

EPA draft summary of issues and questions from 2-28-06 information exchange calls

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This document attempts to summarize the main issues and questions raised on the “information exchange” calls between EPA and several Alaska Tribes on February 28, 2006. A brief summary of each issue or question is provided, and then EPA provides some discussion comments for each issue or question. (Input to discussions based on EPA follow-up research (e.g., conversations with DEC, as well as several comments or questions relevant to the mixing zone regulation raised during separate phone calls between EPA and Tribal staff, are also included in this summary).

1. Protect the resources of the Nushagak/Mulchatna and Kvichak/Lake Iliamna watershed

Summary of issue or question

Several Tribal participants expressed great desire that no environmental degradation be allowed in the Nushagak/Mulchatna and Kvichak/Lake Iliamna region. These waters, they explained, and their headwaters and tributaries, support tremendous salmon fisheries and other aquatic life, and have long supported the culture and subsistence of the Native communities of the region. The headwaters may be especially sensitive to pollution or other disturbance from resource development and extraction activities. They urged that the great value and quality of these waters and the fundamental importance of these resources to Native cultures of the region be protected and preserved and that pollution not be allowed to degrade this pristine region.

Discussion

EPA appreciates the opportunity to learn about the significance of these resources to Alaska Tribes. Regarding the basic issue of whether activities involving pollution discharges are allowed to occur at all, EPA notes that the State’s “antidegradation” policy specifies a framework to be used in making decisions regarding changes in water quality. In general, State antidegradation policies ensure that existing instream water uses and the level of water quality necessary to protect these uses are maintained and protected; and that that where water quality is better than the applicable criteria for aquatic life and recreation, that water quality is maintained and protected unless some lowering of water quality is deemed to be necessary to allow important economic or social development to occur. Antidegradation policies are also meant to ensure that water quality in water bodies of exceptional recreational or ecological significance is maintained and protected. Alaska’s antidegradation policy is contained within the State’s water quality standards at 18 AAC 70.015 and is provided in full in Note 1 at the end of this document.

EPA encourages Tribes to explore with DEC how the antidegradation policy would be implemented in making decisions on whether to allow lowering of water quality (e.g., through issuance of a new NPDES permit or through increased loadings in an existing NPDES permit) in important, high quality waters such as those of the Nushagak/Mulchatna and Kvichak/Lake Iliamna watersheds.

There may be other opportunities for Tribal engagement in decisions affecting their resources such as through the National Environmental Policy Act (NEPA) process. NEPA requires all Federal agencies to, among other things, assess the environmental impacts of major Federal projects or decisions such as issuing permits, consider the environmental impacts in making decisions, and disclose the environmental impacts to the public. This assessment of environmental impacts can be useful in ensuring that government decisions are made with full understanding of the environmental impacts. For more information on NEPA, please visit Region 10's NEPA web site at <http://yosemite.epa.gov/r10/ecocomm.nsf> (click on the "NEPA Review" link on the right-hand side of the page).

In addition, there may be other State regulatory protections for waters in the Nushagak/Mulchatna and Kvichak/Lake Iliamna areas. For example, some of the waters may be within legislatively designated "special areas" which include critical habitat or State refuges (see number 9 below for more information on "special areas"), or included in the State's "Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes" and its associated Atlas. As such, these waters may receive special protections under the authorities of Alaska Department of Fish and Game (DFG) and Department of Natural Resources (DNR). Tribes may wish to contact ADNR and ADFG to learn more about any additional protections that may apply to water resources in this region.

2. Impacts of open pit mines on the environment

Summary of issue or question

A Tribal participant stated that he had observed examples of open pit mines in other States that drastically affected local environments. Given the potential for profound environmental impacts of open-pit mines, he strongly questioned the sense in locating the Pebble Mine in the sensitive and pristine Nushagak/Mulchatna/Iliamna headwater area.

Discussion

This comment relates more to the topic of development of the Pebble Mine and authorization of that specific discharge through an NPDES permit, rather than the State's mixing zone regulation. Comments regarding development of the Pebble Mine should be directed to EPA and State agency staff who are directly involved in that project. EPA's lead contact on Pebble Mine is Dianne Soderlund (soderlund.dianne@epa.gov, (907) 271-3425). In addition, the State of Alaska has a "Large Mine Team." The main Large Mine Team contact for the Pebble Mine project is Tom Crafford (phone number: (907) 269-8621).

3. Zero discharge or "precautionary principle" criteria for Tribal uses

Summary of issue or question

EPA provided some basic background information during the call on water quality criteria. EPA noted that Federal regulations require that State water quality criteria protect the designated uses of waters. EPA also explained that criteria may be narrative or numeric, that EPA develops national recommendations for many numeric water quality criteria, and that States often adopt these recommended criteria. An example of an EPA recommended water quality criteria for the protection of aquatic life is 22 ug/L for the protection of freshwater aquatic life from short-term exposure to cyanide.

One Tribal participant stated that from his view, there is no safe level of pollutant discharge. Another participant stated the view that water quality criteria for Tribal uses should be based on the “precautionary principle” rather than risk assessment.

Discussion

These comments relate to the appropriate basis for the development of water quality criteria that protect Tribal uses of water and to the level of risk that is acceptable in setting criteria to protect Tribal water uses. Federal regulations require that water quality criteria adopted by States must be based on sound scientific rationale (40 CFR 131.11). Certain assumptions regarding appropriate levels of risk are made both in EPA’s development of recommended water quality criteria and in the State’s decisions regarding what water quality criteria to adopt for the protection of designated uses. EPA is not aware that the “precautionary principle” has been used as a basis for establishing water quality criteria. For more information about the methods and assumptions used to develop EPA’s water quality criteria for human health, please visit EPA’s water quality criteria web site at <http://www.epa.gov/waterscience/criteria/>, or contact Denis Borum, EPA Office of Science and Technology, Health and Ecological Criteria Division (borum.denis@epa.gov, (202) 566-1090). For more information regarding water quality criteria adopted by Alaska, contact DEC’s Water Quality Standards section (<http://www.dec.state.ak.us/water/wqsar/wqs/wqs.htm>).

4. Persistence and bioaccumulation of chemicals

Summary of issue or question

Again, during EPA’s background discussion of water quality criteria, a Tribal participant raised a question about how criteria are developed. Some substances may be absorbed through gills or other tissues by aquatic organisms from their surrounding water and concentrated in their bodies (“bioconcentration”); or may be taken up by aquatic organisms when they consume prey that contain the substance. The process by which a substance is taken up by an aquatic organism, both from water and through food, is called “bioaccumulation”¹. The participant asked whether the bioaccumulation behavior of a given pollutant is taken into consideration in the development of water quality criteria for that pollutant.

¹ Definitions of “bioaccumulation,” “bioconcentration,” and “persistence” from the Glossary in EPA, 1991: Technical Support Document for Water Quality-based Toxics Control. EPA Publication No. EPA/505/2-90-001, March, 1991. Available at: <http://www.epa.gov/npdes/pubs/owm0264.pdf>.

Discussion

According to a discussion with EPA scientific staff after the call, bioaccumulation is taken into account during development of EPA's nationally recommended water quality criteria. For example, for many chemicals, EPA derives a numeric water quality criterion by assuming that humans will both be drinking water contaminated by that chemical as well as consuming organisms that have bioaccumulated that chemical.

It is useful to point out that with regard to mixing zones, the State's mixing zone regulation requires the permittee to make specific demonstrations regarding bioaccumulative, bioconcentrating, or persistent pollutants. Specifically, 240(d)(1) of the State's mixing zone policy states that "the department will approve a mixing zone, as proposed or with conditions, only if the department finds that available evidence reasonably demonstrates that within the mixing zone the pollutants discharged will not bioaccumulate, bioconcentrate, or persist above natural levels in sediments, water, or biota to significantly adverse levels, based on consideration of bioaccumulation and bioconcentration factors, toxicity, and exposure." DEC's draft implementation guidance also provides more detail, on p. 1, on information DEC will consider in making determinations under 240(d)(1).

5. Barrier to fish passage

Summary of issue or question

A Tribal participant noted that salmon species migrate to the headwaters of river systems (e.g., the Kaktuli River, which is a headwater tributary of the Mulchatna River). He asked if paragraph 240(c)(4)(G) in the mixing zone regulation ("the mixing zone will not form a barrier to migratory species or fish passage") would apply to such headwaters and protect migrating organisms even in headwaters..

Discussion

EPA believes that 240(c)(4)(G) would apply to migrating species in headwaters as well. EPA also notes that protection of headwater salmon spawning areas would probably also be addressed under 240(e), which states that "in lakes, streams, rivers, or other flowing fresh waters, a mixing zone will not be authorized in a spawning area or allowed to adversely affect the present and future capability of an area to support spawning, incubation, or rearing of any of the five species of Pacific salmon."

6. Baseline and post-authorization monitoring

Summary of issue or question

One participant raised several questions regarding what baseline and follow-up monitoring would be required to demonstrate that the provisions of the mixing zone policy are met. For example, 240(c)(4) establishes that DEC will only approve a mixing zone if "available evidence reasonably

demonstrates” that the mixing zone will not create a public health hazard that would preclude or limit existing uses of the waterbody for water supply or contact recreation; preclude or limit established processing activities or established commercial, sport, personal-use, or subsistence fish and shellfish harvesting; or result in a reduction in fish or shellfish population levels. 240(m) establishes that if DEC finds that “available evidence reasonably demonstrates” that an authorized mixing zone has had, or is having, a “significant unforeseen adverse environmental effect,” DEC will terminate, modify, or deny renewal of the permit or certification authorizing the mixing zone.

The participant asked what, if any, monitoring would be required to document the baseline (pre-mixing zone) condition of the water body so that it could be determined whether an activity would result or had resulted in adverse effects to an existing use of the waterbody. Who would bear the responsibility for this monitoring? What duration (e.g., 3, 4, 5 years?) of baseline monitoring would be considered adequate to support decisions under this regulation?

Another participant commented that Department of Fish and Game (DFG) has conducted a number of baseline studies and that Tribes should seek opportunities to work with DFG to generate further baseline information. However, another participant noted that DFG had not conducted any baseline studies in the Igiugig area.

Discussion

In general, EPA and DEC must have adequate data including flow, pollutant concentrations, and uses, in order to provide a basis for mixing zone determinations and antidegradation analyses. If the basis is not adequate to support the determinations and analyses, the mixing zone would be subject to challenge under the State 401 certification or EPA permit processes. Monitoring is also frequently required in NPDES permits issued by EPA (and may also be specified in the State’s Clean Water Act section 401 certification of those permits). For example, monitoring to measure effluent quality at the “end-of-pipe,” monitoring to measure ambient water quality, and monitoring to measure water quality at the edge of a mixing zone may be required. Monitoring requirements are generally determined on a permit-by-permit basis. Monitoring would need to be conducted in accordance with any sampling, analytical, and reporting requirements set forth in the permit.

In addition, paragraph 240(h) of the final mixing zone regulation allows DEC to require a permit applicant to monitor effluent, ambient water quality, and biological conditions to determine whether unanticipated adverse effects in spawning areas of species other than the five Pacific salmon are occurring.

7. Effects of mine seepage on water quality

Summary of issue or question

One participant commented that mining site leachate and seepage may affect groundwater and surface water quality. He asked whether and how such effects would be analyzed and addressed.

Discussion

Generally, mine tailings disposal is regulated under a State solid waste permit developed with the involvement of DEC water quality permitting staff. Contact DEC for more information on mining regulation (<http://www.dec.state.ak.us/water/wwdp/engineering/engineering.htm>).

For new projects involving Federal permits, during initial project review, comprehensive analysis of environmental impacts would occur under the National Environmental Policy Act (NEPA). Effects such as seepage would be analyzed. If analysis indicated the potential for significant impacts, EPA might adversely rate the Environmental Impact Statement (EIS) unless the impacts were prevented or mitigated. In addition, monitoring could be required to detect any such problems.

If there will be surface water impacts, those impacts may be subject to the NPDES permitting program. If unpermitted water quality impacts occur as a result of mining operations, then EPA, the State, and/or the Federal land management agencies if there is one (e.g., the U.S. Forest Service) could potentially take an enforcement action under the Clean Water Act or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or State regulations. The action taken would depend upon the cause and severity of the problem, as well as other factors.

8. Documentation of uses

Summary of issue or question

One participant observed that some provisions in the mixing zone regulation appear to provide important protection for existing uses from impacts of mixing zones, and asked what kind of evidence would be appropriate to document these existing uses. She explained, for example, that Tribal communities along the Nushagak River conduct many recreational and subsistence activities in and around the river, including harvesting salmon and other species, collection of driftwood for use in smokehouses, harvesting of wild celery from river banks. Children from these communities swim in the rivers. In the regulation, 240(c)(4) states that DEC will only approve a mixing zone if available evidence reasonably demonstrates that designated and existing uses of the waterbody as a whole will be maintained and protected; that the mixing zone will not create a public health hazard that would preclude or limit existing uses of the waterbody for water supply or contact recreation; preclude or limit established processing activities or established commercial, sport, personal-use, or subsistence fish and shellfish harvesting; or result in a reduction in fish or shellfish population levels. In order to ensure that these uses are fully protected, what kind of documentation that these uses exist would be needed, and when; who would be responsible for reviewing such documentation; and to whom could Tribes provide documentation?

In a separate discussion, a Tribal participant asked how DEC defines “subsistence.” For example, would the use of the aquatic resources in a water body be considered “subsistence” if one person used those resources? Five people? Ten people?

Discussion

In making mixing zone determinations, DEC will consider information provided by the applicant as well as other credible sources.² According to DEC, documentation that shows that the use has been on-going and pre-dates the date of the permit application would be appropriate. In addition, information from sources such as community surveys (such as those conducted by DEC under a BEACH grant) and Alaska Department of Fish and Game (DFG) catch records and surveys could also be appropriate.

There are at least two critical points during which Tribes could provide this documentation for consideration in the context of discharge permit development. First, Tribes can provide this documentation during government-to-government consultation with EPA on specific NPDES permits issued by EPA. Tribes can also provide this documentation to EPA and DEC during the permit development process and/or during the public notice period on draft NPDES permits and draft State 401 certifications. DEC and EPA encourage Tribes to provide documentation to DEC and EPA permitting staff as early as possible during the development of the permit and 401 certification and also to submit the documentation during the public comment period so that such information is in the official record for the permit action and 401 certification.

In addition to documenting existing uses, it would be useful for the Tribe to identify and discuss the potential harm to the use from the mixing zone.

Regarding the question of “subsistence,” DEC noted that a determination of “subsistence” use may involve consultation with appropriate experts in or using methods consistent with programs such as the Subsistence Division in DFG (<http://www.subsistence.adfg.state.ak.us/>).

9. “Legislatively designated special area”

Summary of issue or question

A Tribal participant raised a concern regarding the significance of the phrase, “legislatively designated special area” in the mixing zone regulation. Paragraph 240(g) states that DEC may authorize a mixing zone in a spawning area of non-salmonids under certain conditions, and after consultation with either the Alaska Department of Natural Resources (DNR) or the Alaska Department of Fish and Game (DFG). The consultation will be with the DFG if the spawning area under consideration is within a “legislatively designated special area under AS 16.20”³. The participant expressed concern that designation of an area as a “special area under AS 16.20” could be used as a way of removing the area from protection it would otherwise receive under the mixing zone policy. He also expressed concern that such designations are made by the State without Tribal input. Another participant commented that Tribes could contact State legislators regarding designation of “special areas.”

² See “Burden of Proof,” provided by DEC during the 2005 public comment period for the proposed mixing zone regulation. Available at <http://www.dec.state.ak.us/water/wqsar/trireview/mixingzones.htm>.

³ Alaska Statute (AS) 16.20, “Conservation and Protection of Alaska Fish and Game,” can be accessed at <http://touchngo.com/lgcntr/akstats/Statutes/Title16/Chapter20.htm>.

Discussion

All provisions of the mixing zone policy will continue to apply to mixing zones within “special areas.” The only differences in treatment for “special areas” under the final mixing zone regulation are that (a) DEC will defer to DFG, rather than DNR, regarding spawning areas for species other than the five anadromous Pacific salmon; and (b) a mitigation plan for mixing zones in such spawning areas must be approved by DFG, rather than DNR. DEC has also clarified the meaning of the term “special area” in the final mixing zone regulation; the final regulation states that “‘special area’ means a state game refuge, a state game sanctuary, or a state fish and game critical habitat area, established under AS 16.20” (18 AAC 70.240(p)).

Finally, the “special areas” mentioned in this regulation receive more, rather than less, State environmental protections as compared to waters that are not “special areas” (for example, a permittee within a “special area” must get an additional permit from DFG).

10. Spawning area prohibition – clarification

Summary of issue or question

A question was raised as to whether “spawning area” was defined both by physical location where spawning occurs as well as the times when spawning is occurring. Paragraph 240(e) states that mixing zones “will not be authorized in a spawning area or allowed to adversely affect the present and future capability of an area to support spawning, incubation, or rearing of any of the five species of Pacific salmon.” In other words, if spawning by any of the Pacific salmon species occurs in the summer and autumn, could a mixing zone be authorized in the winter or spring?

Discussion

EPA’s understanding from discussion with DEC, as well as from reading paragraph 240(j) of the regulation, is that a spawning area is defined both in terms of physical location as well as timing. Thus a mixing zone could be authorized during part of the year in the above example.

11. Permit modifications

Summary of issue or question

Mixing zones, which allow exceedances of water quality criteria that apply outside the mixing zone, are authorized in connection with NPDES permits. A participant posed the following question: If a mixing zone for some pollutant – for example, arsenic – was authorized for a particular discharge, but after the permit was issued, the arsenic criterion was revised, or new information showed that the mixing zone could pose a greater risk than originally anticipated, would the mixing zone be immediately modified to reflect the new information or criterion?

Discussion

Permit periods are typically established at 5 years and changes in the permit's requirements would normally occur at the time of permit reissuance. Under certain conditions, permits may be modified sooner if there is new information that was not available at the time of permit issuance (see 40 CFR 122.62(a)(2)). However, a revised water quality criterion in State water quality standards would not necessarily in itself be grounds for a permit modification outside of the 5 year permit reissuance schedule (see 40 CFR 122.62(a)(3)).

12. Grandfathering

Summary of issue or question

Paragraph 240(i) states that the spawning area provisions do not apply to *renewals* of currently authorized mixing zones if spawning had not been occurring when the mixing zone was previously authorized – even if successful spawning, incubation, and rearing occurred within the mixing zone subsequent to the previous authorization. A participant raised the concern that if a mixing zone were to be authorized in a water such as the South Fork Koktuli River, this provision could be used to allow continued authorization of that mixing zone even if spawning were to occur. According to the participant, mine proponents assert that South Fork Koktuli River is dry, although according to the participant spawning has historically occurred in this waterbody. The participant suggested that if a mixing zone were authorized for a discharge into the South Fork Koktuli River, then the permittee could contend that spawning was not occurring at the time of initial mixing zone authorization and therefore the mixing zone could continue to be authorized.

Discussion

This concern is related to the question of what documentation would be required to document historical spawning at a site. DEC would rely on habitat biologists from DNR or DFG for determinations related to the location or timing of historical or ongoing spawning at a site. Paragraph 240(j) of the final regulation explains that mixing zone determinations in spawning areas will conform with DFG and DNR determinations as to the location and time of the spawning areas. Tribes that wish to document the spawning history or status of a waterbody may wish to contact DNR or DFG.

13. Protection of wetlands

Summary of issue or question

A participant noted that protection of wetlands was not provided for in the mixing zone regulation and urged that such protection be provided.

Discussion

EPA notes the comment. There are no specific protections for wetlands in the mixing zone regulation. Mixing zones in wetlands would presumably be subject to all applicable provisions in the regulation. If a Tribe is or becomes concerned about a specific permit and mixing zone in a wetland, Tribes should notify EPA and DEC as early as possible during the draft permit and 401 certification development process..

14. Current prospecting activity

Summary of issue or question

A participant commented that a prospective permittee (Northern Dynasty) had conducted exploratory drilling in the Pebble Mine area (headwaters of the Nushagak-Mulchatna River system) and asked how environmental impacts from this activity could be addressed.

Discussion

EPA staff noted that such current exploratory activity would likely fall under State authority. As such, questions regarding impacts from current activities relating to Pebble Mine should probably be directed to the State. The State of Alaska has a “Large Mine Team.” The main Large Mine Team contact for the Pebble Mine project is Tom Crafford (phone number: (907) 269-8621).

15. Status of Native allotments

Summary of issue or question

Tribal participants raised two questions on how the State’s water quality standards apply to Native allotments in Alaska. The first question was raised during the water quality standards segment of EPA’s background presentation. The participant asked whether the State’s antidegradation policy would apply to private property such as Native allotments. The second question, raised during the discussion of the State’s mixing zone policy, was how mixing zones might affect the water rights of Native allottees, and whether allottees have any say in the water quality impacts from mixing zones.

Discussion

The Department of the Interior (DOI) considers Alaska native allotments in restricted status to be “Indian country.” Under this position, State water quality standards (WQS) – such as the antidegradation policy – would not be in effect on those restricted native allotments or any other “Indian country” in Alaska. The State’s WQS apply to all lands/waters outside of Indian country, including all private property outside of “Indian country.”

Regarding the second question, an allottee, like any property owner, has public participation opportunities to comment on permits, including mixing zones that may be authorized for that permit. An allottee can also request that their tribal government intercede on the allottee’s behalf by seeking assistance from EPA. For information on water rights in Alaska, please visit DNR’s water rights web

site (<http://www.dnr.state.ak.us/mlw/water/wrfact.htm>) or contact the DNR Water Resources Section (<http://www.dnr.state.ak.us/mlw/water/index.htm>).

16. State permit/mixing zone public notice process

Summary of issue or question

EPA is currently the NPDES permitting authority in Alaska. As shown on p. 5 of the Handout 1 that was provided for the call, EPA provides a public notice for each draft NPDES permit. At that time, EPA provides a copy of the draft permit, a draft "Fact Sheet," and the State's draft certification that the permit complies with State water quality standards (WQS), including with the State's mixing zone policy if applicable. In addition to providing a public comment period on the draft permit, EPA conducts government-to-government consultation with affected Tribes consultation on permits.

A Tribal participant asked whether, in the event the State gains authority for the permitting program, a public notice process for permits would still be offered for all permits, and whether the State would conduct Tribal consultation on permits that could affect Tribal resources.

Discussion

The Clean Water Act requires all NPDES permits to be made available to the public for comments. The State's administrative procedures also require public notice of draft permits. Tribes may be interested to know that the State regulations establishing DEC's public notice process requirements are currently being updated and revised. For information about those regulations, see DEC's web site for this issue: http://www.dec.state.ak.us/water/npdes/draft_regulations.htm

The State is currently in the process of developing wastewater discharge permitting program elements for submittal to EPA for approval. It has not been determined whether or how a Tribal consultation process within a State permitting program will occur. EPA is preparing to conduct government-to-government consultation on EPA's decision on whether or not to approve the State's application. Tribes interested in this issue should contact Michelle V. Davis, EPA Tribal Coordinator, at (907) 271-3434 (davis.michellev@epa.gov).

17. Cumulative impacts

Summary of issue or question

One participant asked whether the policy as well as the implementation guidance address cumulative impacts of mixing zones.

Discussion

EPA notes that paragraph 240(b)(3) states that DEC, “in determining whether to authorize a mixing zone...will consider the effect, if any, including cumulative effects of multiple discharges and diffuse, nonpoint source inputs, that the discharge will have on the uses of the receiving water.”

18. EPA approval requirements

Summary of issue or question

One participant asked what EPA would require from the State in terms of guidance and other supporting information when EPA reviews the State’s mixing zone policy and considers its decision to disapprove or approve the policy.

Discussion

The mixing zone policy is part of the State’s water quality standards, and must be submitted to EPA and approved before it can be used for Clean Water Act purposes. EPA may only approve a water quality standard if it protects designated uses. That is, the administrative record for EPA’s approval must establish that the standard protects designated uses in order for EPA to approve that standard. EPA does not require that the State provide guidance to accompany the mixing zone regulation, but such guidance could inform how EPA interprets the State’s mixing zone policy. If the guidance sheds light on the State’s interpretation of the policy, EPA would take it into account in our decision. The factors EPA must consider in reviewing and deciding whether to approve or disapprove a State’s water quality standards are set forth at 40 CFR 131. These factors include methods used and analyses conducted to support revisions and protection of designated uses.

19. Anadromous waters catalog

Summary of issue or question

Participants raised questions regarding how it would be determined whether a water body should be considered a “spawning area” and therefore protected under paragraphs 240(e) and 240(f). Participants asked how various sources of information might be used in these determinations. For example, one source of information on spawning areas may be the State’s “Anadromous Waters Catalog and Atlas” (AWC) (see Note 2). This source identifies many streams, rivers, and lakes important to anadromous fish species in Alaska but may not include all waters actually used by anadromous fish (see Note 4). What are the relative roles sources such as traditional ecological knowledge (TEK), best professional judgment of fisheries professionals, and the AWC will have in establishing whether a stream is a “spawning area”? If a stream is not cataloged in the AWC but a Tribe can provide visual, audio, TEK, or other documentation that spawning occurs, how would such information be weighed? Could a permit be allowed on a spawning stream that is not catalogued in the AWC? Could a mixing zone be authorized in a spawning stream that is not catalogued in the AWC?

Discussion

In making determinations regarding the location and time of a spawning area, DEC will act in conformance with determinations made by DNR and DFG. Paragraph 240(j) of the final regulation states:

“When determining whether to authorize a mixing zone under (e), (f), or (g) of this section, the department will make that determination

(1) in conformance with the determination of the Department of Fish and Game, acting under AS 16.20, of the location and time of a spawning area within a special area;

(2) in conformance with the determination of the Department of Natural Resources, acting under AS 41.14, of the location and time of a spawning area within waters included in the *Catalog of Waters Important for Spawning, Rearing or Migration of Anadromous Fishes*, adopted by reference in 11 AAC 195.010; or

(3) after consultation with the Department of Natural Resources, as to what the Department of Natural Resources considers the location and time of a spawning area not within waters described in (1) or (2) of this subsection. “

Tribes who wish to establish what the spawning status of a stream is may wish to work with DNR and DFG habitat biologists to develop the appropriate documentation.

20. Protection of marine/estuarine spawning waters

Summary of issue or question

A Sitka Tribal member discussed the Tribe's critical interest and reliance on spawning areas in estuarine and marine waters. According to the Tribal member, the Sitka Tribe has historically harvested herring eggs during the spawning times of that species; and also other aquatic animals (including clams, cockles, abalone, mussels, chitins) that spawn in marine and estuarine waters. The Tribe also harvests seaweed from intertidal areas. The regulation provides for some protection of spawning areas in fresh waters but not in marine waters. For example, paragraphs 240(k)(1)(A) and (B) specify mixing zone size limits for estuarine and marine waters but these size limits are not related to the protection of marine or estuarine spawning areas and can be increased if DEC determines it is “safe” to do so. The member asked how protection of estuarine and marine spawning areas – including, but not limited to, the spawn of the species discussed above – would be provided for by this regulation.

Discussion

EPA notes that several provisions in the mixing zone regulation provide relevant protection for resources identified by the Tribe. For example, 240(c)(2) states that DEC will approve a mixing zone, as proposed or with conditions, only if it finds that available evidence reasonably demonstrates that “designated and existing uses of the waterbody as a whole will be maintained and protected.” 240(c)(4)(C) and (D) state that DEC will approve a mixing zone, as proposed or with conditions only if it finds that available evidence reasonably demonstrates that the mixing zone will not “preclude or

limit established processing activities or established commercial, sport, personal-use, or subsistence fish and shellfish harvesting” or “result in a reduction in fish or shellfish population levels,” respectively. Paragraph 240(d)(6) also states that DEC will approve a mixing zone, as proposed or with conditions, only if it finds that available evidence reasonably demonstrates that within the mixing zone the pollutants discharged will not “produce objectionable color, taste, or odor in aquatic resources harvested from the area for human consumption.”

EPA again notes that the State’s “antidegradation” policy specifies a framework to be used in making decisions regarding changes in water quality. As explained under item 1 of this summary, State antidegradation policies generally ensure existing instream water uses and the level of water quality necessary to protect these uses are maintained and protected; that where water quality is better than the applicable criteria for aquatic life and recreation, that water quality is maintained and protected unless some lowering of water quality is deemed to be necessary to allow important economic or social development to occur.

Again, it is important that Tribes concerned about potential impacts of mixing zones on their uses of waters to document the nature of their uses of a given water body and provide this information to the State and to EPA as early as possible during the NPDES permit development and State Clean Water Act section 401 certification process, as well as during the public comment period for the draft permit and 401 certification. In addition, it would be helpful if, along with this documentation, Tribes also explained how and proposed mixing zone could potentially harm these uses.

21. Fish/shellfish populations

Summary of issue or question

Paragraph 240(c)(4)(D) states that DEC will only approve a mixing zone if available evidence reasonably demonstrates that the mixing zone will not result in a reduction in fish or shellfish population levels. A Tribal participant asked how, prior to authorizing a mixing zone, DEC would evaluate the potential for a mixing zone to cause a reduction in fish or shellfish population levels? Further, if DEC authorizes a mixing zone, how would fish and shellfish population levels be monitored to ensure that this requirement continued to be met?

Discussion

DEC anticipates that it will rely on the expertise of habitat biologists in DNR and DFG to document historical fish and shellfish population levels, or to demonstrate that a mixing zone is not affecting fish and shellfish population levels. DEC advises that Tribes who wish to document historical or present levels work with habitat biologists in DNR or DFG, as appropriate, to develop the appropriate documentation.

22. Pacific salmon vs. other freshwater species

Summary of issue or question

One participant raised the question of why a different level of protection is provided for the spawning areas of Pacific salmon in comparison to other species in paragraphs 240(e), (f), (g), and (h). (In addition, during an earlier phone call between EPA and Tribal staff, the Tribal staff explained that many species of fish, not just salmon, are important to Tribes along the Nushagak. She explained that pike and whitefish are harvested especially in the spring time when salmon are not available. She explained that during the summer children learn subsistence skills and catch grayling; and during the winter Tribal members conduct ice fishing for grayling, pike, and whitefish.)

Discussion

This issue was addressed in DEC Commissioner Kurt Fredriksson's letter to Alaskans dated January 12, 2006, explaining the basis for the regulation adopted by DEC on January 12, 2006:

"The majority of [public] comments stemmed from a fear that the proposed regulations could hurt Alaska's salmon resources by allowing a mixing zone in a spawning area. 'Do not remove the current prohibition on mixing zones in salmon spawning areas' was the message I heard loud and clear'...There is no question that salmon make a major contribution to Alaska's economy and public wellbeing. Consumer perception that Alaska's salmon are clean, fresh, and healthy is critical. Alaska's salmon-based economy is too important to risk any loss in consumer confidence. The adopted regulations retain the prohibition currently in place for mixing zones in salmon spawning areas....based on salmon's unique importance in Alaska law and to Alaskans, I have decided to continue prohibiting mixing zones in salmon spawning areas." [emphasis added]

The Commissioner's letter goes on to discuss why, for non-salmon spawning areas, certain narrow exceptions to the prohibition of mixing zones in spawning areas are allowed for:

"The adopted regulation also prohibits mixing zones in spawning areas for specific non-salmon species; however, for these species a narrow range of exceptions is allowed. An absolute prohibition on mixing zones in non-salmon spawning areas would unnecessarily restrict responsible development that can demonstrate a discharge will not harm the growth and propagation of fish, or where impacts can be appropriately mitigated." [emphasis added]

23. Mixing zone guidance, DEC clarifications

Summary of issue or question

A participant asked what legal weight would any clarifications provided by DEC to questions posed by EPA or Tribes in the context of government-to-government consultation have? What legal weight does material in DEC's implementation guidance have? What, if any, are the public review and notice requirements for DEC's implementation guidance?

Discussion

If a regulatory provision is ambiguous or unclear, then official written clarifications provided by DEC (e.g., a letter or guidance from the DEC Commissioner to EPA provided as part of the official

submittal of the revised water quality standard) could be legally significant in determining the meaning of the provision.

24. Coastal management review

Summary of issue or question

A participant asked whether EPA's 60-90 day approval/disapproval timeframe include coastal management review.

Discussion

The question appears to relate to the coastal project review process, which is required Alaska Coastal Management Program (ACMP). According to information on the ACMP web site (<http://www.dnr.state.ak.us/acmp/Projects/pfirst1.html>), the ACMP requires that projects in Alaska's coastal zone be reviewed by coastal resource management professionals and found consistent with the statewide standards of the ACMP. For more information on Coastal Project Review (also known as consistency review), visit the ACMP web site provided above.

EPA's review of the State's mixing zone regulation under EPA's Clean Water Act authority is not subject to the Coastal Project Review process because EPA's action does not require a consistency review because it is not a project that requires a state, local, or federal permit. However, new NPDES permits that discharge to marine waters are subject to Coastal Project Review.

25. Fines and penalties

Summary of issue or question

A Tribal participant asked what fines and penalties would be imposed for violations of provisions of the mixing zone regulation.

Discussion

With respect to Federal law, it is important to clarify that the mixing zone regulation applies to discharge permits, not the discharger itself. The public may challenge whether the permit complies with the mixing zone regulation through permit review, comment, and appeal processes. Dischargers then must comply with the permit, or be subject to EPA, State, or citizen suit. If the discharger violated their permit, then the discharger would potentially be subject to fines, penalties, injunctions, or orders through an enforcement action by State, EPA, or citizens. The maximum amount is determined by the Clean Water Act but in any given case would be determined on a case-by-case basis.

Under State law, there may be additional considerations. Regarding any such additional considerations under State law, Tribes interested in this question should contact DEC.

26. Public information on mixing zones

Summary of issue or question

A Tribal participant asked whether there was any readily accessible source of public information on mixing zones, such as a list by region of where all mixing zones were located, what pollutants they discharged, their size, etc.

Discussion

DEC maintains a database which contains some information on authorized mixing zones. In addition, DEC is further developing this and other databases to make this information more readily available to the public. For more information contact DEC's Division of Water, Wastewater Discharge Program, at <http://www.dec.state.ak.us/water/wwdp/index.htm>. In addition, State 401 certifications of NPDES permits, which contain information on mixing zones authorized by that certification, can be found in the administrative records for NPDES permits available at EPA Region 10. Information on NPDES permits in Alaska can be found at EPA Region 10's web site (<http://yosemite.epa.gov/R10/Homepage.NSF/webpage/Alaska's+Environment?opendocument>).

Notes

1. The following is the full text of Alaska's antidegradation policy from the State's water quality standards (available on DEC's water quality standards web site, <http://www.dec.state.ak.us/water/wqsar/wqs/wqs.htm> - click on "18 AAC 70" for the State's water quality standards)

18 AAC 70.015. Antidegradation policy.

(a) It is the state's antidegradation policy that

(1) existing water uses and the level of water quality necessary to protect existing uses must be maintained and protected;

(2) if the quality of a water exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality must be maintained and protected unless the department, in its discretion, upon application, and after compliance with (b) of this section, allows the reduction of water quality for a short-term variance under 18 AAC 70.200, a zone of deposit under 18 AAC 70.210, a mixing zone under 18 AAC 70.240, or another purpose as authorized in a department permit, certification, or approval; the department will authorize a reduction in water quality only after the applicant submits evidence in support of the application and the department finds that

(A) allowing lower water quality is necessary to accommodate important economic or social development in the area where the water is located;

(B) except as allowed under this subsection, reducing water quality will not violate the applicable criteria of 18 AAC 70.020 or 18 AAC 70.235 or the whole effluent toxicity limit in 18 AAC 70.030;

(C) the resulting water quality will be adequate to fully protect existing uses of the water;

(D) the methods of pollution prevention, control, and treatment found by the department to be the most effective and reasonable will be applied to all wastes and other substances to be discharged; and

(E) all wastes and other substances discharged will be treated and controlled to achieve

(i) for new and existing point sources, the highest statutory and regulatory requirements; and

(ii) for nonpoint sources, all cost-effective and reasonable best management practices;

(3) if a high quality water constitutes an outstanding national resource, such as a water of a national or state park or wildlife refuge or a water of exceptional recreational or ecological significance, the quality of that water must be maintained and protected;

(4) if potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy described in this section is subject to 33 U.S.C. 1326 (commonly known as sec. 316 of the Clean Water Act).

(b) An applicant for a permit, certification, or approval who seeks to reduce water quality as described in (a) of this section shall provide to the department all information reasonably necessary for a decision on the application, including the information and demonstrations required in (a) of this section and other information that the department finds necessary to meet the requirements of this section.

(c) An application received under (a) of this section is subject to the public participation and intergovernmental review procedures applicable to the permit, certification, or approval sought, including procedures for applications subject to the Alaska Coastal Management Program in AS 46.40 and 6 AAC 50, and applications subject to 18 AAC 15. If the department certifies a federal permit, the public participation and intergovernmental review procedures followed by the federal agency issuing that permit will meet the requirements of this subsection.

2. The Anadromous Waters Catalog and Atlas is described by the State of Alaska as follows:

"...Alaska Statute 41.14.870(a) requires the Alaska Department of Natural Resources (ADNR) Office of Habitat Management & Permitting (OHMP) to "specify the various rivers, lakes and streams or parts of them" of the state that are important to the spawning, rearing or migration of anadromous fishes. The Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes and its associated atlas (the Catalog and Atlas or AWC, respectively) are the media used to accomplish this specification and are adopted as regulation under 11 AAC 195.010...The AWC currently lists approximately 16,000 streams, rivers or lakes around the state, which have been specified as being important for the spawning, rearing or migration of anadromous fish. Based upon thorough surveys of a few drainages it is believed that this number represents less than 50% of the streams, rivers and lakes actually used by anadromous species. It is estimated that at least an additional 20,000 anadromous water bodies have not been identified or specified under AS 41.14.870(a)."

Source: http://www.sf.adfg.state.ak.us/SARR/FishDistrib/FDD_intro.cfm.