SCOMM

#36:44

BRISTOL BAY PROCESSING WASTE MEETING
JANUARY 27, 1984
TAPE #49

Rep. Herrmann called the meeting to order at 1:07pm and explained that the meeting was regarding the garbage problem in the Bristol Bay area. She introduced herself to be the Representative for the Bristol Bay area and asked that everyone at the meeting introduce themselves and mention what they do and who they are representing.

Dianne Soderlund - EPA - Alaska Operations Office - Anchorage
Wally Scarburgh - EPA - Juneau
Nels Anderson - City of Dillingham
Joe McGill - Western Alaska Cooperative Marketing Association & Bristol Bay Herring Marketing Cooperative
George Jacko - Staff person/Special Committee on Fisheries
Keith Kelton - Dept. of Environmental Conservation - Juneau Division - Field Operations Director
Mel Monsen - Aide/Special Committee on Fisheries
Robert E. Wicker - Bristol Bay Borough Assemblyman
Don Penner - Bristol Bay Borough Assistant Manager & Community Development Director
Karl Hellberg - Alaska Independent Fishermen's Marketing Association President
Harvey Samuelson - Western Alaska Cooperative Marketing Association President

Rep. Herrmann explained that the purpose of the meeting was to bring all of them together to find out how each of them see the problem and be able to leave the meeting with the feeling that someone is going to take responsibility for and work to eleviate the problem. She continued to say that she saw the problem of waste increasing as more and more floating processors enter the bay bringing with them the garbage and fish waste problem. The fact that they are floating processors presents an enforcement problem of anyone being able to fight these processors. I've received many complaints from people in the area concerning fish waste. I do appreciate DEC's presence in the area and it did help. But I feel more can still be done.

Rep. Herrmann further stated that she wrote a letter to Commissioner Neve' and proceeded to read his response that explained who could enforce proper waste disposal and suggested ways for the borough to correct an improper solid waste disposal activity. The letter also explained to her who to contact for that area. Rep. Herrmann then stated that she isn't in total agreement with Commissioner Neve' because she feels it is the State's job to enforce the statutes. She said that she would like DEC to talk about the problem as they see it and talk about the task force they have and how they see that working. She indicated that she would like to hear their plans for the 1984 season.

Keith Kelton - We are presently going through a minor reorganization now within the Department. We are attempting to put more people out in the regional offices. The person who is presently in Unalaska will be transferring to Dillingham. There will be greater presence on site. In addition we will still be able to respond with the old personnel from Anchorage, approximately at the same level that we have in the past. Bristol

Keith Kelton (continued) - Last year we spent 49 days in the field in Dillingham, Unalaska, and the Aleutian chain area, primarily for seafood processing solid waste problems. We are more than willing to provide the same level as last year, or increase it, working with the task force. I don't think that we can address the problem more heavily with the staff that we have. We've set up the task force with area processors and borough and administrative people in the area, last year, to try to address this problem. I don't know who was on the task force.

Don Penner - The concern they had last year was they volunteered the services of their fire boat to take the enforcement out into the bay. It didn't turn out to be a very successful program. The original plan was that we provide one of our law enforcement people to help the DEC enforcement person. Why it didn't work was because we were in a period where we have the rapid expansion of the fishery people coming in and we have to hire extra people just to handle the local problems that we have. We do not have the capability of abiding this kind of an effort. It seemed like last year that it was half way expected of us, we did try to help out. Somewhere along the coordination effort, at least between the borough and DEC, as far as our section is concerned, we're going to have to sit down and work out some kind of a program, long before fishing starts, if you want us involved. One of the things that we felt very uncomfortable with is that we understood that there had been DEC people in the area. Nobody came by our office or anything to notify us. We are looking for some kind of a good coordinated effort. If we are going to be enforcing your regulations, or a combination of yours and DEC, so that at least the people that are out in the bay are able to adhere to one set of reguirements. Being the local government in the area we would really appreciate it if somewhere along the line those efforts would be coordinated with us.

Keith Kelton - As far as I know, there is only one set of regulations out. If you throw trash overboard, you're violating a state law.

Nels Anderson - I would like to echo Don Penner's concerns as a member of Dillingham's City Council. Apparently some levels of expectation have been lifted somewhere along the line. In the people's minds at home there is a feeling that the City is going to be involved in some of this enforcement or policing. We did receive complaints in the City. Any efforts by DEC or anyone else that would make people aware of what they're doing and involve the City of Dillingham, we do need the coordination. Also, DEC is going to have to include somewhere in their budget, some additional funding to give us a hand in doing some of this work. We'd rather not do it. Believe me, we'd rather have them take care of it, we feel that it's your responsibility. But if you're going to parcel out responsibility, the city just can't come up with our money to do it.

Keith Kelton - I think what the Commissioner is saying is that this problem is bigger than one agency can handle with the resources they have available. If we had the resources to do it, we wouldn't be asking for assistance. What he's saying is that everybody has got to participate. But for us to give you money wouldn't accomplish anything, it would diminish our efforts. Actually, this is just one small phase of the water quality that we are responsible for. It is certainly an important problem. I don't know that any one agency can handle it by themselves and do it to the level that you would like it to be done. We're certainly not going to back off from our present commitment.

Rep. Adelheid Herrmann - I was wondering if the Department of Fish & Game was going to work with you, and Fish & Wildlife Protection and the Court System, if they're in agreement with your coordinating. Because you know they might be saying "well we have enough to do".

Keith Kelton - Well we certainly can't force Fish & Game to do something they don't want to do; but as far as the court system, if we bring them a valid case, they've got to prosecute it so.

Wally Scarburgh - We see a real need for EPA's presence in Bristol Bay, due to the increase in activities there in the last few years. If we do do that, we will probably be looking at a week for a couple of people, and we will also coordinate our efforts with DEC.

Dianne Soderlund - Let me expand on that - first of all, when we go into an area, we develop coordinates and get in touch with local governments. EPA does have a legal right to require the solid waste be disposed of properly. Even if EPA isn't in the field, they will pursue the case if they have documented evidence. Our reason for not being present is lack of resources.

Karl Hellberg - The chances of a fisherman breaking away from fishing for one or two days during the peak run to go file a case, is very nill. Someone has to be there. I suggest EPA set something up with the coast guard.

Wally Scarburgh - EPA will try to set something up with the Coast Guard. If EPA makes its presence in the Bay, we will take hand-outs for transportation.

Karl Hellberg - I feel it's the Coast Guard's job.

Keith Kelton - What is the volume of fish waste?

Don Penner - I went out into the Bay and there is a lot of fish waste out there. I feel it's coming from the processors, floaters or land.

Karl Hellberg - Because of the type of waste, I feel 90% comes from processors.

Robert Whicker - As far as the Borough is concerned, we did put our fire boat to use. We are willing to help, but we are short handed too. The Borough is not only looking for support of having people there but also support for use of our boat.

Wally Scarburgh - Maybe you can help by making everyone aware of the legal requirements.

Don Penner - Both DEC & EPA has to take into consideration the tides and water condition. If the water if rough, we're not going to risk taking our fire boat out, because it would slow us down and it jeopardizes our fire protection. If you're going to request that we give you this kind of assistance, you should bring your plan to the Borough.

Wally Scarburgh - EPA appreciates the offer by Bristol Bay Borough to help.

Rep. Herrmann - With there being a joint commitment between EPA and DEC for enforcement funds, is this money coming from the State?

Keith & Wally - We are both dealing with separate budgets.

Dianne Soderlund - We communicate with each other to find out who will be where and when so efforts are not duplicated.

Joe McGill - I don't think it's the responsibility of local boats. It's our in the water and according to our laws, constitution, or whatever you want to call it, the State if obligated to support our laws in the state. There's no way you can run out there in your boat and look at them floaters or anything else and do any good. Because they can dump their garbage and in 15 minutes you can't tell who it belongs to unless it has a name on it or something. But as I gather, Fish & Game is coming up with a new hot line program that can be helpful. I would like to bring attention to this gentleman from Fish & Wildlife Protection to explain the program.

Don Tetzlaff - We are out in the Bay and our vessels are available to whoever needs them. However, you have to realize our main responsibility is the protection of resources. As for our hot line program, a person will be able to call in on a toll free line and report garbage spills. Our smaller vessels are located by fisheries, one for each. We have a larger vessel that roams the area. There is room for lodging on the larger vessel but the small vessels have no place to sleep.

Keith Kelton - We would like to put a man on your vessel.

Rep. Herrmann - We need people on both sides.

Keith Kelton - We don't mind moving people around. Our inspectors will also have a broader range of responsibilities. We anticipate more contacts on all aspects of the problem.

Don Penner - Is there going to be some coordinated effort also with FDA by DEC?

Wally Scarburgh - We've tried working with FDA and it's very difficult, they don't like to tell people where they're going.

Rick Lauber - We have been working towards a joint permit, but that's not an accomplished factor. It's an irritant to have to qualify for two permits when the differences don't seem all that great. DEC and EPA is working towards this. The other thing is the reorganization of DEC.

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Rick Lauber (continued) - Presently, if your plant is off the beaten path, you never get inspected. The only time floaters get inspected is when their tied up at the dock when an inspector happens to come by. Last records indicated that they were able to inspect 60% of the shore based processors. It seems about 30% of the floaters. Since that time, we've had a considerable increase in the number of floaters. The DEC has reorganized in hopes of being able to inspect a larger percentage. Under the reorganized program, sanitation people will be doing the inspection. DEC has asked, through the years, for additional inspectors and were able to get some.

Another thing being talked about, that shows a lot of promise, is the cooperative effort between state agencies as well as the federal agencies. The administration has just recently followed a recommendation by the Governor's Fisheries Policy Task Force, that called for the creation of the fisheries mini-cabinet. They're supposed to work on problems just like this one. They're supposed to coordinate these things. DEC has inspected most all of the processors in Naknek and Dillingham and they have issued citations and they are tough.

There used to be a problem with oil platforms throwing garbage overboard. It wasn't too long ago that State Ferries were throwing garbage overboard.

Percentage wise I represent the vast majority of the shore based processors and many of my members are floaters. A number of the more recent floaters coming into the bay are not my members. In the distant past, we never ground any of our waste. We just dumped it into the river. Other than some set netters' complaints, there was never any real problem with the gillnetters as there are now. Well now that were grinding and pumping on the shore based plants, this makes me suspect that the majority of the waste is coming from the floaters.

Joe McGill - I'd like to say that the whole thing is definite. We got enough laws written up here, it's bigger than the state constitution just covering this one item and I think it's definitely a state problem.

One time on the herring grounds there was a complaint that one of the floaters was spilling oil and I thought it was an invasion. They had the Coast Guard fly over him and Fish & Game Protection cruising around him and everything else. And it was nothing compared to this problem we've got here. i think it's definitly a state problem. They can lease another boat or they can hire some more kids and give them a gun. Have them get out there and watch those floaters. Shore plants don't have much fish waste coming from them. You see pallot boards and everything else drifting. I'll admit there's some from the boats. I definitly think it's a state problem, if they don't

have the money, they could find it someplace. Get rid of some of those deadwood employees they have or something and get someone out there to enforce it. There is no way it should be a local problem.

Dianne Soderlund - What EPA and the State is asking is that the problem be referred to us. That helps us concentrate on the areas where violations are occuring. From our perspective, we're not asking local people to go out and try to stop the violations from occuring.

Keith Kelton - I don't think the state is trying to advocate any responsibility, we fully recognize it as our problem, we've got the laws and regulations to take care of it.

Rep. Herrmann - It kind of make me wonder though when DEC is on the grounds and Jim Allen writes to you and says that; everyone contacted regarding the 1983 polution problem in Bristol Bay was very pleased, that the problem had improved. It makes me wonder when you guys are out there doing this and I still get tons of complaints.

Nels Anderson - What he's saying is absolutely not the case because these fishermen are sending in complaints all summer long and there's no evidence to support the observations that he made to you. I don't know if you've ever been out to the fishery, but I think it would be in your best interest to go out there sometime and look at the number of vessels that are operating out there, and then you look at the number of people that you put on plus the number of man days that are given to the effor , ten man days spent in the last two weeks in June, to do something. Then ten man days were spent in the first part of July to board floating processors for sanitary solid and fish waste discharge. That's all O.K., but I think what we're trying to tell you is that the problem makes the Normandy Invasion look like a small exercise. There's a lot of activity out there. We don't think that you people have caught up to the problem. The number of floating processors out there has increased substantially over the last five years. it just really built up and we expect to have that kind of activity again this year because of the fresh/frozen market - there's a heavy demand so you can expect these people are going to be out there doing the same as they were last year.

It seems to me that more interdivision. interdepartmental communication has to occur. I think you need to come to people like Rick, he's willing to help get the additional man hours or bodies out there to get it done. And I am willing to help do that and I'm sure there are a lot of others that are too. Make a full court press because this kind of thing is going to continue to happen.

Going back to some of the comments made by the EPA people. There has, as far as I know, for an awful long time not been EPA presence in Bristol Bay. I know it's not your fault because you don't handle the budget. I'm really kind of sick now that one of Senator Steven's staff isn't here to hear these comments and it would be good to have the coast guard. As Harvey mentioned in his letter to me just recently, the coast guard should be working with DEC to make sure we get a handle on these problems. I think that the processors,

the ones that have been there for a long time, are geared up to your rules and regulations. But gear does break down, grinders do break down and I'll tel you, if you're going to close these guys down because their grinder breaks down, you're going to have the fishermen on your butts because they've got to get rid of their fish and the fish has got to get processed. So everybody gets hurt if we don't go into the season with a highly coordinated effort. Even though we're all trying to protect the environment out there and water discharge and everything else, you have to remember we've got fishermen and we've got investments in the whole business. The fishing industry, they've got to have those interests protected as well. There has got to be a two pronged effort. When one observes these observations here they sometimes seem to forget the human element.

Rick Lauber - I would like to see a concentration of the effort on the flagrant violator. They should keep their eyes on that which is significant. My complaint about DEC is the fact that they will nit pick on some minor violation while a major one is allowed to continue.

Rep. Herrmann - Don, if someone were stationed on the Vigilant or something and them you could run this person around like maybe at night when they were going to dump their garbage.

Don Tetsdaff - We could have room for somebody on the larger vessel like the Vigilant. They are welcome to come aboard one of our smaller boats on an actual patrol, that's no problem. As long as they have the understanding that we have a primary objective for being out there and that's to protect the resource. When we have the vessel and time available, we would divert our course to go check out one of their problems.

We peace officers of the state are obligates to protect all laws of the state, but our primary objective is to protect the fish & wildlife of the state. We all know there's a problem, we all know there's laws in the book that will slap a person with a harsh penalty for violating them, but I think we do have an obligation to find out why they are dumping the garbage over the side. Probably one is because there's no facility out there to dump it in, so what else are these people going to do. Public support of these laws are necessary otherwise they will never do any good. Issuing tickets is the last resort in getting people to comply with laws. The first is education.

Rep. Herrmann - There is someone in Naknek that is willing to provide a garbage collection service, but we don't know if it's a state problem or borough problem or who's responsible.

Don Penner - There's a local man who has expressed interest in hauling the king Salmon, Naknek waste. He may have a garbage collection scow of some kind and use the borough dump. In the last year or so we have come a long way in improving our facility.

Harvey Samuelson - I think this waste disposal problem came about from the floaters coming out there and gutting their fish on board and then throwing them overboard with our grinding them up. That's what bothers me about this more than anything else. Collecting this garbage could be a thriving business for somebody if the state doesn't want to be in it.

Nels Anderson - I think it is the responsibility of DEC to listen very carefully to what's being said around this table. Where are the people dumping the waste, and why are they dumping it is a good question.

Keith Kelton - It's not the state's responsibility to construct or maintain a solid waste facility. For an organized government we can make a grant to build a solid waste facility.

Rick Lauber - If a facility is provided for the processors at the expense of local taxes, that's going to be unacceptable.

Don Penner - We aren't thinking in terms of local taxation to support it. We were thinking in terms of fee structure.

Karl Hellberg - Need to recognize the problem of getting this garbage ashore, there's a tidal problem and you need a dock.

Rick Lauber - I suspect that the grinders are on board but they are not using them. The floaters are too out of touch, this makes them difficult to monitor. If a floater has been out for 3 weeks and comes in without any garbage, don't you have a case?

Don Tetzlaff - No you don't have a case.

Joe McGill - Put your hot line on the radio. This would help make a case. I think it's a simple problem. Just a matter of some good enforcement.

Rep. Herrmann - (Reads August 2nd Memo and goes on to say that this garbage problem has been brought to DEC's attention) I think DEC should have put a little more effort into it.

Keith Kelton - Cited the fact that they were short handed and had a limited budget, thus making what was being asked of them difficult to do.

Nels Anderson - If the City of Dillingham is going to be involved, we need to have a policy meeting with whomever is going to set it up.

Robert Whicker - The Bristol Bay Borough extends its offer to DEC and EPA to come to the borough and have a meeting.

Wally Scarburgh - Requested letters citing problems sent to government agencies.

Keith Kelton - The department (DEC) plans to have stronger requirements before issuing permits.

Dianne Soderlund - It's difficult to go aboard and inspect. There needs to be back-up and replacement parts for equipment.

Rick Lauber - Suggest to Dianne more emphasis on education.

Dianne Soderlund - Agrees.

Some General comments were made by Don Tetzcaff, Rep. Herrmann, Joe McGill, Rick Lauber.

Nels Anderson - In summarization, I received a lot of complaints on this problem. All this happens in a 4 to 6 week period. I recommend that the appropriate agencies start prior to the peak of the season. I commend the department on the work they did in the last season. I think DEC now realizes the magnitude of the problem. I think cooperation is important. I think a meeting should be organized with the Bristol Bay Borough. I recommend that it is recognized that the report written by Mr. Allen is misleading. I recommend the legislature to look into increasing the travel funding for DEC.

MEETING ADJOURNED

BRISTOL BAY PROCESSING WASTE MEETING PARTICIPANTS

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MEMORANDUM

State of Alaska

TO: Bob Martin
Deputy Director
Southcentral Regional Office

DATE: February 1, 1984

FILE NO:

TELEPHONE NO: 465-2609

FROM: Keith Kelton
Director
Environmental Quality Operations

SUBJECT: Bristol Bay Solid Waste Problem

During the afternoon of January 27, 1984, I met with a group of people regarding the solid waste and seafood processing waste problem in the Bristol Bay/Naknek area. These people, who are identified as follows, are concerned with the amount of debris, primarily the solid waste, plastics, lumber, bags, strapping material, etc., that is discharged into the water by the floating processors during the Bristol Bay commercial fishing season: the people identified below were at the meeting.

Attendees	Representing
Joe McGill	Fisheries Group
Nels Andersen	City of Dillingham
Wally Scarburgh	EPA - Juneau
Diane Soderlund	EPA - Anchorage
Karl Hellberg	Fisherman's Association
Don Penner	Bristol Bay Borough
Robert Whicher	Bristol Bay Borough
Ed Hines	Fisheries Group
Mel Monsen	Fisheries Group
Don Tetzlaff	Fish and Wildlife Protection
Rick Lauber	Pacific Seafood Processors Association
Representative Adelheid Herrmann	District of Naknek
Keith Kelton	ADEC

-- Those attending stressed that the solid waste problem was of major proportions and needed immediate attention by those State and federal agencies responsible for controlling solid waste into the Bristol Bay/Naknek waters. They requested that a task force be developed consisting of local governments, interested parties and the affected agencies to implement scheduled inspection and enforcement activities in the area. During this discussion, ADEC was criticized as being unresponsive to the needs of the people in the area and were requested to provide the assistance needed to solve the problem. It was stressed that we needed to greatly expand our resources and our inspections in the affected areas. Although improperly ground fish waste are also considered a problem, primary concern is the solid waste discarded overboard. The general opinion by those people present was that the waste problem primarily originated from the floating processors and should not be attributed to shore-based facilities or the 1,800 odd fishermen who use the Bay.

-- There was strong exception to Jim Allen's August 18, 1983 memorandum to me where he made the statement that conditions's have improved. Although people generally recognize there was improvement between the 1982 - 1983 season, they felt that Mr. Allen's report was not critical enough of the conditions that still existed. They also strongly resented Commissioner Neve's letter of May 17, 1983, to Representative Herrmann, where he stated that local government should share responsibility for correcting the problem. Those present felt that local responsibility should be minimized.

-- In presenting ADEC's position, I stressed we would be expanding our resources locating positions in Dutch Harbor, Dillingham, Bethel, and Kodiak. These positions would be available to work on-site in the affected areas and would be supplemented by our normal inspections from the seafood industry program personnel. I also stressed we would be able to spend more time in the area due to our reorganization, allowing us to free up other sanitarians if necessary during peak processing times. It was pointed out that, although it would not be of much help this year, our requirements that processors submit a plan of operations, addressing all DEC permits, will be necessary prior to the issuance of seafood processing permits in the following years. It was stressed that there would be a general permit issued by EPA, certified by ADEC, that would be in effect for this season.

-- During the meeting, ADEC received considerable support from Rick Lauber, and his testimony that the reorganization should, in essence, allow the Department more flexibility and personnel to address the problem. Mr. Lauber also stated that, if the Department wished, he would be willing to lobby the administration for additional staff members to aid in doing this work. We also received support from Mr. Tetzlaff in his offer to make Fish and Wildlife Protection vessels available to ADEC for our inspections. He offered to allow our personnel to go on their vessels for extended periods of time with the understanding that their work would come first but they would be more than happy to deliver us to the floating processors for our inspections and pick us up later when they had completed their work. He stated that we would be able to spend as much time as we wanted on their vessels at no cost to us. I strongly suggest that we organize our inspection schedules around the schedule of Fish and Wildlife Protection for this summer. The Bristol Bay Borough also offered the use of their fire vessel to transport personnel to the scene of some of the processing vessels in the Naknek area. This is with the understanding we schedule these trips in advance to allow adequate time for the Bristol Bay Borough Assembly to approve the use of their vessel for this purpose. It was also stressed that we should attempt to schedule these trips when tide conditions are favorable to allow the optimum access from port facilities.

The following comments are my recommendations as to how I would wish you to proceed with implementing those points that were discussed during this meeting.

1. I request that you and Jim Allen continue to develop and work with a task force to address the problem of solid waste disposal in the Bristol Bay area. It is important to develop a schedule of inspections coordinated with Seafood and Animal Industry personnel, the Bristol Bay Borough, Fish and Wildlife Protection, City of Dillingham, and all other interested parties at the earliest possible convenience. I would suggest this schedule be completed early in March with notification given to all affected parties in the Bristol Bay area, processors and fishermen, that ADEC will be greatly expanding its number of inspections and enforcement actions in enforcing permit conditions and solid waste disposal regulations.

2. I request that a meeting be scheduled in Naknek with all interested parties to discuss the proposed summer activities and coordinate use of vessels and inspection schedules, no later than the end of April.

3. In your review of the plan of operations for all processors, it is important that we give detailed attention to the disposal of solid waste. I recommend that, to the extent possible, we encourage on-board incineration of solid waste by all floating processors, since the number of shore based facilities are limited and it is unlikely that most processors will take the time during a busy fishing season to transport their waste to the shore. This, if possible, should be made a condition of their permit, which will be required if they are to obtain a processing permit.

4. I realize that our travel budget is extremely limited but I do request you expend the maximum amount possible from your budget to address this important problem in the Bristol Bay area. Hopefully, our next year's travel budget will allow us greater resources to address this problem.

5. It is important to remember that we are likely to be criticized from some processors and fishermen for over zealous enforcement of our regulations. The fisheries group that I met with was informed of the likelihood that they would be receiving criticism from their constituents if strict enforcement of our regulations was attempted. It is my recommendation that we not be concerned about this type of adverse criticism and enforce our regulations to the maximum extent possible.

MEMORANDUM:

TO: Rep. Adelheid Herrmann, Chairman
House Special Committee on Fisheries

FROM: Deborah L. Greenberg,
Committee Researcher, House Special
Committee on Fisheries

DATE: February 23, 1984

SUBJECT: Two Additional Recommendations by Nels Anderson on Fish Waste

I checked with Nels about any additional recommendations he might have on the DEC Fish Waste problems. The two he discussed most strongly were:

1) Making sure DEC has a plan in place for the 1984 season, and,

2) Increasing the budget for DEC waste problems over the FY 83 levels.

Please let me know if there are any other recommendations of Nels that I should review.

BACKGROUND ON FISH AND SOLID WASTE DISPOSAL IN BRISTOL BAY

Fish and Solid Waste Disposal in Bristol Bay during fishing seasons is a problem. 1983 was no exception. The amount of pollution caused by dumping untreated fish and solid waste into Bristol Bay is almost impossible to determine. 1983 found 29 land processors and 38 floating processors operating in Bristol Bay. Also included are the estimated 400 to 500 support vessels. Add to that approximately 1800 gill net vessels and support vessels for approximately 900 set net operations. 39.1 million salmon were harvested in Bristol Bay.

This information is presented to give you an idea of how much disposable waste can be generated by the fishing industry. Fish heads, viscera, solid waste dumped into the rivers of Bristol Bay can be a monumental problem if the State fails to prevent pollution.

FISH AND SOLID WASTE DISPOSAL RECOMMENDATIONS

1. A Fish and Solid Waste Disposal Program for the 1984 Fishing Season to be funded to accomplish the following goals:
   a) Plan and implement a Bristol Bay Fish and Solid Waste Disposal Plan for the 1984 fishing season which would allow the Department of Environmental Conservation to station a permanent representative in Bristol Bay.
   b) Send all processors, support vessels and fishermen information about bilge oil, sewage and fish waste regulations that will be in effect in 1984.
   c) Increase the man days of actual on-site inspection and patrols of shore-based and floating processors. (ADEC presence is a must during the height of the season.)
   d) Re-establish contact with enforcement and judicial officers regarding ADEC mission in Bristol Bay as it relates to fish and solid waste disposal.
   e) Have ADEC establish a Fish and Solid Waste Disposal Task Force of concerned parties to address fish and solid waste disposal problems in Bristol Bay and make policy recommendations for legislative and administrative consideration.

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BIO ECONOMIC RESEARCH AND ANALYSIS

NORMAN STADEM
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September 13, 1983

Mr. James C. Allen
Anchorage/Western District Supervisor
Alaska Department of Environmental Conservation
437 E Street, Suite 200
Anchorage, AK. 99501

Dear Mr. Allen:

This is to affirm my impression of the positive results of our meeting yesterday in your office regarding the solid fish waste disposal problem in the Naknek/Kvichak Rivers during the Sockeye salmon fishing season. There has been a dramatic increase in the volume of unground viscera, heads, and whole fish and other processing waste during the past two years. In my capacity as a representative of the Alaska Independent Fishermen's Marketing Association, Coop I heard from a large number of the fishermen in respect to this problem. The concern was unanimous--the problem has gotten out of hand, and A.I.F.M.A.Coop must bring the problem to the attention of regulatory agencies for resolution. Obviously, of primary concern is the economic cost transfered to the fishermen by those processors who dump without grinding these fish wastes. Fishing productivity is adversely impacted since productive time is wasted in disentangling this material, especially viscera, from the nets. There is a concern also for the possible health hazzard of infection, such as blood poisoning or fish poisoning, from constantly handling the decomposing fish wastes. Of no small significance is the detrimental impact on morale.

We realize that waste disposal is a fundamental problem in a primary processing industry such as salmon fishery. However, ADEC has essentially solved this problem in the case of shore-based processors by requiring that all fish wastes be ground before dumping it into the water-ways. The problem, with respect to the fishermen, is more acute in the case of floating processors because they dump directly in the prime fishing areas. Thus, there is no chance of some of the material washing ashore where it decomposes or is eaten by birds and animals, rather than being caught in gill nets.

Your suggestion that ADEC take the initiative in organizing a meeting of concerned parties to discuss the general problem of waste disposal into the Bay, is taken as a positive step in seeking a solution to this increasing problem. We look forward to hearing more on this in the near future.

Sincerely yours,

Norman Stadem
Assemblyman, AIFMA Coop

cc: State Rep. Adelheid Herrmann
Mr. Mitch Kink, Gen. Mgr., AIFMA Coop

MEMORANDUM

State of Alaska

TO: Bob Martin
Deputy Director, EQO

DATE: September 14, 1983

FILE NO:

TELEPHONE NO: 274-2533

FROM: Jim Allen
Anchorage/Western
District Supervisor

SUBJECT: Bristol Bay

Norman Stadem visited this office on September 12, 1983 regarding the pollution of Bristol Bay during the 1983 Salmon Season. Mr. Stadem is a economist by profession, a professor at APU and a member of the board of the Alaska Independent Fisherman's Marketing Association Cooperative (AIFMAC) and a fisherman. Mr. Stadem is representing AIFMAC during his visit. The AIFMAC has a membership of 500 plus fishermen.

We reviewed my report to Keith Kelton dated August 18, 1983 on the same subject.

Mr. Stadem is still concerned with the type and volume of pollution to the bay and cited several examples where fishing boats had become disabled and were required to be towed to shore to untangle plastic binding material from the propellers. This material is used to bind fibers used for packing processed fish.

We both agreed that in-addition to reducing pollution that a greater distance between boats would tend to reduce incidental pollution from the ships and boats.

It is my recommendation that we expand beyond our regulatory role and into one where we can obtain cooperation from all departments, organizations, and individuals involved in Bristol Bay.

DEC should form a committee to form a task force on the problem and make recommendations for implementation of a program to further reduce pollution. Formation of the committee and members of the task force should include but not limited to the following:

1. The Departments of Fish and Game and Public Safety, Fish and Wildlife Protection
2. DEC, Seafood and Animal Health
3. Alaska Independent Fisherman's Marketing Association Cooperative

5. Local Native Associations

6. City of Dillingham

7. Western Alaska Commerical Fisherman's Association

8. North Pacific Processors Association

9. Alaska Fisherman's Journal

Grants are needed to establish local landfills and collection points located where waste oil and refuse can be stored. The committee should start work on plans for a task force in January or February 1984.

JCA/nsm
cc: Keith Kelton
Norman Stauen
Jeff Skrade
Joe Campbell

MEMORANDUM

State of Alaska

437 E. Street, Suite 200 Anchorage, Alaska 99501

TO: Keith Kelton
Director, EQO

DATE: August 18, 1983

FILE NO:

TELEPHONE NO: 274-2533

FROM: James C. Allen
Anchorage/Western
District Supervisor

SUBJECT: Disposal of Salmon and Solid Waste in Bristol Bay 1983

Based on my 1982 observations, the following plan was initiated for the 1983 season:

1. Five-thousand, six-hundred fisherman and two-hundred and eighty-eight processors applied to fish and process herring in Bristol Bay for the 1983 season. Our main concern and that of Fish and Game was oil pollution from the fishing and processing vessels. Herring roe is very susceptible to the effects of petroleum products. Letters were sent to all processors and made available to processors when they reregistered locally with the Department of Fish and Game. Ten man days was spent on the Fish and Wildlife vessel Vigilant for enforcement purposes. No oil pollution was observed. I feel this was due to the fact that we sent out the letters, we were there and excellent weather conditions. Last year ten fishing boats were sunk or driven on shore by bad weather.

2. Bristol Bay Salmon Processors are located at:

Location	Land	Floating	Tenders	Freighters
Dillingham	6	-	-	-
Queen Slough	1	-	-	-
Clarks Point	-	8	-	-
Ekuk	1	1	-	-
Naknek	5	21	48	17
South Naknek	3	-	-	-
Egegik	1	2	-	-
Pederson Point	1	-	-	-
Togiak	1	-	-	-
TOTAL	19	32	48	17

This represents the majority of the plants and processors in the immediate area. Tenders and freighters were only counted in the area off of the Naknek River. It is difficult to estimate the amount of fish waste produced from the 36 million red salmon that were processed. Kings, silvers and other salmon are not included in this figure. It is also difficult to estimate the amount of solid waste generated from the processing and the crew.

5227

Again, letters were sent to all processors and copies were provided to Fish and Game offices in Dillingham and King Salmon for distribution.

Ten man days were spent during the last two weeks in June to primarily inspect land based plants for water, sewage and fish waste discharge systems. Ten man days were spent the first two weeks in July to board floating processors for sanitary, solid and fish waste discharge.

On two occasions, The Bristol Bay Borough made available their fire boat. Within three hours we were able to check the sterns of seventy-eight vessels. Fish and Wildlife Protection provided a boat ride to Queen Fisheries which eliminated an air charter cost.

Meetings were held with the Magistrates in Naknek and Dillingham and letters were sent to reconfirm our conversation and included regulations, waste discharge requirements for land and floating processors and types of misdemeanors. This information was also provided to Fish and Wildlife personnel in Dillingham and Naknek.

Observations:

1. Everyone contacted regarding our 1983 activities to reduce pollution in Bristol Bay were very favorable. Other than the improved esthetic effects to the water and beaches, there were other positive benefits, i.e, fish-heads no longer effected set nets; fish intestines no longer effected drift nets; plastic bands on fiber etc., no longer fouled propellers. Question -

2. Everyone contacted that had been in the Bay had noted a decrease in the amounts and types of solid and fish waste which was also our own observations.

3. Sixteen NOVs were issued in the four week period and essentially dealt with improper fish waste discharge.

4. Nine of the twenty-one floating salmon processors in the Naknek area had installed incinerators to reduce the volume of combustible waste.

5. As the results of our letter and activities, the refuse collector contractor for the Bristol Bay Borough instituted a refuse collection service by boat for salmon processors off of the Naknek River.

Recommendation:

To continue the present program for the 1984 season however, this is in conflict with the Regional and District work plan and the approximately 40% decreasse in travel budget for the Anchorage/Western District.

JCA/nsm

271-2533
SCRO
437 E Street
Suite 200
Anchorage, AK
99501

June 6, 1983

Dear Seafood Processors:

This is furtner to our April 18, 1983 letter of information regarding oil, sewage and soild waste pollution of Bristol Bay.

All processing plants have Seafood Processing Wastewater Permits. These permits require grinding Seafood wastes to a size that is capable of passing through a 0.5 inch mesh screen. The effluent seafood wastewater is to be discharged at a depth equal or greater than mean lower low water for snore based plants. Floating Seafood processors wastewater effluent shall be discharged at a depth equal to or greater than 42 feet below mean lower low water.

Acceptable methods of solid waste disposal are to incinerate combustibles and compact and store non-combustibles for transportation to an approved landfill site in Alaska or outside. The Department will have personnel in the Bristol Bay area for the Salmon processing season to assist operators in meeting these requirements and to enforce state regulations. Violations of provisions of the oil, wastewater and solid waste regulations will be subject to appropriate enforcement action.

Your cooperation will assist us to protect the environment of Bristol Bay.

If you have any questions regarding this letter please contact this office at 274-2533.

Sincerely,

Bob Martin
Regional Supervisor

BM/JCA/msm

STATE OF ALASKA
DEPT. OF ENVIRONMENTAL CONSERVATION
SOUTHCENTRAL REGIONAL OFFICE

BILL SHEFFIELD, GOVERNOR

☒ 437 E. STREET
SECOND FLOOR
ANCHORAGE, ALASKA 99501
(907) 274-2533

☐ P.O. BOX 615
KODIAK, ALASKA 99615
(907) 486 3350

☐ P.O. BOX 1207
SOLDOTNA, ALASKA 99669
(907) 262-5210

☐ P.O. BOX 1709
VALDEZ, ALASKA 99686
(907) 835-4698

☐ P.O. BOX 1064
WASILLA, ALASKA 99687
(907) 376-5038

April 18, 1983

Dear Fishermen and Seafood Processors:

Marine intertidal and nearshore areas require special attention as they are very productive and supply habitat essential to the life cycles of many important species. Herring and salmon are among the many species where the intertidal and nearshore regions play an important role in their productivity. This habitat is extremely sensitive and easily damaged by oil spills and improper waste disposal, particularly in areas where spawning takes place. The State of Alaska has implemented regulations to protect these resources from various forms of pollution.

The most common pollution incidents in the fishing grounds have been the discharging of bilge oils and fuel spills, the dumping of solid waste overboard and on beaches, and the discharging of untreated sewage and processing wastes. These incidents can significantly impact the future fisheries of the area.

This fishing season, the Alaska Department of Environmental Conservation will be in the field working with other agencies in an effort to reduce the pollution incidents associated with the harvest of fishery resources. This work will entail routine patrols amongst the fishing fleet, boarding vessels to alert the vessel master to pollution prevention, and responding to pollution incidents as they are reported.

State law requires prompt reporting of oil spills and other serious pollution incidents. This reporting helps to facilitate quick cleanups thereby reducing environmental impacts and damage to fishing equipment. During the upcoming fishing seasons you should be able to contact this Department in the field through the Alaska Fish and Wildlife Protection Service or the Alaska State Troopers or in Anchorage dial 274-2533. If you cannot contact this Department, contact the U.S. Coast Guard, the Alaska Department of Fish and Game, or the local police.

We enlist your support in our efforts to prevent pollution which may affect fishing resources.

Sincerely,

Bob Martin
Regional Supervisor

BM/SZ/nsm

18-09LH

MEMORANDUM

State of Alaska

TO: Peter Ashman, Charley Shawback
Magistrates

DATE: June 7, 1983

FILE NO:

TELEPHONE NO: 274-2533

FROM: James C. Allen
Anchorage/Western
District Supervisor

SUBJECT: The Pollution of
Bristol Bay

This is to confirm our recent conversations regarding seafood and solid wastes that are discharged from land based and floating processors.

Attachments #1 and #2 are letters sent to all Bristol Bay Processors by mail and were forwarded to Fish and Game Offices in Dillingham, and King Salmon for distribution to processors who must also re-apply locally for processing.

Attachment #3 is my memo of January 24, 1983 to Joe Campbell regarding fish and solid waste regulations and policies.

The wastewater and solid waste regulations are attached as are formats #21 and #23 which are the examples of the permits for land and floating processors and are marked attachments #4, #5, #6 and #7 respectively.

Foreign processors must also comply with the Department's regulations.

There are three types of misdemeanors that could result from improper discharge of seafood or other solid waste. (AS 46.03.790):

(1) A violation of a statute or regulation which has been committed wilfully may be considered a Class A misdemeanor. Class A misdemeanors under AS 12.55.035(b)(3) carry a maximum fine of $5,000. Under AS 12.55.135(a) such persons can also be sentenced for up to one year in jail.

(2) A violation which has been unintentionally committed may be considered a Class B misdemeanor, and under AS 12.55.035(b)(5) carries a maximum fine of $300.

(3) Failure to provide or falsely state information with respect to unlawful discharge is a misdemeanor punishable by a fine of not more than $25,000 as set out in AS 46.03.790(d).

Furthermore, each day on which the violation occurs is considered a separate violation (AS 46.03.790(c)).

The penalties assessed depend on the severity of the violation. A description of the type and severity of the violation will be provided to the proper authority by a representative of this Department.

Please contact this office at 274-2533 if you have any questions regarding the above information.

JCA/JFH/msm
Attachments

MEMORANDUM

State of Alaska

TO: Joseph W. Campbell
Division of Fish & Wildlife Protection
Department of Public Safety

DATE: January 24, 1983

FILE NO:

TELEPHONE NO: 274-2533

FROM: James C. Allen
Anchorage/Western
District Supervisor

SUBJECT: Nondomestic Wastewater and Solid Waste Regulations

Joe, I waited until the attached revised regulations became law, December 30, 1982, to forward them to you with the following comments.

AS 46.03.020.(10)(A) allows for the Department to develop AAC to "control, prevent and abatement of air, water or land or subsurface land pollution." And (D) the "collection and disposal of sewage and industrial waste."

Title 18, Chapter 72, Articles 1 and 2 pertain to domestic and nondomestic wastewater. The definition for nondomestic wastewater, 18 AAC 72.990(29) includes food processing.

Section .210 requires a permit issued by the Department before a person can discharge nondomestic wastewater into or onto the water or land in Alaska.

The Department and EPA both issue nondomestic wastewater permits. EPA at one time issued all discharge permits which were co-signed by DEC so the Department could also enforce the provisions. Since Reganomics, the EPA staff has been reduced so they placed priority on only the large discharges whereas we do all the rest.

Enclosed are examples of our permit requirements used in the Bristol Bay area. These types of permits would not be issued in Kodiak or Dutch Harbor. Format 21 would be used for a land based operation and 23 for a floating processor and the letter form is only for those floating processors which process less than five tons of raw product per day.

The permit requirements are more alike than different. Wastewater is separated from domestic sewage. Some methods (grinders) is required to reduce solids to a size small enough to pass through a 0.5 inch mesh screen. The requirements A,1,d says what can't be included in the wastewater or allowed to accummulate on the beach. A,1,c for land processors says that the waste discharge line has to be at least below mean low water.

Domestic wastewater (sewage) for floaters is more specific than land based processors as noted in 2, a, I, II, III and IV.

The rest of the requirements should not be of interest for enforcement purposes.

We may summarize as:

1. Wastewater is to be separated from sewage and oi
2. All must grind fish waste.
3. Land based processors must discharge below low tide.
4. Depending on the location of the float various domestic wastewater discharge requirements apply.

Solid wastes are covered in Title 18, 60.130.(15), Chapter 60. The definition for solid waste includes everything. 18 AAC 60.101 prevents solid waste from pollution of the air, water, land and subsurface land of the state.

Solid waste disposal sites must have a permit except as excluded in 18 AAC 60.020(1), (2) and (3) which are single family or duplex where the solid waste are disposed of on the premises, a farm or an incinerator rated at less than 200 pounds per hour.

JCA/msm
Enclosures

MEMORANDUM

437 "E" Street, Suite 200

State of Alaska

Anchorage, Alaska 99501

TO: Bill Lamoreaux
District Office
Supervisor

DATE: August 2, 1982

FILE NO:

TELEPHONE NO: 274-2533

FROM: James C. Allen
Anchorage/Western
District Supervisor

SUBJECT: Bristol Bay Solid Waste Disposal Problems

For a number of years complaints have been made to the Department regarding solid waste in Bristol Bay. This can be divided into two different problems. These are fish heads and intestines from shore and floating salmon processors and solid waste generated by the floating processors. The fish heads and intestines are more of a problem along the beaches where they foul the set nets and prevent netting of salmon. A considerable amount of time and frustration is spent in removing the waste. Intestines are more of a problem from the floating processors as the heads, having weight, generally sink to the bottom. Floating processors near the shore are a greater problem than those in the center of the bay.

Many of the processors burn combustible solid waste on the stern and they will tell you that the non-combustibles are taken to a shore dump, but this is highly questioned as being accurate, which was confirmed by informal conversation with crew members. Ships that don't burn refuse and those with non-combustibles dump them over the side causing accumulation of waste on the bottom and the beach.

Fish and Game requires all operators to file an intent to operate for the next year. The form can be used to determine who is going to process what seafood and where. I have requested a copy of this report be mailed to me in December 1982.

Contact was made on my Dillingham trip of July 26-29, 1982 with John Campbell and Ron Kiniecik, Fish & Wildlife Protection. Both express their concern for the solid waste problems of the region both on land and at sea. They have requested a memo from our Department stating section of the statutes and AAC to cite in issuing a citation.

Observation of waste discharge pipes in Kodiak and Dillingham revealed a discrepancy on our part on not requiring design and construction requirements on the outfalls. Processors use plastic that is too fragile for either an anchor or wave action. We should require Class 50 ductile iron, with joints which will take a 5° defection without leaking. To protect this pipe, it should be required to be buried to a depth of 5 feet until it can be exposed at a depth 10 feet below minimum low low tide. A diffusser would be ideal, but not necessary.

The discharge pipe should be required to be anchored with 9 foot spacing were exposed on the bottom.

Recommendations:

1. We notify all land processors that:

   a. Grind to less than 0.5 inch square and discharge as described above.

   b. To discontinue processing when grinder or discharge pipe is broken. This should motivate back-up grinder in parallel. This should also apply to floating processors however, no discharge line would be required.

2. Combustible solid waste on floating processors should be required to be burned or compacted with non-combustibles and transported to local dumps. Boats from the processor are running back and forth all day. Any processor or boat observed to discharge solid wastes into the waters of the State will be cited.

3. A specification for the discharge outfall should be a part of the permit.

In summary, we should inform all processors of our 1983 season requirements and plan to have DEC personnel in Bristol Bay in 1983 for at least the first three weeks of July.

JCM/ccs

Box 234
Dillingham, AK
99576
November 30, 1983

Officer Ron Kmiecik
Box 223
Dillingham, Alaska 99576

Dear Officer Kmiecik:

Representative Adelheid Herrmann would like to get your views on several fishery related issues that affect our fishermen in Bristol Bay. The first issue is fish waste dumping by fish processors in Bristol Bay, particularly the Nushagak River. The second issue is gill net mesh size. Finally, the issue of fish processors anchoring in desirable drift areas seems to be a problem for drift gill netters.

Does your office have any information that would give Rep. Herrmann any facts which would help define the magnitude of the problems mentioned? Also does your office have any suggestions for solutions to the issues previously mentioned?

Would a joint meeting with processors, fishermen, fishermen's organizations, the Coast Guard and your office be helpful before the 1984 fishing season starts?

Thank you for your consideration.

Very sincerely,

Nels A. Anderson Jr.

Nels A. Anderson, Jr.
Special Assistant
House Special Committee on
Fisheries

BILL SHEFFIELD, GOVERNOR

DEPARTMENT OF PUBLIC SAFETY

P.O. BOX 6188 ANNEX
ANCHORAGE, ALASKA 99502
PHONE:

DIVISION OF FISH & WILDLIFE PROTECTION
P.O. Box 1005
Kodiak, Alaska 99615

December 21, 1983

Nels A. Anderson, Jr., Special Assistant
House Special Committee on Fisheries
P.O. Box 234
Dillingham, Alaska 99576

Dear Mr. Anderson,

In response to your request to Trp. Kmiecik in Dillingham for his views on the three problems relating to the Nushagak Bay, I am enclosing his answers.

Additionally, a meeting was held in Naknek in November with the United States Coast Guard, processors and fishermen in attendance, to discuss the interruption of the drift gill net fleet by anchored vessels. There were a number of recommendations presented and I'm sure they could be applied to the Nushagak area as well. Lt. Matt Cronnin is stationed in Anchorage and is in the Marine Safety Office in the Federal Building. He would be able to provide a clear overview of that particular problem and the maritime laws that effect it.

The fish waste that is dumped before being properly ground is not restricted to the Nushagak area and from personal observations, I would say that is most likely to occur when there is a malfunction of equipment. Mr. Everett Stone, sanitarian for the Dept. of Environmental Conservation is usually present in Bristol Bay during peak periods. He would be more able to respond to the magnitude of the fish waste problem and measures taken to correct it.

Hopefully the information provided will be of assistance to your committee and if we can be of help further, please don't hesitate to ask.

Sincerely,

Phil Gilson

Lt. Phil Gilson
Commander, "E" Detachment
Fish & Wildlife Protection
Kodiak

Enclosure (1)

cc: Lt. Col. Tetzlaff
Sgt. Youngren

First Issue: Fish Dumping in the Nushagak River

During the 1982 season complaints were received from both subsistence and commercial fishermen about whole fish, heads and entrails not being ground up or ground enough. These complaints were received from subsistence fishermen fishing Kanakanak and City beaches, set netters from Clarks Slough, Combine Flats, Clarks Point and Coffee Point areas, and drifters who were fishing from Nushagak Point south. Complaints, when received, are usually from all users during the same time frame. The waste is coming from Dillingham docks, floating processors near Clarks Point and from the processor up Clarks Slough.

Complaints indicate that the problem caused by one or more of the processors occur approximately once per week.

I believe the solution to this on-going problem is to permanently station a representative of the Dept. of Environmental Conservation office in Dillingham. During the 1983 season we had D.E.C. personnel TDY here and it substantially reduced the complaints and visual observations compared to the 1982 season. I believe the D.E.C. representative presently in Dutch Harbor is being transferred to Dillingham in the near future.

Second Issue: Gill Net Mesh Size

Gill Net Mesh Size is a management issue. I agree with the Dillingham ADF&G managers that the current mesh size of 5-3/8 inches during the red salmon season is most advantageous. The current 5-3/8 inches mesh size is allowing favorable proportions of male and female (nearly 50%) in the spawning areas. A change in mesh size would affect this balance and would require a larger escapement to offset the imbalance. Further information can be obtained from the Dillingham office of the ADF&G.

Third Issue: Processors Anchoring in Desirable Drift Areas

On the final issue of processors anchoring in desirable drift areas, several complaints were received during the 1983 season. As our fishery continues to grow, it will have to handle the larger volume of processors/transport ships on the bay. The complaints received were reference to a few of the processor ships, not the majority. The problem was processor ships anchoring just off Ekuk. The majority of the processors anchor off Clarks Point and no complaints have been received reference their anchorage location.

I feel a meeting with all parties involved would be beneficial. I contacted Matt Cronnin from the U.S.C.G. Anchorage office today reference this meeting. Mr. Cronnin is in concurrence that a meeting with all interested parties would be helpful, since the meeting will be addressing problems discussed in Naknek this past October. Mr. Cronnin stated December or January in Dillingham would be possible and he would confirm and get back with Trooper Kmiecik.

MEMO

To: Representative Adelheid Herrmann

From: Co-Man Services, Special Assistant on Fisheries

Date: January 5, 1984

Subject: Tasks that need immediate attention on a Fish Waste Dumping Plan in Bristol Bay for 1984

1. Request a 1984 Fish Waste Disposal Plan for Bristol Bay which addresses budget commitment, man days on sites in Naknek and Dillingham, as soon as possible.

2. Request Representative Adams to allocate a specific amount of funds for a 1984 Fish Waste Disposal Program for Bristol Bay in the DEC Budget so that we are not short-changed or under budgeted. You will need to have Joyce R. find out how much was spent on the 1983 Fish Waste Disposal effort.

Box 234
Dillingham, AK
99576
November 30, 1983

Mr. Harvey Samuelsen
President
WACMA
Dillingham, AK 99576

Dear Harvey:

Representative Adelheid Herrmann has asked me to help resolve several issues that are of concern to fishermen throughout Bristol Bay. The issues are fish waste dumping in the Bay, salmon net mesh size, set net regulations and anchoring of processors in drift areas.

I would like to discuss these matters with you to give Rep. Herrmann direction on how the issues can be solved. Your assistance on these issues would be very helpful.

Please let me know when it would be convenient for us to get together. I plan on contacting fishermen on a one to one basis to get their views as well as yours in your capacity as president of WACMA.

Thank you for your consideration.

Very sincerely,

Nels A. Anderson Jr.

Nels A. Anderson, Jr.
Special Assistant
House Special Committee on
Fisheries

WESTERN ALASKA
COOPERATIVE MARKETING ASSOCIATION

1

BOX 213 . . . DILLINGHAM, ALASKA

January 12, 1984

Nels A. Anderson Jr.
Special Assistant
House Special Commission on Fisheries
Box 234
Dillingham, Alaska 99576

As pertaining to our conversation over the telephone.

No. 1 We definitely need the Coast Guard to come in and hold hearings here at Dillingham about the floating processors anchoring in our prime fishing areas. The way they anchor is a real hazard to all navigation, not only to the fisherman but to any boat or other craft. The Coast Guard will probably say they have no jurisdiction over this problem.

If we can't get cooperation from them, this matter should be turned over to the Congressional Delegation in Washington D.C.

From previous phone calls last summer with the Governor's Staff the state people told me they had no control over it, it was pointed out to me by them its all up to the Coast Guard.

No. 2 Fish Waste Dumping should not be allowed in any Fisheries in the State & Federal Waters off Alaska Coasts.

Every processor should have a grinding machine on board also at shore based plants.

A very strict law should be enacted during the session in Juneau this year.

Also no garbage should be thrown overboard, such as plastic strapping, ropes, palette boards, plastic bags, tires and other items.

The State of Alaska should have a garbage scow and charge for the service, or contract it out to someone to do it. I do believe its long overdue.

No. 3 I firmly believe that all salmon net mesh size and set net regulations should be left up to the Fish Board and not our legislative body.

Signed By: Harold H. Samuelson

MEMO

To: Mike Nelson, Area Biologist Alaska Department of Fish and Game

From: Nels A. Anderson, Jr., Special Assistant, Special Committee on Fisheries

Date: January 5, 1984

Subject: Location and Number of Land and Floating Processors Operating in Bristol Bay in 1983.

Would your office please give us the location of and the total number of salmon processors operating on and offshore in the 1983 fishing season in Bristol Bay? One source placed the total of land processors at nineteen (19) and thirty-two (32) floating operations. We would appr ciate your numbers on this matter.

Also, would your office be able to enumerate the number of tenders and freighters operating in Bristol Bay in 1983? This inquiry is not as important as the preceding one.

Thank you for your consideration.

cc: Representative Adelheid Herrmann

BILL SHEFFIELD, GOVERNOR

DEPARTMENT OF FISH AND GAME

BOX 199 – DILLINGHAM 99576

DIVISION OF COMMERCIAL FISHERIES

January 5, 1984

Mr. Nels A. Anderson, Jr.
Special Assistant
Special Committee on Fisheries
P.O. Box 234
Dillingham, Alaska 99576

Dear Nels:

In regards to your questions posed in your memo to me dated Jan. 5, 1984, I have the following to offer:

1. Location and number of salmon processors operating on and offshore in Bristol Bay in 1983:

   (A) Land Processors - 17 major
   12 minor
   29 total

   (B) Floating Processors - 38 Total

   Comments: Major/minor land processors split roughly by total production over 1.0 million lbs. = major; and under 1.0 million lbs. = minor. Floating processors not split due to wide range of production.

2. Number of Tenders/Freighters operating in Bristol Bay:

   We do not have information regarding total sea-going vessels. I would estimate that between 400 and 500 vessels of all types would be present in Bristol Bay during the sockeye season. My estimate based on number of processor by product-type and estimate of average number of support vessels. The U.S. Coast Guard may be able to provide a better estimate.

3. I'm also providing a "Fishery Operator Summary" below, which may be of assistance. Please remember that the number of operators will not total (in most cases) to the district totals as processors may operate

(continued)

in all production modes or in just one, and in one or all districts:

FISHERY OPERATOR SUMMARY, 1983

District	Number of Operators[1] (Total)	Processing Method: Canned	Frozen	Cured	Export: Fresh	Brine	Number of Canning Lines[2]: 1-lb.	½-lb.	¼-lb.
Naknek-Kvichak	(43)	5	31	5	13	9	9	10	1
Egegik	(35)	1	24	3	8	2	1	2	
Ugashik	(24)	1	19	2	4	4			1
East Side	(52)	(7)	(38)	(5)	(17)	(13)	10	12	2
Nushagak	(28)	3	20	1	11	2	6	5	1
Togiak	(12)	1	10	1	2		1	1	
West Side	(31)	(4)	(22)	(1)	(12)	(2)	7	6	1
TOTAL BAY	62	11	46	5	23	13	17	18	3

1/ Indicates operators with either a physical plant or processing facility in a district or those operators from other areas buying fish and/or providing tender and support service for fishermen in districts away from the facility.

2/ Number of canning lines available for operation.

Hope this information fulfills your needs.

Sincerely yours,

Mike

Michael L. Nelson
Senior Area Mgmt. Biologist
(907) 842-5227

MLN/hes

CO—MAN SERVICES

BOX 234
DILLINGHAM, ALASKA 99576

January 6, 1984

Patterson Sanitiaion & Refuse Service Inc.
King Salmon, Alaska 99613

Dear Mr. Patterson,

Representative Adelheid Herrmann has asked me to contact you regarding solid waste disposal by floating and land processors in the Naknek/ King Salmon area. We have reports that floating processors burn their combustible waste and that they bring thier non-combustible waste to shore for disposal at your waste disposal site in the Naknek/ King Salmon Dump Site.

Can you confirm this for us? Your help in this matter would be very helpful in planning a solid and fish waste disposal program to prevent dumping into the river systems of Bristol Bay.

Thank you for your consideration.

Very Sincerely,

Nels A. Anderson, Jr., Special Assistant
Special Committee on Fisheries

cc: Representative Adelheid Herrmann

CO—MAN SERVICES

BOX 234
DILLINGHAM, ALASKA 99576

January 6, 1984

Mr. Don Penner
Bristol Bay Borough
Naknek, Alaska 99633

Dear Mr. Penner,

Representative Herrmann has asked me to contact you regarding the solid and fish waste disposal program you have with the Alaska Department of Environmental Eonservation. Our office is interested in this program because other coastal communities could benefit by using what you have worked out as a model.

As you know, many people complained about fish processors dumping unground fish waste and solid waste into the Naknek/Kvichak and Nushagak river systems. ADEC was present during the 1983 season, but many complaints of finding fish entrails in drift and set nets still persisted throughout the 1983 fishing season.

Any information you have would be helpful in preparing for the 1984 season. We are especially interested in whether or not all processors brought their waste for disposal on land. We want to avoid any problems that will cause unnecessary environmental damage to our waters that we depend on for a living.

Thank you for your consideration.

Very Sincerely,

Nels A. Anderson, Jr., Special Assistant
Special Committee on Fisheries

cc: Representative Adelheid Herrmann

CO—MAN SERVICES

BOX 234
DILLINGHAM, ALASKA 99576

January 6, 1984

Mr. James C. Allen
Alaska Department of Environmental Conservation
437 E. Street, Suite 200
Anchorage, Alaska 99501

Dear Mr. Allen,

On behalf of Representative Herrmann, I would like to commend you on the amount of work that your office accomplished in helping to reduce fish waste and solid waste disposal in Bristol Bay in 1983. The effort to notify processors, the judiciary and others about what your mission was is outstanding and should be repeated in 1984.

There are some questions however, about your August 18, 1983 report to Mr. Keith Kelton regarding your observations on what the effect of your effort eccomplished.

OBSERVATION # 1

I can find very few people who would state that the fish waste problem even left the bay. I am personally able to tell you that I recieved complaints about fish waste in nets and on beaches throughout the summer fishing season. It has come to my attention that this is true in Nushagak and Naknek/Kvichak River systems. Many fishermen also complained about plastic garbage bags being cought in props and that there were large numbers of garbage bags sighted on our beaches in both river systems.

OBSERVATION # 2

There is little evidence that can substantiate this observation. People who live on the river and fish all summer found that 1983 was worse in terms of fish waste and garbage disposal. This has to be the case when you see the large number of floating fish processors and commercial fishing boats operating in Bristol Bay. Garbage is being dumped somewhere and we are not sure how much combustible waste on board floating processors and how much non-combustible waste is being hauled to shore for disposal at municipal dump sites. Your help in determining the extent of disposal practices would be appreciated so that the final destination of waste generated by fishing activities can be accounted for.

You referred to issues I raised in Observation #2 in your memo to Mr. Bill Lamoreaux on August 2, 1982. You questioned the accuracy of fish processors who stated that they "burn combustible solid waste on the stern and they will tell you that the non-combustibles are taken to a shore dump, but this is highly questioned as being accurate." Have you determined that the fish processors now

have this capacity and if so how many actually do it? If they do not then what accounts for such an improvement in waste disposal in 1983?

Furthermore your memo of August 2, 1982 in reference to a discrepancy on your part regarding discharge pipe design and construction. Has your recommendation been implemented by regulation and is it in effect at this time?

Finally, have your recommendations in the August 2, 1982 letter been translated into regulations? Can you tell us how much grinding equipment costs and how much of an investment is required to have a back-up grinder in parallel?

Recommendation #1 (b) seems to be rather harsh especially if the processor has fish on board that may spoil if held too long before processing. The economic interests of fishermen are at risk if they have no place to deliver their fish if a processor is shut down during grinder breakdown. In your view, is this a good suggestion?

Very Sincerely,

Nels A. Anderson, Jr., Special Assistant
Special Committee on Fisheries

cc: Representative Adelheid Herrmann
cc: Commissioner, Department of Environmental Conservation

PRESS RELEASE

January 10, 1984

From: Representative Adelheid Herrmann

Fish Waste Disposal

Representative Adelheid Herrmann, D-District 26, is not satisfied with the fish waste situation in Bristol Bay. 1983 had twenty-nine (29) land processors and thirty-eight (38) floating processors in Bristol Bay. In addition, an estimated four hundred (400) to five hundred (500) support vessels of all types were operating in Bristol Bay.

The large number of processors and their support vessels presents a problem of fish waste and solid waste disposal. If fish waste is not ground up it will eventually get onto the beaches and get caught in gill nets. Solid waste dumped into the water will get fouled in propellors, anchors and set net tackle.

The Alaska Department of Environmental Conservation is charged with the responsibility of providing programs that prevent environmental degradation of the air, water and land resources of Alaska. In 1983, DEC developed a plan for the disposal of salmon and solid waste in Bristol Bay. The department sent letters to processors regarding discharge of bilge oil, fuel spills, dumping solid waste overboard and on beaches, and discharge of untreated sewage and processing wastes. They also notified processors that they would be making routine patrols to prevent pollution and respond to reported pollution incidents. DEC did spend time inspecting land based plants for water, sewage and fish waste discharge systems as well as boarding floating processors for sanitary, solid and fish waste discharge.

"Although, I recognize the effort made by DEC, I am still concerned that more needs to be done in 1984. I am asking fishermen and others to send me letters or public opinion messages via the Legislative Information Offices regarding their experience regarding fish and solid waste disposal problems in the Bay in 1983. I need this information to help me get funds to put more emphasis on a fish and solid waste disposal program for the 1984 fishing season.

Representative Herrmann received an unusually high number of complaints from her constituency in Bristol Bay regarding fish waste getting caught in nets. There were complaints of garbage bags floating to the beaches and plastic bags fouling props and set net tackle.

"It is my intent to work with DEC to increase the effort of preventing fish and solid waste pollution in 1984 and I will do all I can to see that there is enough money in the DEC budget to get the job done. I again ask for letters and public opinion messages to be sent to me on any fish waste or solid waste problems that you observed in 1983.", Herrmann concluded.

BILL SHEFFIELD, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION

Telephone: (907) 274-2533
Address: 437 E Street
Suite 200
Anchorage, AK
99501

January 31, 1984

Mr. Nels A. Anderson, Jr.
Special Committee on Fisheries
Co-Man Services
P.O. Box 234
Dillingham, AK 99576

Dear Mr. Anderson:

Subject: Bristol Bay

Thank you for your letter of January 6, 1984. The following are my responses to your questions:

1. Nine of 21 floating seafood processors located off the Naknek River had some form of incinerators for the combustion of solid wastes. The solid waste contractor for King Salmon/Naknek areas provided boat refuse collection services for all 21 of these processors. I plan to contact the refuse service to obtain the amount of refuse collected in 1983. Eventhough refuse collection was available and in many cases, incinerators, there may have been mishandling of refuse when we were not present. We noticed substantial improvement over previous years while conducting inspections however, such complaints would suggest additional exposure may be warranted.

2. In 1983, this office required the burying of waste discharge pipes for outfalls in Dillingham. Prior to the 1984 salmon processing season, this office will require plans for the burial of nine existing outfalls that were not in compliance in 1983. They are located in Naknek, South Naknek and Egegik. Waste discharge pipes are required to have sealed engineered plans submitted which is required in 18 AAC 72.060(a). Outfalls can be damaged by waves, boats and ice scouring. 18 AAC 72.060(j) 1-11, list reference materials which may be used in the plan review process. Number (6) refers to the design of outfalls to protect them from damage. Past practice has been to extend plastic pipe across the bottom of the bays or rivers. This has consistently been shown to not work and is contrary to good engineering practice. A well placed line can serve the processor well for many years within continuous need to repairs.

3. My recommendations of August 2, 982 are essentially implemented in the Anchorage/Western District Office.

4. I have not been able to contact Kyko Suiasin, here in Anchorage, to obtain specifications and exact costs of fish waste grinders. When this information is available, I will forward it under separate cover. It should be noted however, that the cost of a standby grinder or parts is not substantial and relates to having other standby hardware such as a spare pump.

5. The recommendations in my August 2, 1982 letter are in fact already embodied in regulations. Grinding of fish waste has been the standard for many years by EPA and ADEC and is reflected in all permits issued for the area for many years. Discharging in noncompliance of these criteria is only acceptable under the most severe circumstances to protect life and property damage. An operator is expected to properly operate and maintan all treatment equipment and this would included maintaining an inventory of spare parts for equipment prone to malfunctions.

The specifications for solid waste handling are contained in regulations adopted by this Department as well as the engineering plan review for outfall construction if it is part of a waste system.

6. Processors have replacement parts for their generators and processing equipment so why not for the grinders. In 1982, when Ball Brothers and Columbia Ward did not grind and discharged heads and guts, they affected the income of the set netters in the immediate area.

Sincerely,

James C. Allen

James C. Allen
Anchorage/Western
District Supervisor

JCA/msm
cc: Commissioner Neve'
Representative Adelheid Herrmann
Keith Kelton, ADEC - Juneau
Bob Martin, ADEC - Anchorage

authorized to give administrative direction to and exercise general supervision of the activities in a vehicle or place; in a state office building, "other person who has control" means a division director who has authority over the office or his designee;

(4) "room" means an indoor area which is bordered on all sides by walls or partitions which are continuous and solid except for door portals for entry and exit and except for windows and vents;

(5) "smoking" means holding or carrying a lighted cigar, cigarette, pipe, or other lighted smoking equipment or material. (Eff. 8/28/81, Reg. 79)

Authority: AS 18.35.360
AS 46.03.020
AS 46.03.140

CHAPTER 60.
SOLID WASTE MANAGEMENT

Article

Editor's Note: The regulations in this chapter, effective October 9, 1983, and distributed in Register 88, constitute a comprehensive reorganization and revision of this material. They replace all previous regulations in this chapter which were repealed simultaneously with the adoption of these regulations. The history line at the end of each section does not reflect the history of the replaced provisions before October 9, 1983, nor is the section numbering related to the numbering before that date.

ARTICLE 1.
STANDARDS AND LIMITATIONS

Section

18 AAC 60.010. GENERAL REQUIREMENTS. Repealed 10/9/83.

18 AAC 60.015. ACCUMULATION AND STORAGE. (a) A person who owns or operates an industrial, commercial, or public facility shall keep the premises free of solid waste that may attract disease vectors or create other health hazards.

(b) A person who stores food wastes and other putrescible wastes shall do so in a place and manner that prevents wildlife attraction or access.

(c) A person who stores solid waste shall do so in a way that does not violate AS 46.06. (Eff. 10/9/83, Reg. 88)

Authority: AS 46.03.020(10)
AS 46.06.080

18 AAC 60.020. SOLID WASTE MANAGEMENT PERMIT. Repealed 10/9/83.

18 AAC 60.025. TRANSPORT. (a) A person who transports solid waste shall do so in a way that prevents waste from escaping from the transporting vehicle.

(b) A person who spills solid waste during collection or transport shall pick up the waste and clean the area at once. (Eff. 10/9/83, Reg. 88)

Authority: AS 46.03.020(10)
AS 46.06.080

18 AAC 60.030. OPERATING REQUIREMENTS. Repealed 10/9/83.

18 AAC 60.035. GENERAL REQUIREMENTS FOR DISPOSAL SITES. A person who owns or operates a solid waste disposal site shall ensure that

(1) surface water runoff does not flow over, into, or through uncovered solid waste;

(2) solid waste is not placed in and does not enter surface waters;

(3) leachates and eroded soil from the sit do not violate the standards for surface wate quality in 18 AAC 70 outside the site's boundary;

(4) leachates from the site do not violate the standards for groundwater quality in 18 AAC 70 beyond the horizontal limits of solid waste placement;

(5) a site located in a floodplain does not restrict the flow of the 100-year flood or reduce the temporary water storage capacity of the floodplain, and is built to prevent the washout of covered solid waste;

(6) disease vectors do not become a nuisance or a hazard to health;

(7) birds attracted to the site do not become a hazard to aircraft;

(8) wildlife and domesticated animals are not attracted to or allowed access to deposited solid waste;

(9) public access to the site is controlled to minimize health and safety hazards;

(10) solid waste is burned in an incinerator complying with 18 AAC 50.040 or by approved controlled burning methods;

(11) dust, odors, and other activity effects do not become nuisances or hazards to health, safety, or property;

(12) litter is kept in refuse holding and disposal areas by fencing or other approved means;

(13) access roads and nearby land are kept free of litter or windblown solid waste;

(14) salvaging, if allowed by the operator, is done in an approved area and does not hinder site operations or create a safety hazard or nuisance;

(15) access and on-site roads are kept passable and safe for vehicles during normal hours of operation;

(16) adequate numbers and types of working equipment are available to assure that all requirements are met. (Eff. 10/9/83, Reg. 88)

Authority: AS 46.03.020(10)
AS 46.06.080

18 AAC 60.040. INCINERATION. Repealed 10/9/83.

18 AAC 60.045. LANDFILLS. (a) A person who owns or operates a solid waste landfill shall ensure that

(1) the landfill working face is kept as small as practical;

(2) finished lift height does not exceed eight feet;

(3) operational cover is applied to the compacted solid waste as set out in Table A, unless otherwise directed by a permit issued by the department;

TABLE A

Waste Received/Day*	Population Served*	Cover Frequency
More than 10,000 lb.	More than 2,000	Daily
5,000 lb. to 10,000 lb.	1,000 to 2,000	3 times/week
3,750 lb. to 5,000 lb.	750 to 1,000	2 times/week
2,000 lb. to 3,750 lb.	400 to 750	Weekly
1,000 lb. to 2,000 lb.	200 to 400	2 times/month
Less than 1,000 lb.	Less than 200	Monthly

*Use the measure that requires the most frequent cover application.

(4) intermediate cover is applied when solid waste will not be placed on a partly filled area within 30 days;

(5) final cover is applied, within 90 days after the last waste deposition,

(A) to areas that will not receive more waste within one year;

(B) to areas that have been filled to the final design elevation; or

(C) to an entire landfill for which a permit is denied or terminated;

(6) decomposition gases generated within the landfill are controlled or vented so that the explosive limit concentration of the gases is not exceeded at or beyond the site boundaries, and so that other health or safety hazards are prevented;

(7) cover material and drainage control structures are designed, graded, and maintained to prevent ponding and erosion and to minimize the amount of water entering the solid waste;

(8) a grass or groundcover crop or other approved surface finish is established and maintained within four months after final cover placement, or, season not permitting, when prescribed by the department;

(9) a minimum separation of 50 feet is kept between landfilled areas and the site's boundary; and

(10) a surveying bench mark and reference base line are established and maintained at sites serving at least 2,000 persons and at other sites as required by permit.

(b) The department will, in its discretion, increase or decrease required operational cover frequency as set out in Table A to compensate for site-specific conditions, including disease vectors, odor, wildlife attraction, scavenging problems, waste composition, blowing litter and other visual nuisances, availability of cover, frozen soil, limited site volume, or the use of shredding, baling, incineration, or other predisposal processing. (Eff. 10/9/83, Reg. 88)

Authority: AS 46.03.020(10)

18 AAC 60.050. DISPOSAL ON LAND. Repealed 10/9/83.

18 AAC 60.055. LANDFILLS IN PERMAFROST. A person landfilling solid waste in or

on permafrost soils shall comply with 18 AAC 60.045 and shall ensure that

(1) landfilled solid waste becomes a fixed and integral part of the permafrost; and

(2) solid waste, such as septage and sewage sludges, likely to contain pathogenic microorganisms is incinerated, disinfected, or otherwise treated to destroy the pathogenic microorganisms before burial. (Eff. 10/9/83, Reg. 88)

Authority: AS 46.03.020(10)

18 AAC 60.060. RECLAMATION FACILITIES. Repealed 10/9/83.

18 AAC 60.065. TRANSFER STATIONS. A person who owns or operates a solid waste transfer station shall ensure that

(1) waste receptacle size and waste pickup frequency prevent overflow and littering; and

(2) the transfer station is kept litter-free. (Eff. 10/9/83, Reg. 88)

Authority: AS 46.03.020(10)
AS 46.06.080

18 AAC 60.070. SOLID WASTE MANAGEMENT RESPONSIBILITY. Repealed 10/9/83.

18 AAC 60.075. LANDSPREADING. A person who owns or operates a solid waste landspreading site shall ensure that

(1) a minimum vertical separation of six feet is kept between the waste application surface and the groundwater table;

(2) a minimum horizontal separation of 100 feet is kept between the disposal area and surface waters;

(3) surface runoff does not enter or leave the disposal area;

(4) waste is applied only when the receiving soils are thawed and workable;

(5) cadmium application does not exceed 0.5 pounds per acre per year or 4.5 pounds per acre total accumulation; and

(6) polychlorinated biphenyl (PCB) concentrations do not exceed 10 milligrams per kilogram in wastes that are incorporated into the soil. (Eff. 10/9/83, Reg. 88)

Authority: AS 46.03.020(10)

18 AAC 60.080. SOLID WASTE MANAGEMENT ON PUBLIC PROPERTY. Repealed 10/9/83.

18 AAC 60.085. SPECIAL WASTE DISPOSAL. In addition to the other requirements of this chapter, a person who disposes of the solid wastes listed in this section shall ensure that

(1) junked vehicles and equipment

(A) are not used to stabilize slopes or prevent erosion;

(B) are drained of all oil and petroleum products before they are buried; and

(C) are not a visual nuisance, a harborage for disease vectors, a public safety hazard, or an oil spill hazard when stored for recycling;

(2) sewage sludges and septage

(A) to be landfilled contain at least 10 percent solids by weight;

(B) placed in landfills are covered at once or otherwise managed to prevent health hazards and odor nuisances;

(C) to be landspread are treated by one of the following processes before application or incorporation; in addition, public access to the site must be controlled for at least 12 months, and grazing by animals whose products are consumed by humans must be prevented for at least one month after application:

(i) aerobic digestion with residence time ranging from 60 days at 15°C to 40 days at 20°C, and a volatile solids reduction of at least 38 percent;

(ii) anaerobic digestion with residence times ranging from 60 days at 20°C to 15 days at 35° to 55°C, and a volatile solids reduction of at least 38 percent;

(iii) air drying for a minimum of three months, two months of which must have average daily temperatures above 0°C with the liquid sludge allowed to drain and dry on under-drained sand beds, or in basins in which the sludge is nine inches deep;

(iv) composting, using the within-vessel, static aerated pile, or windrow composting methods with the waste kept at a minimum operating temperature of 40°C for five days, and exceeding 55°C for at least four hours during this period;

(v) lime stabilization with enough lime added to produce a pH of 12 after two hours of contact; or

(vi) other approved processes with similar reduction of pathogens;

(D) applied to land that will be used to grow crops for direct human consumption within 18 months of the application are treated by

(i) high temperature, aerobic composting, using the within-vessel method with the sludge kept at 55°C or higher for three days; using the static aerated pile method with the sludge kept at 55°C or higher for three days; or using the windrow method with the sludge reaching 55°C or higher for at least 15 days during the composting period with at least five turnings of the windrow;

(ii) heat drying, with dewatered sludge cake dried by direct or indirect contact with hot gases, and its moisture content reduced to 10 percent or lower; the sludge particle temperature, or the wet bulb temperature of the gas stream in contact with the sludge at the point where it leaves the dryer, must exceed 80°C;

(iii) heat treatment, with the liquid sludge heated to 180°C for 30 minutes;

(iv) thermophilic aerobic digestion with the liquid sludge agitated with air or oxygen to keep aerobic conditions, residence times of 10 days at 55 to 60°C, and a volatile solids reduction of at least 38 percent; or

(v) other methods or operating conditions that the department finds will equally reduce pathogens;

(3) drill mud disposed of on land is confined in a pit, trench, or diked area that prevents erosion or mass flow of the mud. (Eff. 10/9/83, Reg. 88)

Authority: AS 46.03.020(10)

18 AAC 60.087. HAZARDOUS WASTE. (a) A person who disposes of hazardous waste, except household waste, shall obtain specific department approval for each disposal.

(b) A solid waste is hazardous if it

(1) is ignitable as defined by 40 CFR 261.21, revised July 1, 1981;

(2) is corrosive as defined by 40 CFR 261.22, revised July 1, 1981;

(3) is reactive as defined by 40 CFR 261.23, revised July 1, 1981;

(4) is EP toxic as defined by 40 CFR 261.24, revised July 1, 1981; or

(5) appears on any of the hazardous waste lists in 40 CFR 261, revised July 1, 1981. (Eff. 10/9/83, Reg. 88)

Authority: AS 46.03.020(10)
AS 46.03.296

18 AAC 60.090. JUNKED VEHICLE AND EQUIPMENT DISPOSAL. Repealed 10/9/83.

18 AAC 60.095. RECYCLING REQUIRED. A person who generates or accumulates recyclable waste metals shall recover and reuse those metals or ship them to a market for recycling if

(1) the amount generated or accumulated exceeds 100 tons per year;

(2) recyclable waste metals are at least 25 percent of the total dry weight, after processing, of the solid waste generated or accumulated, excluding drill mud and spoil and

overburden from land clearing or construction activities; and

(3) surface transport systems operate between the waste generation or accumulation site and a market. (Eff. 10/9/83, Reg. 88)

Authority: AS 46.03.020(10)
AS 46.06.010(7)

18 AAC 60.100. PRESUMPTIVE PROOF OF ILLEGAL DISPOSAL. Repealed 10/9/83.

18 AAC 60.110. ABATEMENT ORDER. Repealed 10/9/83.

18 AAC 60.115. IDENTIFICATION OF SOLID WASTE MANAGEMENT REGIONS. Repealed 10/9/83.

18 AAC 60.120. PENALTIES. Repealed 10/9/83.

18 AAC 60.130. DEFINITIONS. Repealed 10/9/83.

ARTICLE 2.
PERMITS

Section
200. Permit requirement
210. Application for permit
220. Permit issuance
230. General permits

18 AAC 60.200. PERMIT REQUIREMENT. (a) A person who constructs, modifies, or operates a solid waste disposal site shall do so in accordance with a waste disposal permit issued to that person by the department. A permit is not required for a single-family or duplex residence or a farm where solid waste is generated and disposed of on the premises.

(b) Persons holding valid permits on October 9, 1983 shall have until July 1, 1984, to meet the requirements of this chapter, unless a waiver is granted by the department under 18 AAC 60.900. (Eff. 10/9/83, Reg. 88)

Authority: AS 46.03.020(10)
AS 46.03.100

18 AAC 60.210. APPLICATION FOR PERMIT. (a) A person required by 18 AAC 60.200 to have a waste disposal permit shall submit a complete application using forms supplied or approved by the department.

(b) The application must clearly show how the proposed activity will comply with this chapter, and must include two copies of

(1) a completed application form;

(2) detailed plans and specifications for the solid waste disposal site showing the existing conditions, the proposed development steps, and the proposed appearance and use of the completed site;

(3) a map or aerial photograph of a scale at least one inch to the mile showing the location of the proposed site and its boundaries, the location of all buildings, railroads, roads, surface waters, wells, and surface contours within one-half mile, and the location of all airports within two miles of the site;

(4) a description of the proposed development and operating procedures and of the ways that water pollution, disease vectors, wildlife access, safety hazards, and litter, odor, and other nuisances will be controlled;

(5) an evaluation of the site's leachate generation and water pollution potential based on waste quantity and type, site geology, hydrology, and other physical conditions;

(6) a certification of compliance with local ordinances and zoning requirements;

(7) a written statement from the landowner, if a person other than the applicant, giving the applicant permission to conduct the proposed activity; and

(8) any other information the department may require.

(c) The department will, in its discretion, require an applicant to determine the quality of surface waters near the proposed site, and to submit this data with the application.

(d) A person applying for a waste disposal permit must follow the procedures described in

18 AAC 15.020 – 18 AAC 15.100. (Eff. 10/9/83, Reg .88)
Authority: AS 46.03.020(10)
AS 46.03.110

18 AAC 60.220. PERMIT ISSUANCE. (a) The department will base its decision to issue or deny a permit on the proposed activity's probable compliance with

(1) this chapter;

(2) the air quality control regulations, 18 AAC 50;

(3) the water quality standards, 18 AAC 70;

(4) the wastewater disposal regulations, 18 AAC 72;

(5) the Alaska Coastal Zone Management Act, AS 46.40;

(6) the Alaska Historic Preservation Act, AS 41.35; and

(7) local ordinances and zoning requirements.

(b) The department will, in its discretion, attach conditions to the permit to ensure compliance with state laws and regulations, including conditions which address facility design, construction, operation, and monitoring, and the posting of a bond or other surety to guarantee permit compliance. (Eff. 10/9/83, Reg. 88)
Authority: AS 46.03.020(10)

18 AAC 60.230. GENERAL PERMITS. (a) The department will, in its discretion and on its own motion or upon application by any person, issue a general permit for several solid waste disposal activities which

(1) involve the same type of operation;

(2) dispose of the same types of solid waste; and

(3) in the opinion of the deputy commissioner, are better controlled by a general permit than by individual permits.

(b) A person wishing to apply for a general permit must follow the procedures in 18 AAC 15.020 – 18 AAC 15.100 and 18 AAC 60.210.

(c) The department will, in its discretion, restrict the general permit to a specific area or set of physical site conditions.

(d) The department will, in its discretion, require a person with a general permit to apply for and obtain an individual permit when

(1) the activity does not comply with the general permit;

(2) the activity is causing pollution that threatens public health or the environment; or

(3) a change occurs in the availability of demonstrated technology or practices for the control or abatement of pollution from the disposal activity. (Eff. 10/9/83, Reg. 88)
Authority: AS 46.03.020(10)
AS 46.03.100

ARTICLE 3.
REGULATORY MONITORING AND COMPLIANCE

Section
300. Surface water
310. Groundwater
320. Records

18 AAC 60.300. SURFACE WATER. The permit holder shall monitor surface water as set out in the permit. (Eff. 10/9/83, Reg. 88)
Authority: AS 46.03.020(10)

18 AAC 60.310. GROUNDWATER. The permit holder shall

(1) install at least three groundwater monitoring wells, two of which must be located down gradient from the solid waste fill, at disposal sites

(A) serving an annual average population of at least 2,000;

(B) receiving an annual average of five or more tons of waste per day; or

(C) found by the department to have a significant potential for violating 18 AAC 70;

(2) analyze the groundwater quality at all new sites listed in (1) of this section for pH, temperature, iron, chloride, chemical oxygen demand, specific conductance, and any other characteristics the department may require before depositing any waste;

(3) install more groundwater monitoring wells if required by the permit; and

(4) monitor groundwater as set out in the permit. (Eff. 10/9/83, Reg. 88)

Authority: AS 46.03.020(10)

18 AAC 60.320. RECORDS. The permit holder shall prepare and annually update as-built or record drawings showing the location and volume of waste deposited at the solid waste disposal site and shall file those drawings with the department when the site is closed. (Eff. 10/9/83, Reg. 88)

Authority: AS 46.03.020(10)

ARTICLE 4. RESPONSIBILITIES

Section
400. Responsibility
410. Post-Closure Responsibility

18 AAC 60.400. RESPONSIBILITY. (a) A person who owns or operates a property or establishment where solid waste is accumulated shall store the waste in a neat, safe, and sanitary way until it can be disposed of.

(b) A person who owns or operates a property shall remove accumulated solid waste to a permitted solid waste disposal site, subject to the exception of 18 AAC 60.200(a). Contractual or other arrangements for the removal of accumulated solid waste do not relieve a person of this responsibility.

(c) A person sponsoring a public activity, including recreational, sporting, or entertainment events, shall collect, store, transport, and dispose of the solid waste generated during the event.

(d) Animal carcasses, except big game animals subject to 5 AAC 81.216(b), must be disposed of by the owner or occupant of the land where the carcass is found. (Eff. 10/9/83, Reg. 88)

Authority: AS 46.03.020(10)

18 AAC 60.410. POST-CLOSURE RESPONSIBILITY. The owner of a closed or abandoned solid waste disposal site shall

(1) maintain the integrity of the soil cover, slopes, vegetation, drainage structures, groundwater monitoring facilities, liners, caps, and gas venting structures;

(2) continue all monitoring programs established under a permit for 10 years after the site closes, or longer if the department determines that special circumstances require; and

(3) correct any water or air quality violations or decomposition gas hazards caused by the deposited wastes or their interaction with the environment. (Eff. 10/9/83, Reg. 88)

Authority: AS 46.03.020(10)

ARTICLE 5. GENERAL PROVISIONS

Section
900. Waivers
910. Definitions

18 AAC 60.900. WAIVERS. (a) The department will, in its discretion and upon written application, grant a waiver from one or more provisions of this chapter if the applicant

(1) identifies the provision to be waived;

(2) shows that compliance with the identified provision would, because of unusual conditions, impose a substantial financial, technological, or safety burden on the applicant or the public without equal value to the public or protection of the environment; and

(3) shows that the proposed operation will protect public health and welfare, natural resources, and the environment and will be consistent with the provisions of this chapter.

(b) In granting a waiver, the department will, in its discretion, impose permit conditions to assure that public health and the environment are protected. (Eff. 10/9/83, Reg. 88)

Authority: AS 46.03.020(10)

18 AAC 60.910. DEFINITIONS. In this chapter

(1) "approved" means approved in writing by the department;

(2) "controlled burning" means the burning of solid waste using containment, combustion air control, or other methods that yield complete combustion, assure the safety of persons and property, and comply with 18 AAC 50;

(3) "cover material" means soil or other approved material used to cover solid waste disposed of at a landfill;

(4) "department" means the Department of Environmental Conservation;

(5) "deputy commissioner" means the deputy commissioner of environmental conservation;

(6) "disease vector" means a carrier that can transmit a pathogen from one organism to another and includes flies and other insects, rodents, birds, and vermin;

(7) "disposal" means discharging, depositing, injecting, dumping, spilling, leaking, or placing solid waste into or on land or water so that the waste or any part or byproduct of the waste may enter the environment;

(8) "drill muds" means the fluids composed of clays, oil, water, and chemical additives used by oil well and other deep drilling operations to lubricate the drilling bit, maintain hydrostatic pressure control in the well, remove drill cuttings from the well, and stabilize the walls of the well during drilling;

(9) "final cover" means a layer of at least 24 inches of cover material, the uppermost six inches of which is soil that sustains plant growth;

(10) "groundwater table" means the upper surface of a zone of fully saturated soil at which the groundwater is subjected to atmospheric pressure;

(11) "hazardous waste" means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or biological characteristics may cause or significantly contribute to

(A) an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(B) a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed;

(12) "household waste" means any solid waste generated in single and multiple residences, hotels, and motels;

(13) "intermediate cover" means a layer of cover material at least 12 inches thick;

(14) "landfill" means to dispose of solid waste on or into the land; "landfill" also means the site or facility where landfilling occurs;

(15) "landspreading" means to dispose of solid waste, primarily sludges and composted organics, by application to the land surface or by incorporation into the upper three feet of soil;

(16) "leachate" means liquid that has passed through or emerged from solid waste and contains dissolved or suspended materials from the waste;

(17) "lift" means the vertical thickness of a compacted volume of solid waste and the cover material above it;

(18) "operational cover" means the cover material applied at specified intervals during the operation of a landfill;

(19) "permafrost" means soil in which the naturally occurring temperature has remained below 0°C (32°F) for two or more consecutive years;

(20) "person" means a natural person, partnership, company, corporation, joint venture, association, trust, or governmental agency;

(21) "processing" means changing solid waste characteristics, composition, or volume to improve waste manageability using chemical, physical, or biological means such as incineration, pyrolysis, baling, composting, shredding,

magnetic separation, screening, or source separation;

(22) "putrescible waste" means material that can decompose and cause obnoxious odors;

(23) "recyclable waste metals" means copper, brass, bronze, aluminum, lead, zinc, and ferrous metals, except steel cans and those metals that are bonded or fused to other materials and cannot be readily separated;

(24) "runoff" means the portion of precipitation that drains from an area as surface flow;

(25) "salvage area" means an area at a solid waste disposal site where waste material is segregated or stored before removal for recycling or reuse;

(26) "salvaging" means the controlled removal of waste materials for recycling or reuse;

(27) "septage" means sludge from a septic tank;

(28) "sewage sludges" means the organic sludges generated by municipal wastewater collection and treatment activities, and may include primary, secondary, and digested sludges, grit, and screenings;

(29) "sludge" means any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other waste with similar characteristics and effects;

(30) "solid waste" means garbage, refuse, sludge, and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, and agricultural operations, and from community activities; "solid waste" does not include

(A) spoil and overburden from road construction, land clearing, or mining operations;

(B) dissolved material in domestic sewage;

(C) industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1342);

(D) source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended; or

(E) mining waste regulated by the Federal Surface Mining Control and Reclamation Act of 1977;

(31) "solid waste disposal site" means a landfill, a landspreading facility, or other facility used for the final disposal of solid waste, and includes the land upon which the facility is located;

(32) "surface water" means lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, oceans within the territorial limits of the state, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private;

(33) "transfer station" means a public use facility for the deposit and temporary storage of solid waste with a containment capacity of at least 20 cubic yards; and

(34) "working face" means that portion of a landfill where waste is consolidated and compacted before placement of cover material. (Eff. 10/9/83, Reg. 88)

Authority: AS 46.03.020(10) AS 46.03.820(a)
AS 46.03.100 AS 46.06.080
AS 46.03.296

CHAPTER 64.
LITTER RECEPTACLES

Section
- 5. General requirements
- 10. Placement
- 15. Minimum standards
- 20. Anti-litter symbol
- 25. Maintenance
- 250. Definitions

18 AAC 64.005. GENERAL REQUIREMENTS. (a) A person who owns or operates any of the following public places shall provide litter receptacles as required in this chapter:

(1) designated rest areas and scenic view points along public highways outside urban areas;

(2) parks and recreation areas accessible by road;

(3) campgrounds and trailer parks for transient use;

(4) service stations;

(5) fast-food restaurants, self-service refreshment areas, taverns, grocery stores, and shopping malls;

(6) parking lots for more than 50 vehicles;

(7) marinas, boat launching areas, and marine fueling stations;

(8) piers, docks, and small boat harbors accessible by road;

(9) central business district sidewalks in cities and organized boroughs;

(10) designated bus stops for public transportation systems used by at least 30 persons daily in communities of less than 10,000 people or 20 persons in any hour in communities over 10,000 people;

(11) schoolgrounds; and

(12) sites for sporting events, fairs, carnivals, circuses, festivals, and other similar public events.

CHAPTER 70.
WATER QUALITY STANDARDS

Section
10. General
15. Short-term variance
20. Protected water uses and criteria
30. Procedure for applying water quality criteria
32. Mixing zones
34. Thermal discharges
40. (Consolidated into 18 AAC 70.010)
50. Classification of state waters
55. Procedure for reclassification
58. Classification criteria
60. (Repealed)
70. (Consolidated into 18 AAC 70.020)
80. (Consolidated into 18 AAC 72)
81. (Repealed)
82. (Repealed)
83. (Repealed)
84. (Repealed)
85. (Repealed)
86. Enforcement discretion
90. (Consolidated into 18 AAC 72)
100. (Repealed)
110. Definitions

18 AAC 70.010. GENERAL. (a) No person may conduct an operation which causes or contributes to a violation of the water quality standards established by this chapter.

(b) The water quality standards set by this chapter apply to human activities which result in alterations to waters within the jurisdiction of the state. These water quality standards constitute the degree of degradation which may not be exceeded in a water body.

(c) Waters having natural characteristics which are of a higher quality than the water quality criteria for protected uses established in 18 AAC 70.020 must be maintained at the existing quality, except where

(1) under 18 AAC 70.015 or 18 AAC 70.055, it is demonstrated to the satisfaction of the department that limited degradation of the water body may be allowed;

(2) it has been demonstrated to the department that a reduction of water quality is justifiable as a result of necessary economic or social development;

(3) the reduction of water quality will not injure present or potential uses of the waters; and

(4) all wastes and other materials and substances proposed for discharge into the waters are provided with all known available and feasible methods of treatment as determined by the department before discharge.

(d) No person may discharge or cause the discharge of any waste or substance into waters within the jurisdiction of the state without first treating and controlling the discharge to ensure that the quality of the receiving water does not violate the water quality standards set by this chapter.

(e) The department will, in its discretion, issue a compliance order for activities or sources of waste or substances in existence on December 19, 1982 that cause a violation of the water quality standards set by this chapter. The compliance order must provide a detailed plan to bring the activity into compliance with this section. The department will set requirements and schedules for bringing the waste, substance, or activity into compliance in an expeditious manner and will consider the impact of the violation upon the overall environmental quality of the area, including air, land, water, energy, and aesthetic uses. (In effect before 7/28/59; am 5/24/70, Reg. 34; am 8/28/71, Reg. 39; am 10/22/72, Reg. 44; am 2/2/79, Reg. 69; am 12/19/82, Reg. 84)

Authority: AS 46.03.010 AS 46.03.080
AS 46.03.020 AS 46.03.100
AS 46.03.070

18 AAC 70.015. SHORT-TERM VARIANCE. (a) A short-term variance from the criteria established in 18 AAC 70.020 will, in the department's discretion, be allowed for nonpoint sources, and for temporary activities associated with the placement of dredged or fill material, affecting a specific water body when necessary to accommodate essential activities, respond to emergencies, or to protect the public interest. Short-term variances must be authorized in writing by the commissioner or his designee under conditions the commissioner, in his discretion, will prescribe, even though the activities may result in a temporary exceeding of the water quality criteria for the water involved. A short-term variance will be granted only after the applicant has demonstrated to the satisfaction of the commissioner that the wastes, materials, or substances which will exceed the water criteria limits are provided with all known available and feasible methods of treatment before entering state waters, and if the activity for which the variance is sought

(1) will have no actual or potential adverse impact on a protected use of the waters involved beyond the term of the variance granted;

(2) will be kept to a minimum impact and time frame, utilizing all known available and feasible methods of mitigation;

(3) when completed, will not result in a continuing or recurring reduction of water quality; and

(4) when completed, the water quality will return within the shortest feasible time to that existing before the activity for which the short-term variance was requested unless, as provided for in 18 AAC 70.010, it is found that a limited degradation of the water in question is justifiable.

(b) A variance under this section may be authorized on either an area or project basis or for specific individual events, as determined by the commissioner.

(c) A person seeking a short-term variance of the water quality criteria shall submit a written request to the commissioner. The request must contain the location, time, duration, and type of activity requiring the variance; reasons why the activity is required; the geographical extent and quantified degree of variance from the applicable criteria required; detailed plans of construction or operational techniques proposed; and an estimate of the impact of the activity on the uses of the waters involved, including recreational use and use for habitat, food chain, rearing, growth, or migration by fish, shellfish, other aquatic life, mammals, and wildlife, including seabirds, waterfowl and furbearers. The commissioner will, in his discretion, treat an application for a U.S. Army Corps of Engineers' permit as an application for a short-term variance for temporary activities associated with the placement of dredged or fill

material when the commissioner determines that a variance is needed for certification of the activity. Upon the commissioner's request, the applicant shall submit additional information required for processing of an application for a short-term variance.

(d) If the commissioner determines that the application may generate substantial controversy, he will issue public notice of the application under (e) of this section. If public notice is not issued, the commissioner will obtain the staff recommendation on the application within 20 days of receipt of the application, and will issue the department's decision within 10 days after receipt of the staff recommendation.

(e) If the commissioner determines to issue public notice under (d) of this section, he will, within 10 days of receipt of the application, publish notice of the application in two editions of a newspaper in general circulation within the area which will be most significantly affected by the decision, and in other media the commissioner deems appropriate. The notice will summarize the substance of the request, and will identify the office of the department where copies of the request and supporting documents may be obtained. Public comment will be considered timely if it is submitted within 30 days of the second publication of notice. A mailing list of interested persons and organizations wishing to receive copies of the public notice will be maintained by the department for mailing at the time notice is given.

(f) Within 10 days of the close of the public notice period, a staff person designated by the commissioner will issue a recommendation. The recommendation will include the basis for recommending approval or disapproval of the variance request. Where public comment adverse to the request has been received by the department, and where the staff recommendation is to approve the request, it will state the staff rationale for the recommendation. The rationale for a recommended denial will also be provided. The staff recommendation will be forwarded to the commissioner for his review. The recommendation will be served on the applicant, and on all persons who submitted timely written comments.

(g) Within 10 days of service of the staff's recommendation, the applicant, or any other person who submitted timely written comments on the application, may serve upon the commissioner comments on the recommendation. All comments served, and all supplemental matters submitted by the staff, will be placed in a record file. The record file will be closed 10 days after the deadline for serving comments under this subsection.

(h) Within 10 days of closing the record file, the commissioner, or his designee, based upon the matters contained in the record file, will affirm, modify or reverse the staff's recommendation. The commissioner or his designee will, in his discretion, adopt the findings and conclusions in the staff recommendation by reference. The decision will be served on the applicant and all persons who submitted timely written comments.

(i) The commissioner or his designee will, in his discretion, include conditions in the short-term variance necessary to insure that disturbance to water quality and protected uses, including recreational use and use for habitat, food chain, rearing, growth, or migration by fish, shellfish, other aquatic life, mammals, and wildlife, including seabirds, waterfowl and furbearers, is minimized. (Eff. 2/2/79, Reg. 69; am 4/23/79, Reg. 70; am 9/19/79, Reg. 71)

Authority: AS 46.03.010
AS 46.03.070
AS 46.03.080

18 AAC 70.020. PROTECTED WATER USES AND CRITERIA. (a) Uses of waters of the state protected by water quality criteria established in (b) of this section are

(1) Fresh waters

(A) Water supply

(i) drinking, culinary and food processing,

(ii) agriculture, including irrigation and stock watering,

(iii) aquaculture,

(iv) industrial, including any water supply used in association with a manufacturing or production enterprise (other than food processing) including mining, placer mining, energy production or development;

(B) Water recreation

(i) contact recreation,

(ii) secondary recreation;

(C) Growth and propagation of fish, shellfish, other aquatic life, and wildlife including waterfowl and furbearers;

(2) Marine waters

(A) Water supply

(i) aquaculture,

(ii) seafood processing,

(iii) industrial, including any water supply used in association with a manufacturing or production enterprise (other than food processing) including mining, placer mining, energy production or development;

(B) Water recreation

(i) contact recreation,

(ii) secondary recreation;

(C) Growth and propagation of fish, shellfish, other aquatic life, and wildlife

including seabirds, waterfowl and furbearers;

(D) Harvesting for consumption of raw mollusks or other raw aquatic life;

(b) Water quality criteria applicable to each protected water use are

WATER QUALITY CRITERIA

WATER QUALITY PARAMETERS → / FRESH WATER USES ↓	(1) FECAL COLIFORM BACTERIA (FC) (See Note 1)	(2) DISSOLVED GAS	(3) pH (Variation of pH for waters naturally outside the specified range shall be towards the range.)
(A) Water Supply (i) drinking, culinary and food processing	Based on a minimum of 5 samples taken in a period of 30 days, mean shall not exceed 20 FC/100 ml, and not more than 10% of the samples shall exceed 40 FC/100 ml. For groundwater the FC concentration shall be less than 1 FC/100 ml when using the fecal coliform Membrane Filter Technique or less than 3 FC/100 ml when using the fecal coliform MPN technique.	Dissolved oxygen (D.O.) shall be greater than or equal to 6 mg/l. (This does not apply to bays or reservoirs in which supplies are taken from below the thermocline or to groundwaters).	Shall not be less than 6.0 or greater than 8.5. Shall not vary more than 0.5 pH unit from natural condition.
(A) Water Supply (ii) agriculture including irrigation and stock watering	For products normally cooked and for dairy sanitation of pasteurized products the mean, based on a minimum of 5 samples taken in a period of 30 days, shall not exceed 200 FC/100 ml and not more than 10% of the samples shall exceed 400 FC/100 ml. For products not normally cooked and for dairy sanitation of unpasteurized products the criteria for drinking water supply 1(A)(i) shall apply.	D.O. shall be greater than 3 mg/l in surface waters.	Shall not be less than 5.0 or greater than 9.0 for dairy sanitation; pH shall not be less than 6.8 or greater than 8.5.
(A) Water Supply (iii) aquaculture	For products normally cooked the mean, based on a minimum of 5 samples taken in a period of 30 days, shall not exceed 200 FC/100 ml and not more than 10% of the samples shall exceed 400 FC/100 ml. For products not normally cooked the criteria for drinking water supply 1(A)(i) shall apply.	D.O. shall be greater than 7 mg/l in surface waters. The concentration of total dissolved gas shall not exceed 110% of saturation at any point of sample collection.	Shall not be less than 6.5 or greater than 8.5. Shall not vary more than 0.5 pH unit from natural condition.
(A) Water Supply (iv) industrial, including any water supplies used in association with a manufacturing or production enterprise (other than food processing), including mining, placer mining, energy production or development.	Where worker contact is present, the mean FC bacteria concentration, based upon a minimum of 5 samples taken in a 30 day period, shall not exceed 200 FC/100 ml, not more than 10% of the samples shall exceed 400 FC/100 ml.	Shall not cause detrimental effects on established water supply treatment levels.	Shall not be less than 5.0 or greater than 9.0.
(B) Water Recreation: (i) contact recreation	Based on a minimum of 5 samples taken in a 30 day period, the mean shall not exceed 20 FC/100 ml, and not more than 10% of the total samples shall exceed 40 FC/100 ml.	D.O. shall be greater than or equal to 4 mg/l.	Shall not be less than 6.5 or greater than 8.5. Shall not vary more than 0.5 pH unit from natural condition. If the natural condition pH is outside this range, substances shall not be added that cause an increase in buffering capacity of the water.
(B) Water Recreation (ii) secondary recreation	Based on a minimum of 5 samples taken in a 30 day period, the mean shall not exceed 200 FC/100 ml, and not more than 10% of the total samples shall exceed 400 FC/100 ml.	D.O. shall be greater than or equal to 4 mg/l.	Shall not be less than 5.0 or greater than 9.0.
(C) Growth and Propagation of Fish, Shellfish, other Aquatic Life, and Wildlife, including Waterfowl and Furbearers	Not applicable.	D.O. shall be greater than 7 mg/l in waters used by anadromous and resident fish. In no case shall D.O. be less than 5 mg/l to a depth of 20 cm in the interstitial waters of gravel utilized by anadromous or resident fish for spawning. (See Note 2). For waters not used by anadromous or resident fish, D.O. shall be greater than or equal to 5 mg/l. In no case shall D.O. above 17 mg/l be permitted. The concentration of total dissolved gas shall not exceed 110% of saturation at any point of sample collection.	Shall not be less than 6.5 or greater than 9.0. Shall not vary more than 0.5 pH unit from natural condition.

The water quality criteria, when used in combination with the water use designation, constitute the water quality standard for a particular water body. The water quality standards regulate human activities which result in alterations to waters within the jurisdiction of the state.

(4) TURBIDITY (not applicable for groundwaters)	(5) TEMPERATURE	(6) DISSOLVED INORGANIC SUBSTANCES
Shall not exceed 5 NTU above natural conditions when the natural turbidity is 50 NTU or less, and not have more than 10% increase in turbidity when the natural condition is more than 50 NTU, not to exceed a maximum increase of 25 NTU.	Shall not exceed 15° C.	Total dissolved solids (TDS) from all sources shall not exceed 500 mg/l. Neither chlorides nor sulfates shall exceed 200 mg/l.
Shall not cause detrimental effects on indicated use.	Shall not exceed 30°C.	TDS shall not exceed 1,000 mg/l. Sodium absorption ratio less than 2.5, sodium percentage less than 60%, residual carbonate less than 1.25 mg/l, and boron less than 0.3 mg/l. (See Note 7)
Shall not exceed 25 NTU above natural condition level. For all lake waters shall not exceed 5 NTU over natural conditions.	Shall not exceed 20°C at any time. The following maximum temperature shall not be exceeded where applicable: Migration routes: 15°C Spawning areas: 13°C Rearing areas: 15°C Egg & Fry incubation: 13°C For all other waters the weekly average temperature shall not exceed site specific requirements needed to preserve normal species diversity or to prevent appearance of nuisance organisms.	Total dissolved solids shall not exceed a maximum of 1,500 mg/l including natural conditions. Increase in TDS shall not exceed one third of the concentration of the natural condition of the body of water.
Shall not cause detrimental effects on established water supply treatment levels.	Shall not exceed 25°C.	No amounts above natural conditions which can cause corrosion, scaling, or process problems.
Shall not exceed 5 NTU above natural conditions when the natural turbidity is 50 NTU or less, and not have more than 10% increase in turbidity when the natural condition is more than 50 NTU, not to exceed a maximum increase of 15 NTU. Shall not exceed 5 NTU over natural conditions for all lake waters.	Shall not exceed 30°C.	Not applicable.
Shall not exceed 10 NTU over natural conditions when natural turbidity is 50 NTU or less, and not have more than 20% increase in turbidity when the natural condition is more than 50 NTU, not to exceed a maximum increase of 50 NTU. For all lake waters turbidity shall not exceed 5 NTU over natural conditions.	Not applicable.	Not applicable.
Shall not exceed 25 NTU above natural condition level. For all lake waters shall not exceed 5 NTU over natural conditions.	Shall not exceed 20°C at any time. The following maximum temperature shall not be exceeded where applicable: Migration routes: 15°C Spawning areas: 13°C Rearing areas: 15°C Egg & Fry incubation: 13°C For all other waters the weekly average temperature shall not exceed site specific requirements needed to preserve normal species diversity or to prevent appearance of nuisance organisms.	Total dissolved solids shall not exceed a maximum of 1,500 mg/l including natural conditions. Increase in TDS shall not exceed one third of the concentration of the natural condition of the body of water.

WATER QUALITY CRITERIA (Continued)

WATER QUALITY PARAMETERS → / FRESH WATER USES ↓	(7) SEDIMENT (NOT APPLICABLE TO GROUNDWATER SUPPLIES)	(8) TOXIC AND OTHER DELETERIOUS ORGANIC AND INORGANIC SUBSTANCES	(9) COLOR (See Note 12)
(A) Water Supply (i) drinking, culinary and food processing	No measurable increase in concentrations of sediment above natural conditions.	Substances shall not exceed Alaska Drinking Water Standards (See Note 5) or EPA Quality Criteria for Water (See Note 6) as applicable to substance.	Shall not exceed 75 color units where water supply is or will be treated. Shall not exceed 5 color units where water supply is not treated.
(A) Water Supply (ii) agriculture, including irrigation and stock watering	For sprinkler irrigation, water shall be free of particles of 0.074 mm or coarser. For irrigation or water spreading, shall not exceed 200 mg/l for an extended period of time.	Same as (1)(A)(ii) where contact with a product destined for subsequent human consumption is present. Same as (1)(C) or Federal Water Pollution Control Administration, Water Quality Criteria (WQC:FWPCA) as applicable to substances for stockwaters; concentrations for irrigation waters shall not exceed WQC:FWPCA or WQC 1972 (See Notes 7 and 8).	Not applicable
(A) Water Supply (iii) aquaculture	No imposed loads that will interfere with established water supply treatment levels.	Substances shall not individually or in combination exceed 0.01 times the lowest measured 96 hour LC50 (See Note 9) for life stages of species identified by the department as being the most sensitive biologically important to the situation, or exceed criteria cited in EPA Quality Criteria for Water or Alaska Drinking Water Standards, (See Notes 6 and 5), whichever concentration is less. Substances shall not be present or exceed concentrations which individually or in combination impart undesirable odor or taste to fish or other aquatic organisms as determined by either bioassay or organoleptic tests (See Notes 6 and 9).	Shall not exceed 50 color units.
(A) Water Supply (iv) industrial, including any water supplies used in association with a manufacturing or production enterprise (other than food processing), including mining, placer mining, energy production or development.	No imposed loads that will interfere with established water supply treatment levels.	Substances shall not be present which pose hazards to worker contact.	Shall not cause detrimental effects on established water supply treatment levels.
(B) Water Recreation (i) contact recreation	No increase in concentrations above natural conditions.	Same as (1)(A)(i)	Shall not exceed 15 color units.
(B) Water Recreation (ii) secondary recreation	Shall not pose hazards to incidental human contact or cause interference with the use.	Substances shall not be present which pose hazards to incidental human contact.	Shall not interfere with or make the water unfit or unsafe for the use.
(C) Growth and Propagation of Fish, Shellfish, other Aquatic Life and Wildlife, including Waterfowl and Furbearers	The percent accumulation of fine sediment in the range of 0.1 mm to 4.0 mm in the gravel bed of waters utilized by anadromous or resident fish for spawning may not be increased more than 5% by weight over natural conditions (as shown from grain size accumulation graphs). In no case may the 0.1 mm to 4.0 mm fine sediment range in the gravel bed of waters utilized by anadromous or resident fish for spawning exceed a maximum of 30% by weight (as shown from grain size accumulation graphs). (See Notes 3 and 4). In all other surface waters no sediment loads (suspended or deposited) which can cause adverse effects on aquatic animal or plant life, their reproduction or habitat.	Substances shall not individually or in combination exceed 0.01 times the lowest measured 96 hour LC50 (See Note 9) for life stages of species identified by the department as being the most sensitive biologically important to the location or exceed criteria cited in EPA Quality Criteria for Water or Alaska Drinking Water Standards. (See Notes 6 and 5) whichever concentration is less. Substances shall not be present or exceed concentrations which individually or in combination impart undesirable odor or taste to fish or other aquatic organisms as determined by either bioassay or organoleptic tests (See Notes 6 and 9).	Color or apparent color shall not reduce the depth of the compensation point for photosynthetic activity by more than 10% from the seasonally established norm for aquatic life. For all waters not having a seasonally established norm for aquatic life color or apparent color shall not exceed 50 color units.

The water quality criteria, when used in combination with the water use designation, constitute the water quality standard for a particular water body. The water quality standards regulate human activities which result in alterations to waters within the jurisdiction of the state.

(10) PETROLEUM HYDROCARBONS, OILS AND GREASE (See Note 16)	(11) RADIOACTIVITY	(12) TOTAL RESIDUAL CHLORINE	(13) RESIDUES Floating Solids, Debris, Sludge, Deposits, Foam, Scum (not applicable to ground water supplies) (See Note 17)	FRESH WATER USES
Shall not cause a visible sheen upon the surface of the water. Shall not exceed concentrations which individually or in combination impart odor or taste as determined by organoleptic tests.	Shall not exceed the concentrations specified in the Alaska Drinking Water Standards (See Note 3) and shall not exceed limits specified in Title 10, Code of Federal Regulations, Part 20 (See Note 13) or National Bureau of Standards, Handbook 69, (See Note 14)	Not applicable	Shall not alone or in combination with other substances or wastes make water unfit or unsafe for use, cause a film, sheen or discoloration on the surface of the water or adjoining shoreline, cause leaching of toxic or deleterious substances or cause a sludge, solid or emulsion to be deposited beneath or upon the surface of the water within the water column, on the bottom, or upon adjoining shorelines.	(A) (i)
Shall not cause a visible sheen upon the surface of the water.	Same as (1)(A)(i).	Not applicable.	Shall not be present in quantities to cause soil plugging, reduced crop yield, or cause the water to be unfit or unsafe for the use.	(A) (ii)
Shall not exceed 0.01 times the continuous flow 96 hour LC_{50} or if not available the static test 96 hour LC_{50} for the species involved. (See Notes 9 and 10)	Same as (1)(A)(i) except concentration factors for organisms involved shall not exceed maximum permissible limits for specific radionuclides or unidentified mixtures as established by Title 10, Code of Federal Regulations, Part 20, (See Note 13) and National Bureau of Standards, Handbook 69, (See Note 14).	Shall not exceed 2.0 ug/l for salmonoid fish or 10.0 ug/l for other organisms (See Note 6)	Shall not alone or in combination with other substances or wastes cause the water to be unfit or unsafe for the use.	(A) (iii)
Shall not make the water unfit or unsafe for the use.	Same as (1)(A)(i).	Not applicable.	Shall not alone or in combination with other substances or wastes cause the water to be unfit or unsafe for the use.	(A) (iv)
Shall not cause a film, sheen, or discoloration on the surface or floor of the water body or adjoining shorelines. Surface waters shall be virtually free from floating oils.	Same as (1)(A)(i).	Not applicable.	Shall not alone or in combination with other substances make water unfit or unsafe for use, or cause a film, sheen, or discoloration on the surface of the water or adjoining shoreline, cause leaching of toxic or deleterious substances or cause a sludge, solid or emulsion to be deposited beneath or upon the surface of the water within the water column, on the bottom or upon adjoining shorelines.	(B) (i)
Shall not cause a film, sheen, or discoloration on the surface or floor of the water body or adjoining shorelines. Surface waters shall be virtually free from floating oils.	Same as (1)(A)(i).	Not applicable.	Shall not alone or in combination with other substances make water unfit or unsafe for use or cause a film, sheen or discoloration on the surface of the water or adjoining shoreline, cause leaching of toxic or deleterious substances or a sludge, solid or emulsion to be deposited beneath or upon the surface of the water within the water column, on the bottom, or upon adjoining shorelines.	(B) (ii)
Total hydrocarbons in the water column shall not exceed 15 ug/l, or 0.01 of the lowest measured continuous flow 96 hour LC_{50} for life stages of species identified by the department as the most sensitive, biologically important species in a particular location whichever concentration is less (See Note 9 and 10). Total aromatic hydrocarbons in the water column shall not exceed 10 ug/l, or 0.01 of the lowest measured continuous flow 96 hour LC_{50} for life stages of species identified by the department as the most sensitive biologically important species in a particular location, whichever concentration is less (See Note 10 and 11). Concentrations of hydrocarbons, animal fats or vegetable oils in the sediment shall not cause deleterious effects to aquatic life. Shall not cause a film, sheen, or discoloration on the surface or floor of the water body or adjoining shorelines. Surface waters shall be virtually free from floating oils.	Same as (1)(A)(iii).	Shall not exceed 2.0 ug/l for salmonoid fish or 10.0 ug/l for other organisms (See Note 6)	Shall not alone or in combination with other substances or wastes cause the water to be unfit, unsafe or cause acute or chronic problem levels as determined by bioassay or other appropriate methods. Shall not alone or in combination with other substances cause a film, sheen or discoloration on the surface of the water or adjoining shoreline or cause leaching of toxic or deleterious substances or cause a sludge, solid or emulsion to be deposited beneath or upon the surface of the water within the water column, on the bottom or upon the adjoining shorelines.	(C)

WATER QUALITY CRITERIA

WATER QUALITY PARAMETERS → / MARINE WATER USES ↓	(1) FECAL COLIFORM BACTERIA (FC) (See Note 1)	(2) DISSOLVED GAS	(3) pH (Variation of pH for waters naturally outside the specified range shall be towards the range.)
(A) Water Supply (i) aquaculture	For products normally cooked the mean, based on a minimum of 5 samples taken in a period of 30 days, shall not exceed 200 FC/100 ml and not more than 10% of the samples shall exceed 400 FC/100 ml. For products not normally cooked the mean, based on a minimum of 5 samples taken in a period of 30 days shall not exceed 20 FC/100 ml, and not more than 10% of the samples shall exceed 40 FC/100 ml.	Surface dissolved oxygen (D.O.) concentrations in coastal water shall not be less than 6.0 mg/l for a depth of 1 meter except when natural conditions cause this value to be depressed. D.O. shall not be reduced below 4 mg/l at any point beneath the surface. D.O. concentrations in estuaries and tidal tributaries shall not be less than 5.0 mg/l except where natural conditions cause this value to be depressed. In no case shall D.O. levels above 17 mg/l be permitted. The concentration of total dissolved gas shall not exceed 110% of saturation at any point of sample collection.	Shall not be less than 6.5 or greater than 8.5 and shall not vary more than 0.1 pH unit from natural condition.
(A) Water Supply (ii) seafood processing	Based on a minimum of 5 samples taken in a period of 30 days, mean shall not exceed 20 FC/100 ml and not more than 10% of the samples shall exceed 40 FC/100 ml.	D.O. shall be greater than or equal to 5 mg/l.	Shall not be less than 6.0 or greater than 8.5. Shall not vary more than 0.5 pH unit from natural condition.
(A) Water Supply (iii) industrial including any water supplies used in association with a manufacturing or production enterprise (other than food processing) including mining, placer mining, energy production or development.	Where worker contact is present the mean FC bacteria concentration, based upon a minimum of 5 samples taken in a period of 30 days, shall not exceed 200 FC/100 ml, not more than 10% of the samples shall exceed 400 FC/100 ml.	Not applicable.	Shall not be less than 5.0 or greater than 9.0.
(B) Water Recreation (i) contact recreation	Based on a minimum of 5 samples taken in a 30 day period the mean shall not exceed 20 FC/100 ml and not more than 10% of the samples shall exceed 40 FC/100 ml.	Same as (2)(A)(i).	Shall not be less than 6.5 or greater than 8.5. If the natural pH condition is outside this range substances shall not be added that cause an increase in buffering capacity of the water.
(B) Water Recreation (ii) secondary recreation	Based on a minimum of 5 samples taken in a 30 day period the mean shall not exceed 200 FC/100 ml, and not more than 10% of the samples shall exceed 400 FC/100 ml.	Same as (2)(A)(i).	Shall not be less than 5.0 or greater than 9.0.
(C) Growth and Propagation of Fish, Shellfish, Aquatic Life, and Wildlife (including Seabirds, Waterfowl, and Furbearers)	Not applicable.	Same as (2)(A)(i).	Shall not be less than 6.5 or greater than 8.5, and shall not vary more than 0.1 pH unit from natural condition.
(D) Harvesting for Consumption of Raw Mollusks or Other Raw Aquatic Life	Based on a 5 tube decimal dilution test the fecal coliform median MPN shall not exceed 14 FC/100 ml, not more than 10% of the samples shall exceed a FC MPN of 43 FC/100 ml (See Note 15).	Same as (2)(A)(i).	Shall not be less than 6.0 or greater than 8.5. Shall not vary more than 0.5 pH unit from natural condition.

The water quality criteria, when used in combination with the water use designation, constitute the water quality standard for a particular water body. The water quality standards regulate human activities which result in alterations to waters within the jurisdiction of the state.

(4) TURBIDITY	(5) TEMPERATURE	(6) DISSOLVED INORGANIC SUBSTANCES	(7) SEDIMENT
Shall not exceed 25 NTU.	Shall not cause the weekly average temperature to increase more than 1°C. The maximum rate of change shall not exceed 0.5°C per hour. Normal daily temperature cycles shall not be altered in amplitude or frequency.	No man-induced alterations shall be made that would cause a change in the water's isohaline patterns of more than ± 10% of the natural variations.	No imposed loads that will interfere with established water supply treatment levels.
Shall not interfere with disinfection.	Shall not exceed 15°C.	Not applicable.	Below normally detectable amounts.
Shall not cause detrimental effects on established levels of water supply treatment.	Shall not exceed 25°C.	No amounts above natural conditions which can cause corrosion, scaling, or process problems.	No imposed loads that will interfere with established water supply treatment levels.
Shall not exceed 25 NTU.	Not applicable.	Not applicable.	No measurable increase in concentrations above natural conditions.
Shall not exceed 25 NTU.	Not applicable.	Not applicable.	Shall not pose hazards to incidental human contact or cause interference with the use.
Shall not reduce the depth of the compensation point for photosynthetic activity by more than 10%. In addition, shall not reduce the maximum secchi disk depth by more than 10%.	Shall not cause the weekly average temperature to increase more than 1°C. The maximum rate of change shall not exceed 0.5°C per hour. Normal daily temperature cycles shall not be altered in amplitude or frequency.	Maximum allowable variation above natural salinity Natural Salinity (parts per thousand) / Man-induced salinity (parts per thousand) 0 to 3.5 / 1 3.5 to 13.5 / 2 13.5 to 35 / 4	No measurable increase in concentrations above natural conditions.
Same as (2)(C)	Same as (2)(C)	Same as 2(A)(i) and/or 2(C) as determined appropriate by the department.	Not applicable.

WATER QUALITY CRITERIA (Continued)

WATER QUALITY PARAMETERS → / MARINE WATER USES ↓	(8) TOXIC AND OTHER DELETERIOUS ORGANIC AND INORGANIC SUBSTANCES	(9) COLOR (See Note 12)	(10) PETROLEUM HYDROCARBONS, OILS AND GREASE (See Note 16)
A) Water Supply (i) aquaculture	Substances shall not individually or in combination exceed 0.01 times the lowest measured 96 hour LC50 (See Note 9) for life stages of species identified by the department as being the most sensitive, biologically important to the situation, or exceed criteria cited in EPA Quality Criteria for Water or Alaska Drinking Water Standards (See Note 6 and 5), whichever concentration is less. Substances shall not be present or exceed concentrations which individually or in combination impart undesirable odor or taste to fish or other aquatic organisms as determined by either bioassay or organoleptic tests (See Note 9).	Shall not exceed 50 color units.	Shall not exceed 0.01 times the continuous flow 96 hour LC50 or if not available the static test 96 hour LC50 for the species involved (See Note 9 and 10)
A) Water Supply (ii) seafood processing	Substances shall not exceed EPA Quality Criteria for Water (See Note 6) as applicable to the substance.	Shall not exceed 75 color units in water supplies which will be treated. Untreated water supplies shall not exceed 5 color units.	Shall not cause a film sheen or discoloration on the surface or floor of the water body or adjoining shorelines. Surface waters shall be virtually free from floating oils. Shall not exceed concentrations which individually or in combination impart odor or taste as determined by organoleptic tests.
A) Water Supply (iii) industrial including any water supplies used in association with a manufacturing or production enterprise (other than food processing) including mining, placer mining, energy production or development.	Substances shall not be present which pose hazards to worker contact.	Not applicable.	Shall not make the water unfit or unsafe for the use.
B) Water Recreation (i) contact recreation	Substances shall not exceed EPA Quality Criteria for Water (See Note 6) as applicable to constituent.	Shall not exceed 15 color units.	Shall not cause a film sheen or discoloration on the surface or floor of the water body or adjoining shorelines. Surface waters shall be virtually free from floating oils.
B) Water Recreation (ii) secondary recreation	Substances shall not be present which pose hazards to incidental human contact.	Surface waters shall be free of substances producing objectionable color.	Shall not cause a film sheen or discoloration on the surface or floor of the water body or adjoining shorelines. Surface waters shall be virtually free from floating oils.
C) Growth and Propagation of Fish Shellfish Aquatic Life and Wildlife Including Seabirds Waterfowl and Furbearers	Substances shall not individually or in combination exceed 0.01 times the lowest measured 96 hour LC50 (See Note 9) for life stages of species identified by the department as being the most sensitive, biologically important to the location, or exceed criteria cited in EPA Quality Criteria for Water or Alaska Drinking Water Standards (See Note 6 and 5), whichever concentration is less. Substances shall not be present or exceed concentrations which individually or in combination impart undesirable odor or taste to fish or other aquatic organisms as determined by either bioassay or organoleptic tests (See Note 6 and 9).	Color or apparent color shall not reduce the depth of compensation point for photosynthetic activity by more than 10% from the seasonally established norm for aquatic life. For all waters not having a seasonally established norm for aquatic life color, or apparent color, shall not exceed 50 color units.	Total hydrocarbons in the water column shall not exceed 15 ug/l or 0.01 of the lowest measured continuous flow 96 hour LC50 for life stages of species identified by the department as the most sensitive biologically important species in a particular location whichever concentration is less (See Note 9 and 10). Total aromatic hydrocarbons in the water column shall not exceed 10 ug/l or 0.01 of the lowest measured continuous flow 96 hour LC50 for life stages of species identified by the department as the most sensitive, biologically important species in a particular location whichever concentration is less (See Note 10 and 11). There shall be no concentrations of hydrocarbons, animal fats, or vegetable oils in the sediment which cause deleterious effects to aquatic life. Surface waters and adjoining shorelines shall be virtually free from floating oil, film, sheen or discoloration.
D) Harvesting for Consumption of Raw Mollusks or Other Raw Aquatic Life	Substances shall not individually or in combination exceed 0.01 times the lowest measured 96 hour LC50 (See Note 9) for life stages of species identified by the department as being the most sensitive, biologically important to the location, or exceed criteria cited in EPA Quality Criteria for Water (See Note 6) whichever concentration is less. Substances shall not be present or exceed concentrations which individually or in combination impart undesirable odor or taste to fish or other aquatic organisms as determined by either bioassay or organoleptic tests (See Note 6 and 9).	Same as (2)(C).	Shall not exceed concentrations which individually or in combination impart undesirable odor or taste to organisms as determined by bioassay and/or organoleptic tests.

The water quality criteria, when used in combination with the water use designation, constitute the water quality standard for a particular water body. The water quality standards regulate human activities which result in alterations to waters within the jurisdiction of the state.

(11) RADIOACTIVITY	(12) TOTAL RESIDUAL CHLORINE	(13) RESIDUES Floating Solids, Debris, Sludge, Deposits, Foam, Scum (See Note 17) IS	MARINE WATER USE
Shall not exceed the concentrations specified in the Alaska Drinking Water Standards (See Note 5). Concentration factor for organisms involved shall not exceed maximum permissible limits for specific radioisotopes and unidentified mixtures as established in Title 10, Code of Federal Regulations, Part 20 (See Note 13) and National Bureau of Standards, Handbook 69 (See Note 14).	Concentration shall not exceed 2.0 ug/l for salmonoid fish or 10.0 ug/l for other organisms (See Note 6).	Shall not alone or in combination with other substances or wastes cause the water to be unfit or unsafe for the use. Shall not cause detrimental effects on established water supply treatment levels.	(A) (i)
Shall not exceed the concentrations specified in the Alaska Drinking Water Standards (See Note 5) and shall not exceed limits specified in Title 10, Code of Federal Regulations, Part 20 (See Note 13) or National Bureau of Standards, Handbook 69 (See Note 14).	Not applicable.	Shall not, alone or in combination with other substances, make the water unfit or unsafe for use; cause a film, sheen, or discoloration on the surface of the water or adjoining shoreline; cause leaching of toxic or deleterious substances; or cause a sludge, solid, or emulsion to be deposited beneath or upon the surface of the water within the water column, on the bottom, or upon adjoining shorelines.	(A) (ii)
Same as (2)(A)(ii).	Not applicable.	Shall not alone or in combination with other substances or wastes cause the water to be unfit or unsafe for the use.	(A) (iii)
Same as (2)(A)(ii).	Not applicable.	Shall not alone or in combination with other substances make the water unfit or unsafe for use, cause a film, sheen, or discoloration on the surface of the water or adjoining shoreline, cause leaching of toxic or deleterious substances, or cause a sludge, solid, or emulsion to be deposited beneath or upon the surface of the water within the water column, on the bottom, or upon adjoining shorelines.	(B) (i)
Same as (2)(A)(ii).	Not applicable.	Shall not alone or in combination with other substances make the water unfit or unsafe for use; cause a film, sheen, or discoloration on the surface of the water or adjoining shoreline; cause leaching of toxic or deleterious substances; or cause a sludge, solid, or emulsion to be deposited beneath or upon the surface of the water, within the water column, on the bottom, or upon adjoining shorelines.	(B) (ii)
Same as (2)(A)(ii).	Concentration shall not exceed 2.0 ug/l for salmonoid fish or 10.0 ug/l for other organisms (See Note 6).	Shall not, alone or in combination with other substances or wastes, cause the water to be unfit, unsafe, or cause acute or chronic problem levels as determined by bioassay or other appropriate methods. Shall not, alone or in combination with other substances, cause a film, sheen, or discoloration on the surface of the water or adjoining shorelines; cause leaching of toxic or deleterious substances; or cause a sludge, solid, or emulsion to be deposited beneath or upon the surface of the water, within the water column, on the bottom, or upon adjoining shorelines.	(C)
Same as (2)(A)(ii).	Shall not exceed 1 mg/l at any time.	Shall not make the water unfit or unsafe for use, cause a film, sheen, or discoloration on the surface of the water or adjoining shoreline, cause leaching of toxic deleterious substances or sludge, solid, or emulsion to be deposited beneath or upon the surface of the water within the water column, on the bottom, or upon adjoining shorelines.	(D)

Notes:

1. Wherever cited in this chapter, fecal coliform group organisms will be determined by the Membrane Filter Technique or Most Probable Number (MPN) Procedure in accordance with the Standard Methods for the Examination of Water and Wastewater, 15th edition, 1980, published jointly by the American Public Health Association, the American Water Works Association, and the Water Pollution Control Federation (publication office: American Public Health Association, 1015 15th Street NW, Washington, D.C. 20005), or in accordance with other standards approved by the department and the U.S. Environmental Protection Agency (EPA).

2. Wherever cited in these regulations, dissolved oxygen (D.O.) concentrations in interstitial waters of gravel beds shall be determined by the technique described in Variations In The Dissolved Oxygen Content of Intra-gravel Water In Four Spawning Streams of Southeastern Alaska, Special Scientific Report – Fisheries No. 402, February, 1962, by William J. McNeil, which is obtainable from the United States Department of the Interior (USDI), or can be examined at any office of the department and which is on file in the office of the lieutenant governor.

3. Wherever cited in these regulations, fine sediments shall be sampled by the technique described in An Improved Technique for Freeze Sampling Streambed Sediments, USDA Forest Service Research Note PNW-281, October 1976, by William J. Walkotten, obtainable through USDA Forest Service Pacific Northwest Forest and Range Experiment Station, P.O. Box 909, Juneau, Alaska 99801, or by the technique described in Success of Pink Salmon Spawning Relative to Size of Spawning Bed Materials, Special Scientific Report – Fisheries No. 469, January, 1964, by William J. McNeil and W.H. Ahnell, pages 1 through 3 obtainable through USDI Fish and Wildlife Services. Both documents can be examined at any office of the department and are on file in the office of the lieutenant governor.

4. Wherever cited in these regulations, the percent accumulation of fine sediments shall be determined by the technique described in Manual on Test Sieving Methods, Guidelines for Establishing Sieve Analysis Procedures, STP 447A, 1972 edition, which is obtainable through the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103, or which can be examined at any office of the department and is on file in the office of the lieutenant governor.

5. Alaska Drinking Water Regulations, Chapter 80 of this title, which is obtainable from any office of the department, and is on file in the office of the lieutenant governor.

6. The term "EPA, Quality Criteria for Water" includes the EPA, Quality Criteria for Water, July 1976, U.S. Environmental Protection Agency, Washington, D.C. 20460, U.S. Government Printing Office: 1977 0-222-904, and the Ambient Water Quality Criteria for the 65 toxic pollutants listed under section 307(a)(1) of the Clean Water Act, October 1980, EPA 440/5-90-015 through EPA 440/5-80-079, U.S. Environmental Protection Agency, Office of Water Regulations and Standards, Criteria and Standards Division, Washington, D.C. 20470. These documents may be purchased through the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161.

7. Report of the Committee on Water Quality Criteria, Federal Water Pollution Control Administration, Washington, D.C., April 1, 1969, can be examined at any office of the department and is on file in the office of the lieutenant governor.

8. Water Quality Criteria 1972, Environmental Studies Board of the National Academy of Sciences and the National Academy of Engineering, Washington, D.C., 1972, EPA-R3-73-033, March 1973, is obtainable from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20204 (Stock No. 5501-00520, Price $12.80), can be examined at any office of the department and is on file in the office of the lieutenant governor.

9. Continuous-flow LC_{50} bioassays apply if available; static bioassays apply otherwise. The methods of analysis used to determine water quality must be in accordance with the Standard Methods for the Examination of Water and Wastewater, 15th edition, 1980, published jointly by the American Public Health Association, the American Water Works Association, and the Water Pollution Control Federation (publication office: American Public Health Association, 1015 15th Street NW, Washington, D.C. 20005), or in accordance with other standards approved by the department and the U.S. Environmental Protection Agency.

10. Water-soluble extracts of petroleum hydrocarbons shall be used as test solutions in LC_{50} determinations using preparation techniques as specified in Anderson, J.W., et al., published in Marine Biology, v. 27, p. 7[illegible] 1974, which can be examined at any office of the department and is on file in the office of the lieutenant governor.

11. Continuous-flow LC_{50} bioassays shall apply as available; static bioassays shall apply otherwise. The procedures used for methods of analysis to determine total aromatic hydrocarbons shall be in accordance with standards mutually approved by the department and EPA.

12. Color is as measured in color units on the platinum-cobalt scale in accordance with the Standard Methods for the Examination of Water and Wastewater, 15th edition, 1980, published jointly by the American Public Health Association, the American Water Works Association, and the Water Pollution Control Federation (publication office: American Public Health Association, 1015 15th Street NW, Washington, D.C. 20005).

13. Wherever cited in these regulations, 10 CFR 20 Federal Regulations means the Standards for Protection Against Radiation published in the Code of Federal Regulations, January 1, 1978. A copy of these regulations can be examined at any office of the department and are on file in the office of the lieutenant governor.

14. Wherever cited in these regulations, National Bureau of Standards Handbook 69 means the handbook entitled Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air and Water for Occupational Exposure, U.S. Department of Commerce, National Bureau of Standards Handbook 69, June 5, 1959, a copy of which is obtainable from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., and which can be examined at any office of the department, and which is on file in the office of the lieutenant governor.

15. Wherever cited in these regulations, the National Shellfish Sanitation Program, Manual of Operations, Part I, means Sanitation of Shellfish Growing Areas, 1965 Revision, U.S. Department of Health, Education and Welfare, Public Health Service Publication No. 33 Part I, obtainable from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (Price 45 cents), or which can be examined in any office of the department and which is on file in the office of the lieutenant governor.

16. In addition to these water quality standards contained in the table, all ballast placed in cargo tanks of tank vessels, as defined in AS 30.20.060(9), shall be processed by or in an onshore ballast water treatment facility and may not be discharged from tank vessels into the waters of the state.

17. Notwithstanding the criteria otherwise applicable to the deposit of residues, the deposit of dredged or fill material will be allowed by the department if the applicant demonstrates to the satisfaction of the department that the deposit will not significantly impair a protected use.

(c) The methods of analysis used to determine water quality will be in accordance with the following:

(1) Standard Methods for the Examination of Water and Wastewater, 15th edition, 1980, published jointly by the American Public Health Association, the American Water Works Association, and the Water Pollution Control

Federation (publication office: American Public Health Association, 1015 15th Street NW, Washington, D.C. 20005);

(2) Methods for Chemical Analysis of Water and Wastes, March 1979, Technical Report No. EPA 600-4-79-020, Environmental Monitoring and Support Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, Ohio 45268 (may be purchased from the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161, Order No. PB 297686);

(3) Guidelines Establishing Test Procedures for the Analysis of Pollutants; Proposed Regulations, Federal Register Part III, EPA, Monday, December 3, 1979, 40 C.F.R. Part 136, pages 69,464 through 69,575;

(4) Guidelines Establishing Test Procedures for the Analysis of Pollutants; Proposed Regulations; Correction, Federal Register Part IV, EPA, Tuesday, December 18, 1979, 40 C.F.R. Part 136, pages 75,028 through 75,052;

(5) methods prescribed in (b) of this section; or

(6) other methods of analysis approved by the department and the U.S. Environmental Protection Agency. (In effect before 7/28/59; am 5/24/70, Reg. 34; am 8/28/71, Reg. 39; am 10/22/72, Reg. 44; am 8/12/73, Reg. 47; am 2/2/79, Reg. 69; am 4/23/79, Reg. 70; am 9/19/79, Reg. 71; am 12/19/82, Reg. 84)

Authority: AS 46.03.020 AS 46.03.080
AS 46.03.070 AS 46.03.750(e)

18 AAC 70.030. PROCEDURE FOR APPLYING WATER QUALITY CRITERIA. In applying the appropriate water quality criteria for any waters or portion of waters, the department will use the following procedure:

(1) if a water is classified for more than one use, the most stringent water quality criteria of all the included uses will apply;

(2) at the boundary between waters of different water use classifications, the water quality standard for the more stringent water-use classification will apply; and

(3) in brackish water of estuaries, where the fresh and marine water quality standards differ within the same classification, the standard will be determined on the basis of salinity; except that the marine water quality criteria will apply for dissolved oxygen when the salinity is one part per thousand or greater and for fecal coliform organisms when the salinity is ten parts per thousand or greater. (In effect before 7/28/59; am 5/24/70, Reg. 34; am 8/28/71, Reg. 39; am 10/22/72, Reg. 44; am 8/12/73, Reg. 47; am 2/2/79, Reg. 69)

Authority: AS 46.03.020(10)(A)
AS 46.03.070
AS 46.03.080

18 AAC 70.032. MIXING ZONES. (a) In applying the water quality criteria of 18 AAC 70.020 to waters of the state the department will, in its discretion, prescribe in its permits or certifications a volume of dilution for the effluent or material within the receiving water. Water quality standards may be exceeded within this mixing zone; however, the standards must be met at every point outside its boundaries. The department will disallow mixing zones in instances where the substance discharged is bioaccumulative in food chains, concentrates in sediments, is persistent, carcinogenic, mutagenic or teratogenic, or if the potential ecological or human health effects are so potentially adverse that a mixing zone is not appropriate. A mixing zone may be granted only after the applicant has demonstrated to the satisfaction of the department that the wastes, materials, or substances which may exceed the water criteria limits are provided with all known available and feasible methods of treatment before entering state waters.

(b) The department will, in its discretion, establish effluent limitation requirements in its wastewater disposal permits in lieu of or in addition to a defined mixing zone.

(c) No individual mixing zone or combination of mixing zones will be permitted to form a barrier to the migratory routes of aquatic species.

(d) In determining the size of mixing zones, the department will consider the following:

(1) the physical, biological and chemical characteristics of the receiving water;

(2) the effects of the discharge on the present and anticipated protected water uses and quality of the receiving water;

(3) the mixing characteristics of the receiving water; and

(4) the characteristics of the effluent, including flow rate and composition.

(e) Unless it is demonstrated to the satisfaction of the department, in accordance with (f) of this section, that the size limitations can be increased, mixing zones will be as small as practicable and will comply with the following size limitations:

(1) the cumulative linear width of the mixing zone(s) intersected on any given cross section of a river or stream will not exceed one third of the total width of that cross section;

(2) the total horizontal area allocated to all mixing zones on a lake will not exceed 10 percent of the lake's surface area;

(3) the cumulative linear length of the mixing zone(s) intersected on any given cross section of an estuary, inlet, cove, channel, or other marine water measured at mean lower low water may not exceed 10 percent of the total length of that cross section, nor may the total horizontal area allocated to mixing zones in these waters exceed 10 percent of the surface area measured at mean lower low water.

(f) A person conducting an operation for which a mixing zone is sought or required by the department shall submit to the department all information necessary for assignment of a mixing zone, including

(1) the type of operation being conducted;

(2) the characteristics of the effluent or material, including flow rate and composition;

(3) the characteristics of the receiving water at the location of the proposed discharge or activity, including but not limited to, where appropriate, water quality, flow rate, current patterns, depth and width, and seasonal changes;

(4) a description of the extent to which the operation may impact the physical, biological and chemical characteristics of the receiving water; and

(5) a proposed design for outfall and diffuser structures. (In effect before 7/28/59; am 5/24/70, Reg. 34; am 8/28/71, Reg. 39; am 10/22/72, Reg. 44; am 8/12/73, Reg. 47; am 2/2/79, Reg. 69; am 4/23/79, Reg. 70; am 9/19/79, Reg. 71)

Authority: AS 46.03.020(10)(A)
AS 46.03.070
AS 46.03.080
AS 46.03.100
AS 46.03.110

18 AAC 70.034. THERMAL DISCHARGES. As provided for in sec. 316(a) of the Clean Water Act of 1977, whenever the owner or operator of a source of thermal discharge, after opportunity for public hearing, can demonstrate to the satisfaction of the department that the application of the temperature criterion in 18 AAC 70.020 is more stringent than necessary to assure the protection and propagation of a balanced indigenous and anadromous population in the waters to which the discharge is to be made, the department will, in its discretion, apply a new temperature criterion to the water body affected. The new criterion will assure the protection and propagation of a balanced indigenous and anadromous population of aquatic life, and other wildlife in and on that body of water, according to the classification of the water. (Eff. 2/2/79, Reg. 69)

Authority: AS 46.03.020
AS 46.03.070
AS 46.03.080

18 AAC 70.040. NATURAL CONDITIONS. Rpealed and consolidated into 18 AAC 70.010. 2/2/79.

18 AAC 70.050. CLASSIFICATION OF STATE WATERS. (a) Specific waters of the state are classified as follows:

Type/Name	Watershed Number*	Latitude Longitude**	Location	Designated Class	Reach of Water Affected
Rivers:					
Chena River	1903004	147°54'45"W 64°47'45"N	near Fairbanks	(1)(A)(ii) (1)(A)(iii) (1)(A)(iv) (1)(B) (1)(C)	confluence of Chena River and Chena Slough to the confluence of Chena River and Tanana River

*Watershed numbers refer to watersheds established by the U.S. Department of Interior, Geological Survey map, "HYDROLOGIC UNIT MAP – 1974 STATE OF ALASKA" for sale by U.S. Geological Survey, Fairbanks, Alaska 99701; Denver, Colorado 80225; or Reston, Virginia 22092 (Price $1.00), or which may be examined at any office of the department and which is on file at the office of the lieutenant governor.

**River latitude and longitude designations are established at the downstream end of the reach of the river affected as determined from U.S. Department of Interior, Geological Survey quadrangle maps or as assigned in "Water Resources Data For Alaska Water Year 1977" (U.S. Geological Survey Water – Data Report AK-77-1).

(b) Except as provided in (a) of this section, the waters of the state are classified as follows:

(1) marine waters – Classes (2)(A), (2)(B), (2)(C) and (2)(D);

(2) groundwaters – Classes (1)(A) and (2)(A)(iii);

(3) freshwaters – Classes (1)(A), (1)(B), and (1)(C). (In effect before 7/28/59; am 5/24/70, Reg. 34; am 8/28/71, Reg. 39; am 10/22/72, Reg. 44; am 8/12/73, Reg. 47; am 2/2/79, Reg. 69)

Authority: AS 46.03.020(10)(A)
AS 46.03.070
AS 46.03.080

18 AAC 70.055. PROCEDURE FOR RECLASSIFICATION. (a) A person may petition the department to reclassify particular waters of the state to include or exclude a protected use specified in 18 AAC 70.020, or to seasonally exclude a protected use. The petition must be served upon the commissioner and must include

(1) the name, address and telephone number of the petitioner;

(2) the names and addresses of all persons living within one mile of the portion of the water body for which reclassification is sought, and of all owners or users within one mile of the petitioner's operation or proposed operation whose property, minerals, mineral claims, or leases are on the bank or shore of the waters in question;

(3) an accurate description of the waters of the state for which reclassification is sought, including the name of the waters, if any, and a precise delineation of the waters on a most recent U.S. Geological Survey topographical map of the area, at a scale of 1:63,360 (inch to mile) where available;

(4) petitioner's use, or proposed use, of the waters for which reclassification is sought; and

(5) a summary of the factual basis for petitioner's belief that a particular included protected use is not being made of the waters or that an excluded protected use is being made of the waters. The petitioner's summary must be supported by the following:

(A) the name, address, telephone number, occupation and qualifications of each person on whom the petitioner relies in forming the belief; and

(B) a legible and complete copy or duplicate of any report, study, investigation, photograph or other written or tangible material on which the petitioner relies in forming the belief.

(b) The commissioner will, within 30 days of service of a petition under (a) of this section, set the petition for public hearing if

(1) the requirements of (a) of this section have been met;

(2) the petition discloses that the petitioner is engaged, or is likely to engage in a protected use of the waters;

(3) the petition raises a serious and substantial issue regarding the presence of an excluded protected use, or the absence of an included protected use; and

(4) a substantially similar petition has not been set for public hearing within the previous three years.

(c) If the commissioner, upon evaluation of the petition using criteria contained in 18 AAC 70.058, determines that the petition does not raise a serious or substantial issue, then the petition may be rejected without a public hearing. The commissioner will make the decision to reject the petition within 30 days of service of a petition.

(d) If the commissioner set the petition for public hearing under (b) of this section, within 20 days after that decision he will publish notice of the hearing in two editions of a newspaper of general circulation within the area which will be most affected by the decision on the petition, and in other media the commissioner deems appropriate. The notice will summarize the petition and will state where copies of the petition and supporting documents may be obtained. The department will keep a mailing list of persons wishing to receive a copy of the public notice, and will mail a copy when notice of the hearing is published. The commissioner will concurrently send a copy of the petition and supporting documents to the

(1) commissioner of fish and game;

(2) commissioner of natural resources;

(3) commissioner of commerce and economic development;

(4) commissioner of community and regional affairs;

(5) commissioner of health and social services;

(6) Water Resources Board;

(7) property owners and users identified in (a)(2) of this section; and

(8) any municipality in the area for which reclassification is proposed.

(e) The public hearing will be held no sooner than 30 days and not later than one year after the second publication of notice under (d) of this section. The director of the division of environmental quality management, or a designee, will serve as hearing officer. The director will designate a person on the division staff to attend the hearing and to develop the recommendation required by (f) of this section. The hearing will be electronically recorded, and witnesses will testify under oath. The public hearing under this section is quasi-legislative in nature. However, the hearing officer will exclude testimony which is not pertinent to the presence or absence of the protected use at issue, or which is based upon unqualified opinion. The petitioner will testify first, followed by witnesses testifying in support of the petition, and then witnesses opposing the petition. The hearing officer may question a witness and may permit brief, reasonable, and pertinent questioning of a witness by the petitioner or by one or more persons opposing the petition. Written comments on the petition may be served upon the director within 15 days after the public hearing.

(f) Within 30 days after the close of the public hearing, the staff person designated by the director will issue a recommendation. The recommendation will include the basis for recommending approval or disapproval of the petition. Where public comment adverse to the petition has been received by the department, and where the staff recommendation is to approve the petition the staff person's rationale for the recommendation shall also be stated. The rationale for recommended denial of the petition shall also be included. The staff recommendation will be forwarded to the hearing officer for his review. The hearing officer will, within 20 days of issuance of the staff recommendation, issue his recommendation. The hearing officer may base his recommendation, in whole or in part, on matters not addressed at the public hearing, or in the staff recommendation; however, when the hearing officer's recommendation differs from

the recommendation of the staff, the staff recommendation, and the basis for the difference, will be included in the recommendation to the commissioner and will be placed in the record file. The hearing officer may base the recommendation, in whole or in part, on matters which would be insufficient to support a finding in an adjudicatory proceeding. The recommendation will contain findings and conclusions based upon the criteria contained in 18 AAC 70.058. The hearing officer's recommendation will be served on the applicant, and on all persons who either submitted timely written comments or who testified at the public hearing.

(g) A record file, containing the hearing record and all other matters on which the staff person or hearing officer based his recommendation, will be maintained at the central office of the department for a period of 10 years, and will be made available through any office of the department upon written request.

(h) Within 20 days of service of the hearing officer's recommendation, the petitioner, or any other person who either submitted timely written comments or who testified at the public hearing on the petition, may serve upon the commissioner comments on the recommendation. The hearing officer may submit additional matters to the commissioner in response to comments served under this subsection. All comments served, and all supplemental matters submitted by the hearing officer, will be placed in the record file. The record file will be closed 20 days after the deadline for serving comments under this subsection.

(i) Within 30 days of the closing of the record file, the commissioner, based upon the matters contained in the record file, will affirm, modify or reverse the hearing officer's recommendation. The commissioner's decision will contain findings and conclusions based upon the criteria contained in 18 AAC 70.058; however, the commissioner will, in his discretion, adopt the findings and conclusions in the hearing officer's recommendation by reference. The commissioner's decision will be served on the petitioner, and all other persons who either submitted timely written comments or testified at the public hearing.

(j) The reclassification of waters of the state under this section is the exclusive procedure by which the department will change the use designations of waters. Proposed reclassifications by the department will conform to (d) – (i) of this section. The use classification applicable to waters may not be challenged in a permit proceeding under 18 AAC 15.020 – 18 AAC 15.100, a certification proceeding under 18 AAC 15.130 – 18 AAC 15.180, or in a judicial proceeding other than a timely suit for judicial review of a decision under this section. A petition for reclassification under this section may be filed at the same time as an application for a wastewater disposal permit under 18 AAC 15.010(a)(9) or 18 AAC 15.100(d), or an application for certification under 18 AAC 15.130 or 18 AAC 15.180; however, any deadlines applicable to those proceedings will be held in abeyance pending the outcome of the decision under this section.

(k) The following waters may not be reclassified under this section:

(1) waters within areas administered under the National Wilderness Preservation System;

(2) waters within state and national parks, national perserves and monuments, national recreation areas, national wildlife refuges;

(3) wild and scenic rivers established under 16 USC § 1271 et seq.;

(4) marine sanctuaries established under 33 USC § 1401 et seq.;

(5) estuarine sanctuaries established under 16 USC § 4151 et seq.;

(6) waters within critical habitat areas established under AS 16.03.251(1) or AS 16.20; and

(7) waters within Land Use Designation (LUD) I or II areas established by the U.S. Forest Service. (Eff. 2/2/79, Reg. 69; am 12/19/82, Reg. 84)

Authority: AS 46.03.020
AS 46.03.070
AS 46.03.080

18 AAC 70.058. RECLASSIFICATION CRITERIA. (a) A water supply use is present in particular waters if

(1) an appropriation for that use from those waters has been received under AS 46.15 or applicable and sufficient federal law; and the appropriation is being utilized; or

(2) on the basis of contractual obligations or financial commitments, it is more likely than not that the criteria specified in (a)(1) of this section will be met within the succeeding three years.

(b) In addition to (a) of this section, a drinking water use is present in particular waters if

(1) substantial domestic use associated with residences is being made of these waters, and that use is exempt from the need to obtain an appropriation under 11 AAC 72.200(1) – (5); or

(2) the waters are used for drinking by substantial numbers of hunters, fishermen, hikers or other recreational transients (as defined in (h) of this section).

(c) A water-contact recreation use is present in particular surface waters if

(1) there is substantial water-contact recreation use of those waters; or

(2) considering future population or transportation facilities expansion, it is more likely than not that there will be substantial water-contact recreation use of those waters within the succeeding three years.

(d) A secondary water recreation use is present on all lakes, streams, rivers, creeks and marine and intertidal waters, which meet the following criteria:

(1) the waters are visible from a public highway, railroad or public campground;

(2) the waters are visible from the regular route of a marine tour ship or an Alaska state ferry;

(3) the waters lie within public lands which have been classified by the managing agency for either exclusive or nonexclusive public recreation;

(4) the waters lie within lands which are subject to substantial secondary water recreation use; or

(5) considering future population or transportation facilities expansion, it is more likely than not that (1), (2) and (4) of this subsection will be the case for those waters within three years.

(e) A use for growth and propagation of fish, shellfish, other aquatic life, and wildlife, including seabirds, waterfowl and furbearers, is present in all surface waters of the state (including water used by fish afforded protection under the "Anadromous Fish Act," AS 16.05) except for those waters which the department, in consultation with the Department of Fish and Game, finds are inconsequential either to the food chain, habitat, rearing, growth or migration of fish, shellfish, birds, mammals (marine or terrestrial) or other species which the department, in consultation with the Department of Fish and Game, determines warrant protection under this subsection.

(f) The use of harvesting for consumption of raw mollusks or other raw aquatic life is present in all surface waters of the state except

(1) for those which impose an immediate, naturally occurring hazard to the health of the consumer; and

(2) for those which are determined by the department, in consultation with the Department of Fish and Game, to be inconsequential.

(g) For purposes of this section, a "seasonal use" is defined as a use or combination of uses identified in 18 AAC 70.020(a) which does not occur during one or more of the four seasons of the year. The presence of a season is characterized chiefly by differences in temperature, precipitation, amount of daylight and/or animal and plant growth. The department will, in its discretion, exclude a protected water use on a seasonal basis if

(1) in light of the nature of the waters, the protected use is capable of only seasonal use;

(2) the petitioner's operation or proposed operation is capable of seasonal adjustments so that it will meet the more-stringent water quality criteria applicable during the season in which the protected use is present; and

(3) the less-stringent water quality criteria permitted during the excluded season will not

(A) result in a violation of the water quality criteria applicable to the seasonal use during the seasons in which the use is present; or

(B) impair the seasonal use during the season which it is protected, or any other use protected for those waters.

(h) When presence of use under this section depends upon substantiality of use, regularity and diversity of use, rather than intensity of use, will be the determining factors. For example, if fishing on a stream is limited to use by the same persons or groups of persons, the use is insubstantial. Conversely, if diverse persons or groups utilize the stream for fishing, the use will be considered substantial, even though the total number of fishing days on the stream may be no greater than in the prior example, if that use is regular over the peak period of use. Use need not occur at any particular interval during the peak period, but must recur with sufficient regularity to indicate that peak period utilization is usual and predictable. As used in this subsection, "peak period" means that portion of the year in which, given the nature of the water and the use, utilization is most likely to occur.

(i) The burden of proof in establishing the applicability or nonapplicability of the criteria established in this section is upon the person seeking to exclude a protected use in which the waters are otherwise classified, or to include a protection for which the waters are otherwise not classified. (Eff. 2/2/79, Reg. 69)

Authority: AS 46.03.020(9) AS 46.03.070
AS 46.03.020(10)(A) AS 46.03.080

18 AAC 70.060. PERMITS. Repealed 10/22/72.

18 AAC 70.070. WATER QUALITY CRITERIA FOR WATERS OF THE STATE OF ALASKA. Repealed and consolidated into sec. 20(b). 10/22/72.

18 AAC 70.080. MINIMUM TREATMENT. Repealed and consolidated into 18 AAC 72. 2/2/79.

18 AAC 70.081. CERTIFICATE OF REASONABLE ASSURANCE. Repealed 8/21/78.

18 AAC 70.082. PUBLIC NOTICE OF APPLICATION. Repealed 8/21/78.

18 AAC 70.083. PUBLIC HEARING. Repealed 8/21/78.

18 AAC 70.084. NOTICE OF PUBLIC HEARING. Repealed 8/21/78.

18 AAC 70.085. ACTION UPON APPLICATION. Repealed 8/21/78.

18 AAC 70.086. ENFORCEMENT DISCRETION. In determining whether to initiate enforcement action on water quality violations, the department will consider whether the activity in question was conducted in compliance with permit conditions (adopted in accordance with AS 46.03.100, or AS 46.03.100(e) and ch. 15 of this title), engineering plans (approved in accordance with AS 46.03.720), or best management practices which may be adopted by the department. This section is intended to confirm the department's enforcement discretion, and may not be construed as creating a reviewable decision. (Eff. 2/2/79, Reg. 69)

Authority: AS 46.03.020

18 AAC 70.090. IMPLEMENTATION AND ENFORCEMENT PLAN. Consolidated in 18 AAC 72. 2/2/79.

18 AAC 70.100. PENALTIES. Repealed 8/21/78.

18 AAC 70.110. DEFINITIONS. Unless the context indicates otherwise, in this chapter

(1) "acute" means severe but of short duration with respect to constituent toxicity or disease;

(2) "anadromous fish" means those fish which spend a portion of their lives in both fresh and salt waters, including the five species of pacific salmon, dolly varden, rainbow trout (steelhead), sea run cutthroat trout, arctic char, shellfish and whitefish;

(3) "aquaculture" means the regulation and cultivation of water plants or animals for human use or consumption;

(4) "boundary" means any line or landmark which serves to clarify, outline, or mark a limit, border, or interface;

(5) "central office" means the central office of the Alaska Department of Environmental Conservation, Pouch O, Juneau, Alaska 99811;

(6) "certification" means the certification of reasonable assurance issued by the department pursuant to Section 401 of the Clean Water Act, as amended (33 U.S.C. Sec. 1341);

(7) "Clean Water Act" means the Federal Water Pollution Control Act (commonly referred to as the Clean Water Act (P.L. 92-500, as amended by P.L. 95-217), 33 U.S.C. Sec. 1251 et seq.);

(8) "chronic" means lasting a long time or recurring often with respect to constituent toxicity or disease;

(9) "color" means that condition of water which results in the visual sensations of hue and intensity; apparent color is the condition of water due to both substances in solution and due to suspended matter; color is measured in water after the turbidity has been removed;

(10) "commissioner" means the commissioner of environmental conservation;

(11) "compensation point for photosynthetic activity" means that point at which incident light penetration is sufficient for plankton to photosynthetically produce enough oxygen to balance their respiration requirements;

(12) "contact recreation" means activities in which there is direct and intimate contact with water; examples of primary contact recreation include wading and dabbling, swimming, diving,

water skiing, surfing and any intimate contact with water directly associated with shoreline activities;

(13) "criterion" means a designated concentration or limit of a constituent that, when not exceeded, will protect an organism, an organism community, or a prescribed water use of quality with a reasonable degree of safety; a criterion, in some cases, may be a narrative statement instead of a numerical constituent concentration or limit;

(14) "department" means the Alaska Department of Environmental Conservation;

(15) "dissolved oxygen" means the solubility of oxygen in water as determined either by the Winkler (iodometric) method and its modifications or by the Membrane Electrode Method;

(16) "effluent" means that segment of a wastewater stream immediately following the final step in any treatment process but before the wastewater stream is discharged to the receiving environment;

(17) "fecal coliform bacteria" means those bacteria that can ferment lactose at 44.5° ± 0.2°C to produce gas in a multiple tube procedure; fecal coliform bacteria also means all organisms which produce blue colonies within 24 ± hours of incubation at 44.5° ± 0.2°C in an M-FC broth medium;

(18) "fish" means any of the group of cold-blooded vertebrate animals living in water, and having permanent gills for breathing and fins for locomotion;

(19) "Grain size accumulation graph" means the graph of the sediment sieving results where the logarithm of the size (millimeters) is plotted on the horizontal axis and percent accumulation by weight is plotted in the linear scale on a vertical axis;

(20) "groundwater" means water in the zone of saturation, which is the zone below the water table, in which all interstices are filled with water;

(21) "industrial use" means any water supply used in association with a manufacturing or production enterprise (other than food processing) including mining, placer mining, energy production or development;

(22) "lake" means an inland body of water, fresh or salt, of substantial size, occupying a basin or hollow on the earth's surface, which may or may not have a current or single direction of flow;

(23) "LC_{50}" means the median lethal concentration of a toxicant; it is the concentration which is lethal to fifty percent of the organisms tested under conditions outlined by the department in a specified time; "LC_{50}" means the same as tolerance limit, TLM, or TL_{50};

(24) "mean" means the average of values obtained over a specified period of time; for fecal coliform determination the mean shall be computed as the logarithmic mean;

(25) "micrograms per liter (ug/l)" means the concentration at which 1 millionth of a gram (10^{-6}g) is contained in a volume of 1 liter; there are 453.59 grams in a pound;

(26) "milligrams per liter (mg/l)" means the concentration at which 1 milligram (10^{-3}g) is contained in a volume of one liter; it is approximately equivalent to the unit parts per million (ppm), formerly of common use;

(27) "mixing zone" means the area contiguous to a discharge or to an activity in the water, where a receiving water may not meet all the water quality standards; wastes and water are given an area to mix such that the water quality standards are met at the boundaries of the mixing zone;

(28) "most probable number (MPN)" means the statistically determined number which represents the number of individuals most likely present in a given sample or a liquor, based on test data;

(29) "natural condition" means those conditions, physical, chemical, biological or radiological, which exist(ed) in a water before any man-induced discharge into the water or any activity of man resulting in addition of material into the water;

(30) "nonpoint source" means any source of pollution other than a point source;

(31) "oil and grease" means oil and grease as defined by the procedure used; see sec. 20(c) of this chapter for analytical procedures;

(32) "pH" means the negative logarithm of the hydrogen-ion activity concentration, when expressed as moles per liter; $pH = -\log_{10}(H+)$;

(33) "point source" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, container, rolling stock, vessel or other floating craft, from which pollutants are or may be discharged;

(34) "pollution" means the contamination or altering of waters, land or subsurface land of the state in a manner which creates a nuisance or makes waters, land or subsurface land unclean, or noxious, or impure, or unfit so that they are actually or potentially harmful or detrimental or injurious to public health, safety or welfare, to domestic, commercial, industrial, or recreational use, or to livestock, wild animals, birds, fish, or other aquatic life;

(35) "residues" means floating solids, debris, sludge deposits, foam, scum or any other materials or substances remaining in a water body as a result of a direct or proximate activity of man;

(36) "secondary recreation" means recreation activities in which water use is incidental, accidental or sensory, and includes fishing, boating, camping, hunting, hiking and vacationing;

(37) "sediment" means solid material of organic or mineral origin that is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and organic material such as humus;

Grade Scale for Clastic "Sediments"
(based on the Udden-Wentworth scheme)

CLASS:	DIAMETER: Millimeters (mm)
boulders	greater than 256
large cobbles	256-128
small cobbles	128-64
gravel	
very coarse gravel	64-32
coarse gravel	32-16
medium gravel	16-8
fine gravel	8-4
very fine gravel	4-2
sand	
very coarse sand	2.00-1.00
coarse sand	1.00-0.50
medium sand	0.50-0.250
fine sand	0.250-0.125
very fine sand	0.125-0.062
silt	less than 0.062 greater than 0.004
clay	less than 0.004

(38) "sheen" means an iridescent appearance on the surface of the water;

(39) "sodium adsorption ratio (SAR)" means the estimate of the degree to which sodium will be adsorbed in soil from a given water, as proposed by the U.S. Salinity Laboratory, U.S. Department of Agriculture, "Handbook 60," expressed as the quotient of the sodium ion concentration and the square root of one-half the sum of the calcium and magnesium ion concentrations

$$\frac{Na^{+}}{\sqrt{\frac{Ca^{++} + Mg^{++}}{2}}}$$

(40) "spawning" means the process of producing, emitting or depositing eggs, sperm, seed, germ, larvae, young, or juveniles, especially in large numbers, by aquatic life, including fish, shellfish, amphibians, mollusks, and crustaceans;

(41) "thermocline" means the layer of water between a warmer, surface zone and a colder, deep-water zone in a thermally stratified body of water, in which the water temperature decreases rapidly with depth;

(42) "total aromatic hydrocarbon (TAH)" means those water accommodated compounds

having at least one aromatic ring and includes the following functional groups: oxyaromatics, heterocyclic compounds, benzene family mononuclear aromatics, and polynuclear aromatic hydrocarbons;

(43) "total hydrocarbons (TH)" means those compounds measured using Gruenfields IR partition infrared methods as specified in the 14th Edition of "Standards Methods for the Examination of Wastewater" (method 502 B); samples collected in marine waters for TH analysis shall be taken within one meter of the surface and below any observable surface slip sheen or freshwater lens; samples collected in freshwaters shall be taken immediately below the surface of the water and below any observable surface slip sheen;

(44) "toxic substances" means those materials, or combinations of materials, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available, cause death, disease, behavioral abnormalities, malignancy, genetic mutations, physiological abnormalities (including malfunctions in reproduction) or physical deformations, in affected organisms or their offspring; the term includes the following substances, and any other substance identified as a toxic pollutant under section 307(a) of the Clean Water Act of 1977 (33 U.S.C. sec. 466 et seq.):

Aldrin/Dieldrin; Arsenic; Benzidine; Carbon tetrachloride; Cadmium; Dichlorobenzidine; Chlorinated ethanes; Chloroform; Chromium; Demeton; Dichloroethylenes; Dinitrotoluene; Fluoranthene; Diphenylhydrazine; Endrin; Hexachlorocyclopentadiene; Ethylbenzene; Lindane; Mercury; Nickel; Nitrobenzene; Naphthalene; Silver; Vinyl Chloride; Acenaphthene; Antimony; Chlorinated benzenes; Chloroalkyl ethers; DDT; Dichloropropane and Dichloropropene; Halomethanes; Malathion; Tetrachloroethylene; Trichloroethylene; Polynuclear aromatic hydrocarbons; Endosulfan; Mirex; Pentachlorophenol; Phenol; Acrylonitrile; Asbestos; Benzene; Beryllium; Chlorinated Naphthalene; 2-Chlorophenol; Chlorophenols; Chlorophenoxy herbicides; Cyanide; 2, 4-Dichloraphenol; Acrolein; Chlordane; Nitrosamines; Copper, dichlorobenzenes; Guthion; Haloethers; Heptachlor; Hexachlorobutadiene; Hexachlorocyclohexane; Isophorone; Lead; Methoxychlor; nitrophenols; Parathion; Phthalate Esters; PCB's; Selenium; P-Dioxin; Thallium; Toluene; Toxaphene; Zinc; 2, 4-Dimethylphenol;

(45) "turbidity" means an expression of the optical property that causes light to be scattered and absorbed rather than transmitted in straight lines through a water sample; turbidity in water is caused by the presence of suspended matter such as clay, silt, finely divided organic and inorganic matter, plankton, and other microscopic organisms;

(46) "waters" 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 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 upon the state or under jurisdiction of the state; "waters" does not include ponds or lagoons or parts of wastewater treatment systems which are lined or constructed in such a manner that seepage into the ground is not allowed;

(47) "water recreation" means contact recreation and/or secondary recreation as defined in this section;

(48) "water supply" means any of the waters of the state which are designated to be protected for fresh water or marine water uses, including waters used for drinking, culinary, food processing, agricultural, aquacultural, seafood processing, and industrial purposes;

(49) "wildlife" means all species of mammals, birds, reptiles and amphibians. (In effect before 7/28/59; am 5/24/70, Reg. 34; am 8/28/71, Reg. 39; am 10/22/72, Reg. 44; am 8/12/73, Reg. 47; am 2/2/79, Reg. 69; am 4/23/79, Reg. 70; am 9/19/79, Reg. 71)

Authority: AS 46.03.020(10)(A)
AS 46.03.070
AS 46.03.080

CHAPTER 70. WATER QUALITY STANDARDS

Section
10. General
15. Short-term variance
20. Protected water uses and criteria
30. Procedure for applying water quality criteria
32. Mixing zones
33. Zones of deposit
34. Thermal discharges
40. (Consolidated into 18 AAC 70.010)
50. Classification of state waters
55. Procedure for reclassification
58. Classification criteria
60. (Repealed)
70. (Consolidated into 18 AAC 70.020)
80. (Consolidated into 18 AAC 72)
81. (Repealed)
82. (Repealed)
83. (Repealed)
84. (Repealed)
85. (Repealed)
86. Enforcement discretion
90. (Consolidated into 18 AAC 72)
100. (Repealed)
110. Definitions

18 AAC 70.010(c) is amended to read:

(c) Waters with natural characteristics of higher quality than the water quality criteria for the uses set out in 18 AAC 70.020 must be kept at the existing quality, except where a permit issued or certified under 18 AAC 15, a short-term variance issued under 18 AAC 70.015, or a reclassification granted under 18 AAC 70.055 shows to the department's satisfaction that

(1) reducing water quality is justified because of necessary economic or social development;

(2) reducing water qu lity will not harm present or potential uses of the waters; and

(3) all wastes and other substances to be discharged ~~are~~ will be treated using the methods found by the department to be most effective. (In effect before 7/28/59; am 5/24/70, Reg. 34; am 8/28/71, Reg. 39; am 10/22/72, Reg. 44; am 2/2/79, Reg. 69; am 12/19/82, Reg. 84; am / / , Reg~~ister~~)

Authority: AS 46.03.010
AS 46.03.020
AS 46.03.070
AS 46.03.080
AS 46.03.100

18 AAC 70.032(a) is amended to read:

(a) In applying the water quality criteria of 18 AAC 70.020, the department will, in its discretion, prescribe in its permits or certifications a volume of dilution for an effluent or substance within a receiving water. Water quality standards may be exceeded within this mixing zone. However, the standards must be met at every point outside its boundaries. The department will not allow mixing zones if (1) there is significant potential for adverse environmental or health effects due to discharge of a substance that bioaccumulates in food chains; concentrates in sediments; or is persistent, carcinogenic, mutagenic, or teratogenic, or (2) ~~if the~~ potential environmental or health effects are so adverse that a mixing zone is not appropriate. A mixing zone will be granted only after the applicant has shown to the department's satisfaction that the wastes or substances that may exceed the water quality criteria limits will be treated using the methods found by the department to be most effective. (In effect before 7/28/59; am 5/24/70, Reg. 34; am 8/28/71, Reg. 39; am 10/22/72, Reg. 44; am 8/12/73, Reg. 47; am 2/2/79, Reg. 69; am 4/23/79, Reg. 70; am 9/19/79, Reg. 71; am / / , Register)

Authority: AS 46.03.020(10)(A)
AS 46.03.070
AS 46.03.080
AS 46.03.100
AS 46.03.110

18 AAC 70 is amended to add:

18 AAC 70.033. ZONES OF DEPOSIT. The department will, in its discretion, issue or certify permits to allow deposit of substances on the bottom of marine waters within limits set by the department. Water quality standards may be exceeded within a zone of deposit. However, the standards must be met at every point outside it. In no case may the water quality standards be violated in the water column outside the zone of deposit by any action, including leaching from, or suspension of, deposited materials. Limits of deposit will be defined in a short-term variance issued under 18 AAC 70.015 or a permit issued or certified under 18 AAC 15. (Eff / / , Register)

(SEC 1)

Authority: AS 46.03.020(10)(A)
AS 46.03.070
AS 46.03.080
AS 46.03.100
AS 46.03.110