure" Alaska salmon. Strong water quality

standards played a key role in returning consumer confidence to Alaska seafood.

Yet now the state administration is proposing to greatly reduce the water quality standards to allow more dumping of toxic wastes in Alaska's waters. The state's proposed revisions would:

- Allow degradation of fish habitat;
- Lead to reductions in fish populations; and
- Erode consumer confidence in Alaska's seafood quality.

For example, the state wants to allow *unlined* mine tailings ponds and other wastewater treatment facilities to contain concentrations of toxic wastes that exceed state water quality standards. Water in these facilities could contaminate ground and surface water resources, and find its way into drinking water supplies

and fish spawning areas.

In addition, the state wants to relax regulations regarding mixing zones. Mixing zones are areas of "legalized" pollution for purposes of dilution of industrial effluent. The Hickel administration is proposing to allow discharge of potential carcinogens into mixing zones as long as the compounds are not proved to be cancer-causing *in humans at the location of the mixing zone*.

This standard is virtually impossible to prove. It also ignores effects on fish and other aquatic life, and it ignores health effects on downstream consumers who do not live in the vicinity of the mixing zone. Further, the DEC wants to allow mixing zones in fish spawning areas. (Alaska, unlike almost all other states, does not prohibit discharge of lethal levels of toxins into mixing zones.)

Further, the DEC wants to ignore the impact of particulate hydrocarbons in the water column under the erroneous assumption that only dissolved hydrocarbons are picked up by aquatic life.

Finally, the DEC is willing to expose seafood consumers to greater cancer risk by proposing a dioxin (the active ingredient in Agent Orange) criterion in marine waters which is about 10,000 times less stringent than EPA's standard, and an arsenic criterion in fresh water 3,000 times less stringent.

The Hickel administration's efforts to decrease protections for Alaska's waters diametrically oppose national and international efforts to increase marine environmental protections. One of the principles adopted at the Earth Summit in Rio, and supported by the United States, seeks to control land based sources of

pollution that degrade the marine environment.

In his speech at the Earth Summit, Hickel called on the "nations of the world ... to protect our fisheries from the waste that comes from greed." The place to start is in our own backyard. Alaska's industries must internalize environmental costs under the "polluter pays" principle.

Keeping Alaska's water clean is a top priority for the seafood industry. Yes, it may cost the timber, mining and oil industries money. But if keeping Alaska's water clean does not remain a top priority for all Alaskans, it may cost us our seafood industry.

[] Riki Ott chairs the Habitat Committee for United Fishermen of Alaska. She fishes commercially and has a master's degree and a doctorate in marine pollution.

JNU 7/31

Flood of comments delays water regs

By JAY STANGE

THE JUNEAU NEWS

An overwhelming number of complaints and requests from the public have caused the state Department of Environmental Conservation to add more than six weeks to the public comment period for its proposed changes in water-quality standards.

Critics say the proposed standards would greatly relax the amount of wastewater products that could be legally pumped into Alaska's waterways, including suspected carcinogens vastly above the least stringent standards used by the U.S. Environmental Protection Agency.

"We are flooded with phone requests for extension and for info on the WQS (water-quality standard) revisions from people and organizations all over the map," wrote the DEC's Dave Sturdevant in a Tuesday memo to state and federal regulators.

Sturdevant - the primary writer of the new state water standards, required by amendments to the 1990 Clean Water Act - had said in past weeks that the final version of the state's standards were under deadline pressures and public comment could not be extended.

The new deadline for public comment is Sept. 30, compared with the old deadline of Aug. 10. In addition, a tentative hearing date is scheduled for Haines on Sept. 24, where many commercial fishermen have become enraged at the Kensington mine and DEC over a proposal for a mixing zone at Point Sherman.

A mixing zone is an area where wastewater exceeding allowable levels of contamination is diluted in a natural waterway.

Point Sherman is a popular commercial fishing area for Haines fishermen.

The complaints over the original public comment period, planned for the height of summer when many fishermen are on their boats instead of in packed hearing rooms, were far in excess of any other regulatory change contemplated at DEC, said the agency's environmental quality director, Mike Menge.

"These changes reach statewide on placer mining, fish processing, mining, storm water," Menge said today. "They will affect every aspect of life here in Alaska."

Though groups involved in commenting on the proposed changes are pleased the state gave them six

weeks of breathing room, they are still not satisfied.

The Southeast Alaska Conservation Council wrote one of the first letters complaining the state had not made copies of the proposed regulations available to the public. The group's attorney, Buck Lindekugel, said today his group wanted the comment period extended to November.

"They (the state) are still missing the issue here which is that summertime is the time people most affected, including fishermen and those in the tourism industry, have to make their living," Lindekugel said.

Lindekugel said his group is also unhappy that the public hearing dates, set for Juneau at 7:30 p.m. Aug. 3 at Centennial Hall, were not bumped later.

Meanwhile, Menge said the attorney general's review of the new standards after the comment period could be expedited.

Meanwhile, the EPA is waiting for the new state standards before it can issue wastewater discharge permits for the proposed Kensington and Alaska-Juneau mines.

So the added public comment period will delay final EPA permit approval for the two mines, especially

the Kensington, which is scheduled for a decision on its city-borough mining permit Oct. 15.

The city-borough planning commission on Thursday voted - to the great displeasure of the mine's developer, who wanted the permit by the end of August - for that October schedule.

The mine's objections to the city-borough permit review schedule are apparently a moot point since the EPA's discharge permit is now likely to take much longer.

Though Frank Bergstrom, environmental compliance manager for one of the Kensington Venture's partners, Echo Bay Alaska Inc., said the city-borough schedule is too slow, the delay in DEC's public comment period does not concern him.

"I support the state taking the appropriate amount of time and appropriate process for good water-quality standards," Bergstrom said.

Bergstrom said the company's proposal to pump Kensington wastewater into the Lynn Canal mixing zone may be modified by a change in the proposed state water standards, so the company is not moving ahead with major decisions until the EPA permit is issued.