



**THE ALLIANCE**  
Linking Alaska's Resources to Alaska's People



**ALASKA CHAMBER**



Alaska Metal Mines



ALASKA MINERS  
ASSOCIATION



**RESOURCE DEVELOPMENT COUNCIL**  
Growing Alaska Through Responsible Resource Development



**AOGA**  
ALASKA OIL & GAS ASSOCIATION  
People. Pride. Petroleum.

October 29, 2024

Alaska Department of Natural Resources  
Division of Mining, Land & Water  
Program Support Section  
550 W. 7th Avenue, Suite 1070  
Anchorage, AK 99501-3579  
submitted via email to [dnr.water.regulation@alaska.gov](mailto:dnr.water.regulation@alaska.gov)

Re: Scoping Notice, Instream Flow Reservation of water

Dear Sir or Madame:

The Alaska resource and business associations represented in this letter, Alaska Chamber, Alaska Forest Association, Alaska Metal Mines, Alaska Miners Association, Alaska Oil and Gas Association, Alaska Support Industry Alliance, Associated General Contractors of Alaska, and the Resource Development Council for Alaska, Inc., thank you for the opportunity to provide recommendations for the regulations implementing AS 46.14.145, Reservations of Water.

Before summarizing our suggestions, we would like to explain the principles that motivate our recommendations.

1. **Healthy fish populations and the habitat and water flows that support them are crucial for Alaska.** We understand that fishing is one of the reasons Alaskans live here. For those in rural Alaska, it is a crucial component of their diet and culture.
2. **Healthy fish populations, habitat, and water are important for all users – commercial, sport, and subsistence – and should be managed by an agency whose constituency includes all Alaska users.** Management of Alaska's natural resources should not be delegated to organizations dedicated to a single user, a single viewpoint, or those outside Alaska.
3. **Healthy fish populations and development can co-exist.** It is not necessary to choose one over the other. If managed correctly – as Alaska's record demonstrates – fish and development can occur together.

An attachment to this letter discusses our recommendations. The regulation recommendations are summarized below:

1. Repeal and reenact 11 AAC 93.146(b) to read as follows:

A certificate of reservation for a federally reserved water right will be issued to a federal agency, otherwise a certificate:

(1) for purposes of AS 46.15.145(a)(1) will be issued to the department of fish and game;

(2) for the purposes of AS 46.145(a)(2) or (3) will be issued to the department;

(3) for the purposes of AS 46.15.145(a)(4) will be issued to the department of environmental conservation; and

(4) for multiple purposes under AS 46.15.145(a) will be issued to the state agency with jurisdiction of the reservation's primary purpose.

2. Adopt two new subsections to 11 AAC 93.144:

- §144(x) In evaluating whether the applicant has established a need for the reservation consistent with AS 46.15.145(c), the commissioner will determine that no need exists if a person has spent funds within the watershed and upstream from the proposed reservation during the last five years on the expectation of a different permitting evaluation in which the agencies have equal or greater authority to regulate water use.
- §144(xx) In evaluating whether the applicant has established a need for the reservation consistent with AS 46.15.145(c), the commissioner will evaluate whether an alternative permitting system with equal or more data and expertise is more appropriate to determine uses of water in the watershed and whether there exists a likelihood of unregulated or poorly regulated use of water in the watershed.

3. Changes to 11 AA:C 93.142(b)

- Amend 11 AAC 93.142(b)(8) as follows: “identify physical, biological, and water chemistry, ~~and socio-economic data~~ substantiating the need for and the quantity of water requested for the proposed reservation;”
- Add a new paragraph:  
§142(b)(x): for reservations of water intended to protect fish habitat:
  - (i) identify the population and species of fish using the proposed reservation of water reach for spawning, rearing, or migration;
  - (ii) estimate the population of fish from the proposed reservation of water reach that supplies supply sport, commercial, and subsistence use; and
  - (iii) estimate how differing water levels or flows in the proposed reservation of water would affect the amount or quality of habitat available for rearing, spawning, or migration.
- Add a new paragraph:  
11 AAC 93.142(b) each application must (xx):
  - (i) identify existing land uses and property rights at the proposed reach or upstream in the watershed that may be affected by the proposed reservation of water; the information should include any permits issued by DNR in the last five years, existing mining claims, and other such uses;
  - (ii) identify, and to the extent possible quantify, the recreational, subsistence, and economic uses occurring in the watershed upstream from the proposed reservation of water;

- (iii) identify whether any economic activity near the proposed reach and upstream in the watershed is likely to trigger a permit process that will address water management or water use issues that could protect water use for habitat in the proposed reach; and
- (iv) identify the mineral, oil, or other resource potential in the proposed reach or upstream in the watershed.

- Add a new paragraph: 11 AAC 93.142(b) each application must 11 AAC 93.142(b). Each application must
  - (x) identify and explain the methodology to be used to quantify the proposed reservation including:
    - (A) flowrate and discharge data for the reach
    - (B) for reservations proposed for the purposes of AS 46.15.145(a)(1), hydraulic cross-sections and habitat information for the reach adequate to determine the effect of the requested flows on the amount or quality of available fish habitat;
    - (C) a description of how the data will be analyzed.

Thank you for the opportunity to provide recommendations to these regulations. Please contact any of us if you have questions.

Sincerely,



Kati Capozzi, Alaska Chamber



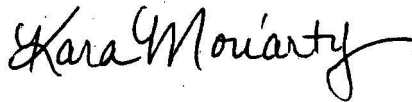
Tessa Axelson, Alaska Forest Association



Karen Matthias, Alaska Metal Mines



Deantha Skibinski,  
Alaska Miners Association



Kara Moriarty, Alaska Oil and Gas Association



Rebecca Logan,  
Alaska Support Industry Alliance



Alicia Amberg,  
Associated General Contractors of Alaska



Leila Kimbrell,  
Resource Development Council for Alaska

### **About the Alaska Chamber**

The Alaska Chamber is a non-profit founded in 1953 working to promote a positive business environment in Alaska. The Chamber is the voice of small and large business representing more than 700 businesses, manufacturers, and local chambers across Alaska. Our member companies employ more than 55,000 hard-working Alaskans. The Chamber advocates for a positive investment climate that provides certainty and stability for Alaska.

### **About the Alaska Forest Association**

The Alaska Forest Association (AFA) is a forest trade association representing an array of members with an interest in the forest products industry in Alaska. AFA members include, but are not limited to, timber operators, contractors, equipment suppliers, fuel distributors, tribal organizations, forest product vendors, sawmills, other affiliated industry associations and private citizens.

### **About Alaska Metal Mines**

Alaska Metal Mines is a professional association formed in 1992 to represent Alaska's large metal mines and advanced projects. We work to inspire Alaskans to support a growing mining industry that produces essential minerals while prioritizing safe operations, community partnerships, and environmental protection.

### **About the Alaska Miners Association**

AMA is a professional membership trade organization established in 1939 to represent the mining industry in Alaska. AMA's more than 1,400 members come from eight statewide branches: Anchorage, Denali, Fairbanks, Haines, Juneau, Kenai, Ketchikan/Prince of Wales, and Nome. Alaska's miners are individual prospectors, geologists, engineers, suction dredge miners, small family mines, junior mining companies, major mining companies, Alaska Native Corporations, and the contracting sector that supports Alaska's mining industry.

### **About the Alaska Oil and Gas Association**

Alaska Oil and Gas Association (AOGA) is a professional trade association whose mission is to foster the long-term viability of the oil and gas industry in Alaska. AOGA's 17 member companies account for the majority of oil and gas exploration, development, production, transportation, refining, and marketing activities in Alaska.

### **About the Alaska Support Industry Alliance**

The Alaska Support Industry Alliance is a 45-year-old professional trade association representing 500 Alaska companies with 35,000 employees who provide support to the oil, gas and mining industries in Alaska.

### **About the Associated General Contractors of Alaska**

The mission of Associated General Contractors of Alaska is to advocate, educate, and promote the construction industry in Alaska.

### **About the Resource Development Council for Alaska, Inc.**

Established in 1975, the Resource Development Council for Alaska (RDC) is a statewide business association comprised of individuals and companies from Alaska's fishing, forestry, mining, oil and gas, and tourism industries. RDC's membership includes Alaska Native corporations, local communities, organized labor, and industry support firms. RDC's purpose is to encourage a strong, diversified private sector in Alaska and expand the state's economic base through the responsible development of our natural resources.

**Attachment to Alaska Business Association letter:  
Alaska Chamber, Alaska Forest Association, Alaska Metal Mines, Alaska Miners  
Association, Alaska Oil and Gas Association, Alaska Support Industry Alliance,  
Associated General Contractors of Alaska, and Resource Development Council for  
Alaska, Inc.**

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**Instream Flow  
Submission to DNR August 1 Scoping Notice for Regulations Implementing  
AS 46.15.145**

**11 AAC 93.146: A private party should not hold an IFR**

**Existing Practice.** Anyone may apply for an IFR. Should DNR decide to grant the reservation, the statute is silent as to what person or organization should hold it. The statute allows DNR to determine the owner through analysis of the public interest. Unfortunately, in a regulation last amended over 30 years ago, DNR required itself to convey the IFR property right to the applicant, whomever that may be. Specifically, 11 AAC 93.146(b) provides that “The certificate of reservation will be issued to the applicant.”

Constitutionally, Alaska’s fish belong to all Alaskans: not to an individual, an interest group, or even to a city, community, group, or Native Tribe. Decisions about the water needed for fish habitat, recreation, or water quality should be made by an Alaskan organization that represents all those groups, not just one. For example, decisions about fish habitat should be made by the Department of Fish and Game, not by any of those other individuals or groups.

The majority of IFR applications are from state or federal agencies. However, as discussed later in this submission, there are single-issue groups, many from outside Alaska, that apply for IFRs once a development project is proposed. It is not reasonable public policy to require Alaska to ask permission from Greenpeace before building an ice road on the North Slope. Nor to ask an individual or outside-funded NGO whether Alaska may build a hydro project to benefit our state.<sup>1</sup>

The solution is to allow only public agencies to hold IFRs. State agencies should hold IFRs to protect water for all Alaskans,

**Recommendation.** A regulation change will solve the problem. Repeal and reenact 11 AAC 93.146(b) to read as follows:

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<sup>1</sup> The requirement to convey an IFR to a private party also inhibits public review of the data. Of the 29 IFR applications submitted to DNR by private parties after a development was proposed, most applicants did not gather any actual data. These applicants copied data gathered by the developer. The developer perceives that their data is being used against them. Public data used against developers results in companies hesitating to give DNR their hydrologic data for fear it will be used against them. While DNR has asserted that it can keep hydrologic data confidential, its ability to do so is questionable, and the data should also be evaluated by DF&G and DEC which have never made that assertion. In addition, it is wrong to keep hydrologic data from the public. The only reason to avoid public review of important environmental data is to avoid the unfortunate legal problem created by the current IFR system. The public should review this data without putting the developer at risk for providing it.

A certificate of reservation for a federally reserved water right will be issued to a federal agency, otherwise a certificate:

- (1) for purposes of AS 46.15.145(a)(1) will be issued to the department of fish and game;
- (2) for the purposes of AS 46.145(a)(2) or (3) will be issued to the department;
- (3) for the purposes of AS 46.15.145(a)(4) will be issued to the department of environmental conservation; and
- (4) for multiple purposes under AS 46.15.145(a) will be issued to the state agency with jurisdiction of the reservation's primary purpose.<sup>2</sup>

### **11 AAC 93.142 and 144. Implement the statutory requirement in AS 46.15.145(c) that there must be a need for an IFR**

The instream flow statute requires an application to identify a “purpose” for a reservation and, separately, to demonstrate the “need” for the proposed reservation. The legislature intended for the need demonstration to be a high bar requiring an applicant to “demonstrate” in detail why the State of Alaska should take the extraordinary step of imposing a property restriction on a stream that makes public water legally unavailable for other uses. The granting of a reservation should be rare, and DNR is remiss in its efforts to take the rigor out of the process by noticing reservations based on minimal showings of need.

Statute and regulation clearly differentiate between these two requirements. “Need” and “purpose” exist in different parts of the statute. AS 46.15.145(a) lists four allowable purposes. For the applicant, it is literally a matter of checking a box. For all recent applications adjudicated by DNR – including those submitted by 3<sup>rd</sup>party applicants or DF&G – the applicants checked the box and noted the purpose as “Protection of fish and wildlife habitat, migration, and propagation.”

AS 46.15.145(c) requires DNR to issue a reservation if four conditions are satisfied.<sup>3</sup> The “need” requirement is one of these conditions. The requirement to demonstrate a “need” for a reservation is a significant, substantive obligation. It is in a different part of the statute than “purpose” and has a different meaning. DNR’s regulations expand on this difference. One part of the regulation requires the applicant to simply “identify the purpose” from a potential list of four purposes [11 AAC 93.142(b)(1)]. A different part of the regulation requires the applicant to “explain what need exists for the proposed reservation, including reasons why the reservation is being requested [§142(b)(3)].”<sup>4</sup> Another regulation requires an applicant to “identify physical, biological, water chemistry, and socio-economic data substantiating the need for and the quantity of water requested for the proposed reservation [§142(b)(8)].”

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<sup>2</sup> §(a)(1) is for protection of fish and wildlife habitat, migration, and propagation; §(a)(2) and (3) are for recreation, park, navigation, and transportation purposes; and §(a)(4) is for sanitary and water quality purposes.

<sup>3</sup> The four requirements are: (i) the rights of appropriators will not be affected, (ii) the applicant has demonstrated that a need exists for the reservation, (iii) there is sufficient unappropriated water in the stream for the reservation, and (iv) the proposed reservation is in the public interest. AS 46.15.145(c).

<sup>4</sup> 11 AAC 93.142(b)(3) (emphasis added).

**Existing Practice.** All recent applications include one sentence that discusses need. The typical sentence reads: “Sufficient flows are needed to support riverine habitats used by fish and to provide fluvial processes that maintain these habitats.” This need statement only restates one of the four potential purposes. This or a similar statement is the only explanation in any recent application that purports to address the “need” for a reservation. There is nothing in any recent application to distinguish the particular reach of the stream that is the subject of the application from any other waterbody in Alaska that contains salmon. The applicant’s sole evidence of a need is this single statement that fish and fish habitat need sufficient water. This is, of course, true for every stream with fish. If this superficial, broad statement of need is legally sufficient, then an IFR is presumptively appropriate for every fish-bearing stream in Alaska. This interpretation renders the legislative language meaningless.

**A Policy Framework to Evaluate Need.** We believe that the question of whether “a need exists for the reservation” falls into three categories:

1) *In a situation where a robust permitting process that involves water rights is reasonably foreseeable, there is no need for an instream flow reservation of water.* A few examples illustrate the point. The proposed Susitna Dam would be required to go through a thorough permitting process coordinated by the Federal Energy Regulatory Commission (FERC) before it is authorized. The FERC process brings far more fisheries information, technical information, and social information to bear on the issue than does a much simpler, less comprehensive instream flow evaluation. Yet an individual applied for an instream reservation below the dam. If approved, the IFR would stop the process; it would legally sequester the water needed for the dam. It would be a mistake to determine the water needs for fish using the reservation of water process rather than using the far more extensive FERC process.

As a second example, permitting processes for large mines involves a long, comprehensive, expensive evaluation. Much of the evaluation involves protecting water and fish habitat. Much more expertise and information are brought to the fisheries issues than is used in most instream flow applications. Every mine evaluation has a great deal more information and more experts reviewing the potential impacts than any IFR evaluation. Yet an established reservation of water would stop the process. The mine permit process would not begin – especially if a reservation of water indicated that no water withdrawal would be permitted for an average of four months each year (as most do). It makes no sense to eliminate the more comprehensive data-driven evaluation in favor of the much more limited instream flow evaluation. There is no advantage to fish and no advantage to society in doing so. DNR can protect the fish by denying or conditioning the water right for the mine. Neither DNR nor DF&G loses any jurisdiction by waiting; however, waiting provides the agencies with more information, more expertise, and more options to solve the issue or to mitigate its effects.

Further, most mines have a detailed adaptive monitoring process. If the monitoring process shows the need for a change in the water allocation, the change should be made without having to modify the IFR property right.

To ensure IFR applications are not used to stifle development or preempt a permit process, we would interpret the need requirement of the statute as not applying to situations where a more comprehensive permitting process will address the issues. In these situations, the IFR or other methods to protect fish should be evaluated during and as part of the permitting process.

*2) Where activities can occur without a robust permitting process and can have unregulated effect on water withdrawals, there is a need for a reservation of water.* In these cases, an instream flow protects the fish from over-withdrawal of water. The most obvious case where this occurs is urban or suburban sprawl which occurs with little or no permitting oversight for water use. For example, homes and businesses are sometimes constructed without regard for the cumulative effect on nearby streams. Examples include Lucille Creek in Wasilla, creeks on the Anchorage Hillside,<sup>5</sup> or streams in the Mendenhall Valley in Juneau. These creeks may need the protection that a reservation of water provides insofar as the water withdrawals may cumulatively compromise the fish habitat. The key point in this example is there is a real threat to the fish habitat and there is no effective permitting scheme that would otherwise address the threat.

*3) When a publicly owned watershed is in wilderness or effectively near-wilderness status, or subject to a land use regime such that nothing will happen that is likely to affect fish habitat, there is no need for a reservation of water.* This reflects the basic point that if a waterbody is likely to never see any development or activities, agency resources should not be spent establishing instream flow reservations. Scarce agency resources are better spent on watersheds where there is, in fact, a need for the reservation. If an IFR application is submitted for the near wilderness that effectively characterizes most of Alaska, the application does not serve any purpose but to stifle potential investment in cases where a resource is identified in the future. If the IFR is for actual wilderness, such as a National Park, then we have no objection to the adjudication, but it seems like a poor use of agency time and money.

It may appear harmless to grant an IFR in rural areas with no imminent development, but it is not. Alaska competes for investment capital with other areas of the world. Alaska's general use of IFRs looks like a significant legal hurdle to the investment community. Consider the example of the Tonalite Creek near Tenekee Springs. DNR had almost 14 years of record for that decision and granted an amount of water that was not naturally available over one-third of the months during those 14 years.<sup>6</sup>

A reservation of water grants a property right to the holder of that reservation of water. That property right holder has the legal right to prohibit others from withdrawing water which trespasses on its right. If DF&G were to assert this right, then one-third of the time for 14 years of record, there would be no water available for any other uses upstream.

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<sup>5</sup> In 2020, The Alaska Miners Association sent in a letter of support for IFRs for three streams draining the Anchorage Hillside: Rabbit Creek, Little Rabbit Creek, and Little Survival Creek.

<sup>6</sup> For documentation of the conclusion that the water was not available 33% of the months during that record, see AMA comment letter to DNR of December 11, 2017. AMA can provide a copy, if needed.



DNR and DF&G have created a written record that 33% of the time, there is not enough water available for anyone to use any amount without degrading fish habitat. A federal EIS, which relies on the written determination of DF&G, would be forced to conclude that any upstream development would significantly degrade fish habitat by depriving it of water that DF&G and DNR have jointly concluded is necessary.

DF&G has used this legal right sparingly. In all likelihood, even if DF&G has the legal authority to stop oil or mining exploration because their water use has a minor effect on fish habitat, the agency would analyze the situation and probably conclude that the minor exploration water withdrawal will not harm fish habitat.

But consider this same situation from the perspective of the outside investor. They know it will often require tens or perhaps hundreds of millions of dollars to develop a project to the point where it can go to permitting. They are being told they must spend that money on the belief that DF&G will not exercise its legal authority, that DF&G will not implement what it has declared, and many Alaskans believe, is its legal obligation, and that no ENGO will force DF&G to do so. What investor will invest in that situation? An investor is likely, instead, to tell the prospect owner – whether it is a Native Corporation, oil lease owner, mining claim owner, fish processor, or even a tourism developer – to go solve the IFR problem, and then come back and pitch the project.

***Recommendation:*** An addition to 11 AAC 93.144 would make it clear that DNR must evaluate need consistent with the statutory requirement of AS 46.145(c). Therefore, DNR should adopt two new subsections to 11 AAC 93.144:

- §144(x) In evaluating whether the applicant has established a need for the reservation consistent with AS 46.15.145(c), the commissioner will determine that no need exists if a person has spent funds within the watershed and upstream from the proposed reservation during the last five years on the expectation of a different permitting evaluation in which the agencies have equal or greater authority to regulate water use.
- §144(xx) In evaluating whether the applicant has established a need for the reservation consistent with AS 46.15.145(c), the commissioner will evaluate whether an alternative permitting system with equal or more data and expertise is more appropriate to determine uses of water in the watershed and whether there exists a likelihood of unregulated or poorly regulated use of water in the watershed.

The recommendations for DNR review above that implement the requirement to demonstrate need under AS 46.15.146(c) would require the applicant to supply additional information. This may require a change to either 11 AAC 93.142 (Content of the Application), or the IFR application form, or both.

**Implement the statutory requirement in AS 46.15.145(c) for DNR to evaluate the public interest tradeoff; require the fishery and economic information for DNR to do so.**

In addition to “need,” another statutory criterion requires DNR to decide whether “the proposed reservation is in the public interest.” [AS 46.16.145(c)(4)]. In evaluating the public interest, DNR must use the eight criteria in AS 46.15.080(b):

- (1) the benefit to the applicant resulting from the proposed appropriation;
- (2) the effect of the economic activity resulting from the proposed appropriation;
- (3) the effect on fish and game resources and on public recreational opportunities;
- (4) the effect on public health;
- (5) the effect of loss of alternate uses of water that might be made within a reasonable time if not precluded or hindered by the proposed appropriation;
- (6) harm to other persons resulting from the proposed appropriation;
- (7) the intent and ability of the applicant to complete the appropriation; and
- (8) the effect upon access to navigable or public water.

When considering the public interest, the statute clearly anticipates that DNR will balance the economic and other benefits resulting from the IFR against potential costs it will cause to economic activity and other individuals. The statute expects that this balancing will be done with data for that particular application; it clearly does not expect this balance to be done generally, universally, in a way that can be done once for all waterbodies in the state. Rather, it expects site-specific data at some level of specificity for DNR to use to make this balancing decision.

To accomplish the statutory-required balancing, DNR should expect an application to include detailed information on the habitat: how the habitat changes with water level; fish abundance and their importance for commercial, sport, and subsistence use; population estimates; use estimates; etc. Similarly, the applicant must supply data and discussion of the potential economic loss. Much of this information would come from information in the applicant’s demonstration of need, and DNR must use it for the public interest determination required by AS 46.15.145.

***Existing Practice.*** None of that site-specific information exists in any recent IFR application. The information is crucial because the proposed reservations would severely restrict other water-using activities in the watershed. The law clearly does not expect DNR to do so without data and analysis.

Presumably, DNR’s balancing would be different if the fish habitat in the particular reach provided rearing habitat for a single salmon than it would if the habitat provided spawning for tens of thousands of salmon. Similarly, it might be different if the loss of a particular volume of water resulted in a 2% decrease in spawning habitat, versus an 80% decrease in spawning habitat. Finally, the balancing might be different if it rendered a new, productive oil field on the north slope uneconomic or eliminated a regional hydropower project than if it inconvenienced a single household. None of this information is provided in a typical IFR application.

The law makes it clear that this information is required. One of the more important best interest criteria for an IFR is provided in AS 46.15.080(b)(3): the effect on fish and game resources and public recreational opportunities.” Yet, no application in the last decade, whether by DF&G or public applicants have included information about the quantity of fish, quality of the habitat, or even whether anyone relies on these fish. In one of DNR’s most

recent decisions, the discussion of fishing impacts uses only state-wide economic totals. The sum total of economic analysis justifying the Middle Fork Koyukuk IFR is that the river “supports subsistence and sport fishing in the watershed and contributes to commercial harvest of fish downstream.” It then cites the American Sport Fishing Association expenditures for sport fishing in Alaska, statewide. This is meaningless analysis: we do not know if the reach contributes a single fish or 10,000 fish to the commercial and sport fishery. We assume that such a difference might influence DNR, but it is clear that the agency does not require the applicant to develop the information. A statewide-level analysis renders the best-interest criteria meaningless in that it would apply equally to every waterbody in the state.

Neither is there a discussion of the potential loss of economic or recreational activities. The required “socio-economic data substantiating the need for” the reservation is missing from the applications. There is no attempt to supply the information to DNR, even though regulation requires it [11 AAC 93.145(b)(8)]. Again, using the Middle Fork Koyukuk decision, DNR states that it “has not identified any imminent proposed alternative uses of water or alternative uses which may be made within a reasonable amount of time.” The analysis ignores the mining claims upstream, the Dalton Highway, and the settlements of Coldfoot and Wiseman which are within the reach itself and would not be able to take water or expand.

Quite simply, DNR cannot execute its statutory evaluation without the missing fisheries and socioeconomic information, and the public cannot be reasonably expected to comment to DNR on what its evaluation should be. The information is the applicant’s responsibility and DNR should reject these applications as incomplete.

Without a real analysis of need, and without information to make a realistic balancing of uses, the agencies appear to be advocating a one-size-fits-all approach that would fit any stream with fish. This conception would mean that every anadromous fish stream would justify an instream flow reservation, no matter what existing or potential upstream activity was stopped, or stifled.

Such a policy would have far-reaching and significant economic consequences. This is obviously not what the legislature intended when they enacted the statute.

The solution is simple: require the information and use it to make the balancing decision required by statute. The legal requirement already exists in statute and is amplified in regulation.

As referenced previously, the public interest criteria in AS 46.15.080(b) anticipate DNR use site-specific data to make its balancing decision. If that were not enough, the regulation makes the need for this data even more clear. 11 AAC 93.142(b) specifies each IFR application must:

- (7) state the estimated quantity of water, stage, or elevation proposed to be reserved, measured in cubic feet per second for an instream flow rate or measured in cubic feet, acre feet, or an elevation relative to a permanent benchmark for a surface elevation, with documentation and calculations justifying the request;

- (8) identify physical, biological, water chemistry, and socio-economic data substantiating the need for and the quantity of water requested for the proposed reservation;

In a perfect world, neither statutes nor regulations would need to be changed. They already require the information that no one is bothering to supply. However, it is unrealistic to make no changes to regulation or the application form but to expect applicants, agencies, and staff to change. Therefore, to make the need for information clear, we recommend changing the application form and the application requirements specified in 11 AAC 93.142.

**Recommendation.** 11 AAC 93.142(b)(8) requires the applicant to supply physical and socioeconomic data. We recommend §(b)(8) be amended and new subsections be added to provide the information needed for DNR to evaluate the public interest as required by AS 46.15.143(c)

- Amend 11 AAC 93.142(b)(8) as follows: “identify physical, biological, and water chemistry, ~~and socio-economic data~~ substantiating the need for and the quantity of water requested for the proposed reservation;”
- Add a new paragraph:  
§142(b)(x): for reservations of water intended to protect fish habitat:
  - (i) identify the population and species of fish using the proposed reservation of water reach for spawning, rearing, or migration;
  - (ii) estimate the population of fish from the proposed reservation of water reach that supplies supply sport, commercial, and subsistence use; and
  - (iii) estimate how differing water levels or flows in the proposed reservation of water would affect the amount or quality of habitat available for rearing, spawning, or migration.

We note that the last piece of information – how habitat changes at different water levels – is the most difficult. Yet it is also the most important for balancing. Without knowing how much habitat will be lost at different water levels, DNR cannot know what water level is needed to balance the loss of economic activity. There is more information about this requirement in the next issue of this submission.

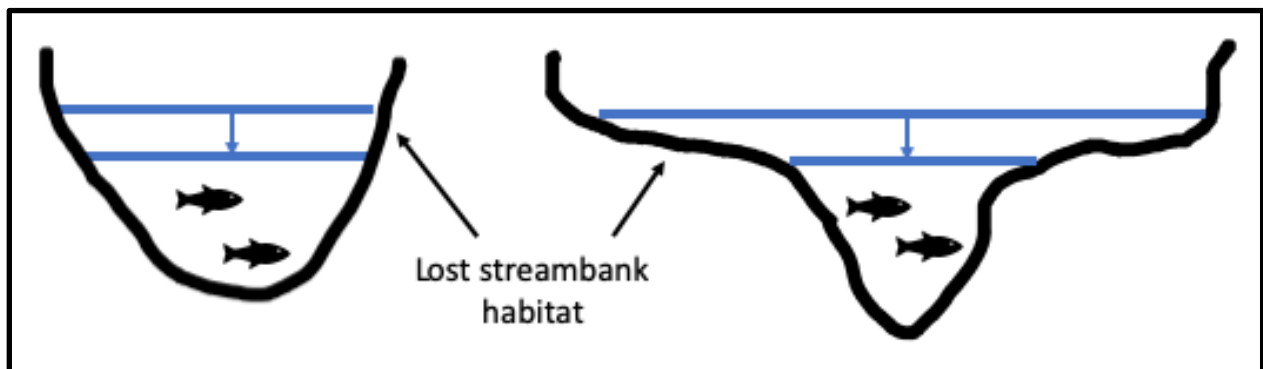
- Add a new paragraph:  
11 AAC 93.142(b)(xx): the application must:
  - (i) identify existing land uses and property rights at the proposed reach or upstream in the watershed that may be affected by the proposed reservation of water; the information should include any permits issued by DNR in the last five years, existing mining claims, and other such uses;
  - (ii) identify and to the extent possible quantify the recreational, subsistence, and economic uses occurring in the watershed upstream from the proposed reservation of water;
  - (iii) identify whether any economic activity near the proposed reach and upstream in the watershed is likely to trigger a permit process that will

- address water management or water use issues that could protect water use for habitat in the proposed reach; and
- (iv) identify the mineral, oil, or other resource potential in the proposed reach or upstream in the watershed.

### Use a site-specific methodology to determine the volume of water to be reserved

**Existing Practices.** There are a variety of methods available that correlate the flow of water in a stream with the presence and quality of fish habitat. To our knowledge, the Pacific Northwest states use site-specific methodologies to make important IFR decisions. Alaska may be the only state that allows the use of a desk-top methodology, relying on historic flow measurements that are uncorrelated to site-specific habitat or site-specific hydraulic characteristics of the stream reach. This one-size-fits-all methodology is easy to use but has not been correlated to most stream types in Alaska. There is no way to predict the approximate percentage of the spawning, rearing, or migration habitat that is being protected by an IFR proposal. Further, the methodology is not transparent. It is not explained in DF&G's applications nor in DNR's decisions. Consequently, the public is unable to review DNR's decisions and know whether it is reserving too much or too little water.

Consider the two rough drawings. They demonstrate the effect of a decrease in water level.



In the stream cross-section on the left, the decrease in water level changes very little of the available bank habitat for spawning or rearing. The steep slope of the streambank means that there is little change in the streambank perimeter. A similar drop in water level for the sketch on the right makes approximately three times as much of the bank habitat unavailable. It should matter which stream cross-section exists in the IFR reach. For some streams, very little habitat is gained or lost by a small difference in flow. For others, the opposite is true. One cannot determine the answer without site-specific investigations that survey the stream cross-sections and locate the fish habitat on those cross-sections. DNR's current desk-top method for IFRs does not do this. Most other states use hydraulic or habitat methodologies. These require more work – they require cross-sections and habitat evaluation of the specific stream reaches rather than desk-top evaluation of historic data – but they result in a correlation of specific flowrates with specific habitat availability. In

other words, one can determine what the IFR is protecting and what is being given up. That is not possible with the desk-top, historic flow methodology used by DNR.<sup>7</sup>

In the IFR applications and decisions made over the last decade, there is no discussion of methodology nor site-specific details to justify the particular flowrates chosen for the IFR. DNR's decision for the Middle Fork Koyukuk decision provides a typical example. In that decision, there is no justification for why DNR chose 1,400 cfs as the reservation for the last week in June and 920 cfs for the first week in July. Readers cannot dispute DNR's conclusion because there is no particular reason given for those numbers and no methodology identified by which they were selected. The stated reasoning is very general: "For the adjudication process, the applicant submitted flow recommendations that mimic the natural hydrologic variability to meet the needs of all species life history stages. The Department reviewed these flows and took into consideration the requested flows, current senior water appropriations, and potential near-future uses that may benefit the people of the State of Alaska. Through this process, ADNR adjusted flows to maintain necessary flow for fish habitat maintenance and passage while providing sufficient water for other potential uses."

If someone with a use upstream were to argue that 920 cfs was equally as good for the last week of June as the first week in July, they would have no basis to do so. There is no reason given that DNR picked those particular numbers, and no reason why any others would not suffice. There is no idea of what would be lost or gained by changing the flowrates.

In another example, DNR originally approved an IFR for a tributary of the Chuitna River even though the applicant had never even visited the stream. Not requiring even a single site visit means the applicant had no way to determine whether its desk-top methodology was appropriate for the site.

In addition, this desk-top methodology grants an IFR for water that frequently does not naturally exist in the stream. As multiple comments and appeals to DNR has shown, DNR typically grants an IFR for a volume of water that is naturally unavailable between 30% and 40% of the time. This means that for any given year, there will probably be between three and four months scattered throughout the year, or perhaps close to 150 days where anyone upstream taking water would trespass on the property rights of the IFR holder.

It does not make economic, legal, or biological sense to reserve water that is naturally unavailable much of the time. This situation cannot be described as Alaska being open for business. It is a serious impediment to investment, as described previously.

**Recommendation.** DNR should require site-specific investigation using hydraulic or habitat methodologies rather than its method based solely on historic flows without field

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<sup>7</sup> The methodology used by DNR is sometimes called the "flow duration method" or a "modified Tennant method." In any case, it is a desk-top method, and the particular method has never been shown to work on Alaskan streams, though a modified version was tested on Willow Creek in 1984 in a doctoral thesis by Christopher Estes. However, even in that single test, of a stream that is different from many others in Alaska, Mr. Estes concluded: "Without actually conducting a field investigation, it is not possible to translate the true value of Tennant's ratings to the specific resources it is being applied." He goes on to say, that the method can be valid "if calibrated to the site or area studied." He also recommends biological parameters be included. In other words, he cautioned that desk-top methods by themselves are inadequate.

verification. To do so, DNR should add site-specific information to its application requirements. Specifically, it should add the following paragraph to 11 AAC 93.142.

11 AAC 93.142(b) Each application must

(x) identify and explain the methodology to be used to quantify the proposed reservation including:

(A) flowrate and discharge data for the reach

(B) for reservations proposed for the purposes of AS 46.15.145(a)(1), hydraulic cross-sections and habitat information for the reach adequate to determine the effect of the requested flows on the amount or quality of available fish habitat;

(C) a description of how the data will be analyzed.

**Attachment to Alaska Business Association letter:  
Alaska Chamber, Alaska Forest Association, Alaska Metal Mines, Alaska Miners  
Association, Alaska Oil and Gas Association, Alaska Support Industry Alliance,  
Associated General Contractors of Alaska, and Resource Development Council for  
Alaska, Inc.**

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**Instream Flow  
Submission to DNR August 1 Scoping Notice for Regulations Implementing  
AS 46.15.145**

**11 AAC 93.146: A private party should not hold an IFR**

**Existing Practice.** Anyone may apply for an IFR. Should DNR decide to grant the reservation, the statute is silent as to what person or organization should hold it. The statute allows DNR to determine the owner through analysis of the public interest. Unfortunately, in a regulation last amended over 30 years ago, DNR required itself to convey the IFR property right to the applicant, whomever that may be. Specifically, 11 AAC 93.146(b) provides that “The certificate of reservation will be issued to the applicant.”

Constitutionally, Alaska’s fish belong to all Alaskans: not to an individual, an interest group, or even to a city, community, group, or Native Tribe. Decisions about the water needed for fish habitat, recreation, or water quality should be made by an Alaskan organization that represents all those groups, not just one. For example, decisions about fish habitat should be made by the Department of Fish and Game, not by any of those other individuals or groups.

The majority of IFR applications are from state or federal agencies. However, as discussed later in this submission, there are single-issue groups, many from outside Alaska, that apply for IFRs once a development project is proposed. It is not reasonable public policy to require Alaska to ask permission from Greenpeace before building an ice road on the North Slope. Nor to ask an individual or outside-funded NGO whether Alaska may build a hydro project to benefit our state.<sup>1</sup>

The solution is to allow only public agencies to hold IFRs. State agencies should hold IFRs to protect water for all Alaskans,

**Recommendation.** A regulation change will solve the problem. Repeal and reenact 11 AAC 93.146(b) to read as follows:

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<sup>1</sup> The requirement to convey an IFR to a private party also inhibits public review of the data. Of the 29 IFR applications submitted to DNR by private parties after a development was proposed, most applicants did not gather any actual data. These applicants copied data gathered by the developer. The developer perceives that their data is being used against them. Public data used against developers results in companies hesitating to give DNR their hydrologic data for fear it will be used against them. While DNR has asserted that it can keep hydrologic data confidential, its ability to do so is questionable, and the data should also be evaluated by DF&G and DEC which have never made that assertion. In addition, it is wrong to keep hydrologic data from the public. The only reason to avoid public review of important environmental data is to avoid the unfortunate legal problem created by the current IFR system. The public should review this data without putting the developer at risk for providing it.



A certificate of reservation for a federally reserved water right will be issued to a federal agency, otherwise a certificate:

- (1) for purposes of AS 46.15.145(a)(1) will be issued to the department of fish and game;
- (2) for the purposes of AS 46.145(a)(2) or (3) will be issued to the department;
- (3) for the purposes of AS 46.15.145(a)(4) will be issued to the department of environmental conservation; and
- (4) for multiple purposes under AS 46.15.145(a) will be issued to the state agency with jurisdiction of the reservation's primary purpose.<sup>2</sup>

### **11 AAC 93.142 and 144. Implement the statutory requirement in AS 46.15.145(c) that there must be a need for an IFR**

The instream flow statute requires an application to identify a “purpose” for a reservation and, separately, to demonstrate the “need” for the proposed reservation. The legislature intended for the need demonstration to be a high bar requiring an applicant to “demonstrate” in detail why the State of Alaska should take the extraordinary step of imposing a property restriction on a stream that makes public water legally unavailable for other uses. The granting of a reservation should be rare, and DNR is remiss in its efforts to take the rigor out of the process by noticing reservations based on minimal showings of need.

Statute and regulation clearly differentiate between these two requirements. “Need” and “purpose” exist in different parts of the statute. AS 46.15.145(a) lists four allowable purposes. For the applicant, it is literally a matter of checking a box. For all recent applications adjudicated by DNR – including those submitted by 3<sup>rd</sup>party applicants or DF&G – the applicants checked the box and noted the purpose as “Protection of fish and wildlife habitat, migration, and propagation.”

AS 46.15.145(c) requires DNR to issue a reservation if four conditions are satisfied.<sup>3</sup> The “need” requirement is one of these conditions. The requirement to demonstrate a “need” for a reservation is a significant, substantive obligation. It is in a different part of the statute than “purpose” and has a different meaning. DNR’s regulations expand on this difference. One part of the regulation requires the applicant to simply “identify the purpose” from a potential list of four purposes [11 AAC 93.142(b)(1)]. A different part of the regulation requires the applicant to “explain what need exists for the proposed reservation, including reasons why the reservation is being requested [§142(b)(3)].”<sup>4</sup> Another regulation requires an applicant to “identify physical, biological, water chemistry, and socio-economic data substantiating the need for and the quantity of water requested for the proposed reservation [§142(b)(8)].”

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<sup>2</sup> §(a)(1) is for protection of fish and wildlife habitat, migration, and propagation; §(a)(2) and (3) are for recreation, park, navigation, and transportation purposes; and §(a)(4) is for sanitary and water quality purposes.

<sup>3</sup> The four requirements are: (i) the rights of appropriators will not be affected, (ii) the applicant has demonstrated that a need exists for the reservation, (iii) there is sufficient unappropriated water in the stream for the reservation, and (iv) the proposed reservation is in the public interest. AS 46.15.145(c).

<sup>4</sup> 11 AAC 93.142(b)(3) (emphasis added).

**Existing Practice.** All recent applications include one sentence that discusses need. The typical sentence reads: “Sufficient flows are needed to support riverine habitats used by fish and to provide fluvial processes that maintain these habitats.” This need statement only restates one of the four potential purposes. This or a similar statement is the only explanation in any recent application that purports to address the “need” for a reservation. There is nothing in any recent application to distinguish the particular reach of the stream that is the subject of the application from any other waterbody in Alaska that contains salmon. The applicant’s sole evidence of a need is this single statement that fish and fish habitat need sufficient water. This is, of course, true for every stream with fish. If this superficial, broad statement of need is legally sufficient, then an IFR is presumptively appropriate for every fish-bearing stream in Alaska. This interpretation renders the legislative language meaningless.

**A Policy Framework to Evaluate Need.** We believe that the question of whether “a need exists for the reservation” falls into three categories:

1) *In a situation where a robust permitting process that involves water rights is reasonably foreseeable, there is no need for an instream flow reservation of water.* A few examples illustrate the point. The proposed Susitna Dam would be required to go through a thorough permitting process coordinated by the Federal Energy Regulatory Commission (FERC) before it is authorized. The FERC process brings far more fisheries information, technical information, and social information to bear on the issue than does a much simpler, less comprehensive instream flow evaluation. Yet an individual applied for an instream reservation below the dam. If approved, the IFR would stop the process; it would legally sequester the water needed for the dam. It would be a mistake to determine the water needs for fish using the reservation of water process rather than using the far more extensive FERC process.

As a second example, permitting processes for large mines involves a long, comprehensive, expensive evaluation. Much of the evaluation involves protecting water and fish habitat. Much more expertise and information are brought to the fisheries issues than is used in most instream flow applications. Every mine evaluation has a great deal more information and more experts reviewing the potential impacts than any IFR evaluation. Yet an established reservation of water would stop the process. The mine permit process would not begin – especially if a reservation of water indicated that no water withdrawal would be permitted for an average of four months each year (as most do). It makes no sense to eliminate the more comprehensive data-driven evaluation in favor of the much more limited instream flow evaluation. There is no advantage to fish and no advantage to society in doing so. DNR can protect the fish by denying or conditioning the water right for the mine. Neither DNR nor DF&G loses any jurisdiction by waiting; however, waiting provides the agencies with more information, more expertise, and more options to solve the issue or to mitigate its effects.

Further, most mines have a detailed adaptive monitoring process. If the monitoring process shows the need for a change in the water allocation, the change should be made without having to modify the IFR property right.

To ensure IFR applications are not used to stifle development or preempt a permit process, we would interpret the need requirement of the statute as not applying to situations where a more comprehensive permitting process will address the issues. In these situations, the IFR or other methods to protect fish should be evaluated during and as part of the permitting process.

*2) Where activities can occur without a robust permitting process and can have unregulated effect on water withdrawals, there is a need for a reservation of water.* In these cases, an instream flow protects the fish from over-withdrawal of water. The most obvious case where this occurs is urban or suburban sprawl which occurs with little or no permitting oversight for water use. For example, homes and businesses are sometimes constructed without regard for the cumulative effect on nearby streams. Examples include Lucille Creek in Wasilla, creeks on the Anchorage Hillside,<sup>5</sup> or streams in the Mendenhall Valley in Juneau. These creeks may need the protection that a reservation of water provides insofar as the water withdrawals may cumulatively compromise the fish habitat. The key point in this example is there is a real threat to the fish habitat and there is no effective permitting scheme that would otherwise address the threat.

*3) When a publicly owned watershed is in wilderness or effectively near-wilderness status, or subject to a land use regime such that nothing will happen that is likely to affect fish habitat, there is no need for a reservation of water.* This reflects the basic point that if a waterbody is likely to never see any development or activities, agency resources should not be spent establishing instream flow reservations. Scarce agency resources are better spent on watersheds where there is, in fact, a need for the reservation. If an IFR application is submitted for the near wilderness that effectively characterizes most of Alaska, the application does not serve any purpose but to stifle potential investment in cases where a resource is identified in the future. If the IFR is for actual wilderness, such as a National Park, then we have no objection to the adjudication, but it seems like a poor use of agency time and money.

It may appear harmless to grant an IFR in rural areas with no imminent development, but it is not. Alaska competes for investment capital with other areas of the world. Alaska's general use of IFRs looks like a significant legal hurdle to the investment community. Consider the example of the Tonalite Creek near Tenekee Springs. DNR had almost 14 years of record for that decision and granted an amount of water that was not naturally available over one-third of the months during those 14 years.<sup>6</sup>

A reservation of water grants a property right to the holder of that reservation of water. That property right holder has the legal right to prohibit others from withdrawing water which trespasses on its right. If DF&G were to assert this right, then one-third of the time for 14 years of record, there would be no water available for any other uses upstream.

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<sup>5</sup> In 2020, The Alaska Miners Association sent in a letter of support for IFRs for three streams draining the Anchorage Hillside: Rabbit Creek, Little Rabbit Creek, and Little Survival Creek.

<sup>6</sup> For documentation of the conclusion that the water was not available 33% of the months during that record, see AMA comment letter to DNR of December 11, 2017. AMA can provide a copy, if needed.

DNR and DF&G have created a written record that 33% of the time, there is not enough water available for anyone to use any amount without degrading fish habitat. A federal EIS, which relies on the written determination of DF&G, would be forced to conclude that any upstream development would significantly degrade fish habitat by depriving it of water that DF&G and DNR have jointly concluded is necessary.

DF&G has used this legal right sparingly. In all likelihood, even if DF&G has the legal authority to stop oil or mining exploration because their water use has a minor effect on fish habitat, the agency would analyze the situation and probably conclude that the minor exploration water withdrawal will not harm fish habitat.

But consider this same situation from the perspective of the outside investor. They know it will often require tens or perhaps hundreds of millions of dollars to develop a project to the point where it can go to permitting. They are being told they must spend that money on the belief that DF&G will not exercise its legal authority, that DF&G will not implement what it has declared, and many Alaskans believe, is its legal obligation, and that no ENGO will force DF&G to do so. What investor will invest in that situation? An investor is likely, instead, to tell the prospect owner – whether it is a Native Corporation, oil lease owner, mining claim owner, fish processor, or even a tourism developer – to go solve the IFR problem, and then come back and pitch the project.

**Recommendation:** An addition to 11 AAC 93.144 would make it clear that DNR must evaluate need consistent with the statutory requirement of AS 46.145(c). Therefore, DNR should adopt two new subsections to 11 AAC 93.144:

- §144(x) In evaluating whether the applicant has established a need for the reservation consistent with AS 46.15.145(c), the commissioner will determine that no need exists if a person has spent funds within the watershed and upstream from the proposed reservation during the last five years on the expectation of a different permitting evaluation in which the agencies have equal or greater authority to regulate water use.
- §144(xx) In evaluating whether the applicant has established a need for the reservation consistent with AS 46.15.145(c), the commissioner will evaluate whether an alternative permitting system with equal or more data and expertise is more appropriate to determine uses of water in the watershed and whether there exists a likelihood of unregulated or poorly regulated use of water in the watershed.

The recommendations for DNR review above that implement the requirement to demonstrate need under AS 46.15.146(c) would require the applicant to supply additional information. This may require a change to either 11 AAC 93.142 (Content of the Application), or the IFR application form, or both.

**Implement the statutory requirement in AS 46.15.145(c) for DNR to evaluate the public interest tradeoff; require the fishery and economic information for DNR to do so.**

In addition to “need,” another statutory criterion requires DNR to decide whether “the proposed reservation is in the public interest.” [AS 46.16.145(c)(4)]. In evaluating the public interest, DNR must use the eight criteria in AS 46.15.080(b):

- (1) the benefit to the applicant resulting from the proposed appropriation;
- (2) the effect of the economic activity resulting from the proposed appropriation;
- (3) the effect on fish and game resources and on public recreational opportunities;
- (4) the effect on public health;
- (5) the effect of loss of alternate uses of water that might be made within a reasonable time if not precluded or hindered by the proposed appropriation;
- (6) harm to other persons resulting from the proposed appropriation;
- (7) the intent and ability of the applicant to complete the appropriation; and
- (8) the effect upon access to navigable or public water.

When considering the public interest, the statute clearly anticipates that DNR will balance the economic and other benefits resulting from the IFR against potential costs it will cause to economic activity and other individuals. The statute expects that this balancing will be done with data for that particular application; it clearly does not expect this balance to be done generally, universally, in a way that can be done once for all waterbodies in the state. Rather, it expects site-specific data at some level of specificity for DNR to use to make this balancing decision.

To accomplish the statutory-required balancing, DNR should expect an application to include detailed information on the habitat: how the habitat changes with water level; fish abundance and their importance for commercial, sport, and subsistence use; population estimates; use estimates; etc. Similarly, the applicant must supply data and discussion of the potential economic loss. Much of this information would come from information in the applicant’s demonstration of need, and DNR must use it for the public interest determination required by AS 46.15.145.

***Existing Practice.*** None of that site-specific information exists in any recent IFR application. The information is crucial because the proposed reservations would severely restrict other water-using activities in the watershed. The law clearly does not expect DNR to do so without data and analysis.

Presumably, DNR’s balancing would be different if the fish habitat in the particular reach provided rearing habitat for a single salmon than it would if the habitat provided spawning for tens of thousands of salmon. Similarly, it might be different if the loss of a particular volume of water resulted in a 2% decrease in spawning habitat, versus an 80% decrease in spawning habitat. Finally, the balancing might be different if it rendered a new, productive oil field on the north slope uneconomic or eliminated a regional hydropower project than if it inconvenienced a single household. None of this information is provided in a typical IFR application.

The law makes it clear that this information is required. One of the more important best interest criteria for an IFR is provided in AS 46.15.080(b)(3): the effect on fish and game resources and public recreational opportunities.” Yet, no application in the last decade, whether by DF&G or public applicants have included information about the quantity of fish, quality of the habitat, or even whether anyone relies on these fish. In one of DNR’s most

recent decisions, the discussion of fishing impacts uses only state-wide economic totals. The sum total of economic analysis justifying the Middle Fork Koyukuk IFR is that the river “supports subsistence and sport fishing in the watershed and contributes to commercial harvest of fish downstream.” It then cites the American Sport Fishing Association expenditures for sport fishing in Alaska, statewide. This is meaningless analysis: we do not know if the reach contributes a single fish or 10,000 fish to the commercial and sport fishery. We assume that such a difference might influence DNR, but it is clear that the agency does not require the applicant to develop the information. A statewide-level analysis renders the best-interest criteria meaningless in that it would apply equally to every waterbody in the state.

Neither is there a discussion of the potential loss of economic or recreational activities. The required “socio-economic data substantiating the need for” the reservation is missing from the applications. There is no attempt to supply the information to DNR, even though regulation requires it [11 AAC 93.145(b)(8)]. Again, using the Middle Fork Koyukuk decision, DNR states that it “has not identified any imminent proposed alternative uses of water or alternative uses which may be made within a reasonable amount of time.” The analysis ignores the mining claims upstream, the Dalton Highway, and the settlements of Coldfoot and Wiseman which are within the reach itself and would not be able to take water or expand.

Quite simply, DNR cannot execute its statutory evaluation without the missing fisheries and socioeconomic information, and the public cannot be reasonably expected to comment to DNR on what its evaluation should be. The information is the applicant’s responsibility and DNR should reject these applications as incomplete.

Without a real analysis of need, and without information to make a realistic balancing of uses, the agencies appear to be advocating a one-size-fits-all approach that would fit any stream with fish. This conception would mean that every anadromous fish stream would justify an instream flow reservation, no matter what existing or potential upstream activity was stopped, or stifled.

Such a policy would have far-reaching and significant economic consequences. This is obviously not what the legislature intended when they enacted the statute.

The solution is simple: require the information and use it to make the balancing decision required by statute. The legal requirement already exists in statute and is amplified in regulation.

As referenced previously, the public interest criteria in AS 46.15.080(b) anticipate DNR use site-specific data to make its balancing decision. If that were not enough, the regulation makes the need for this data even more clear. 11 AAC 93.142(b) specifies each IFR application must:

- (7) state the estimated quantity of water, stage, or elevation proposed to be reserved, measured in cubic feet per second for an instream flow rate or measured in cubic feet, acre feet, or an elevation relative to a permanent benchmark for a surface elevation, with documentation and calculations justifying the request;

- (8) identify physical, biological, water chemistry, and socio-economic data substantiating the need for and the quantity of water requested for the proposed reservation;

In a perfect world, neither statutes nor regulations would need to be changed. They already require the information that no one is bothering to supply. However, it is unrealistic to make no changes to regulation or the application form but to expect applicants, agencies, and staff to change. Therefore, to make the need for information clear, we recommend changing the application form and the application requirements specified in 11 AAC 93.142.

**Recommendation.** 11 AAC 93.142(b)(8) requires the applicant to supply physical and socioeconomic data. We recommend §(b)(8) be amended and new subsections be added to provide the information needed for DNR to evaluate the public interest as required by AS 46.15.143(c)

- Amend 11 AAC 93.142(b)(8) as follows: “identify physical, biological, and water chemistry, ~~and socio-economic data~~ substantiating the need for and the quantity of water requested for the proposed reservation;”
- Add a new paragraph:  
§142(b)(x): for reservations of water intended to protect fish habitat:
  - (i) identify the population and species of fish using the proposed reservation of water reach for spawning, rearing, or migration;
  - (ii) estimate the population of fish from the proposed reservation of water reach that supplies supply sport, commercial, and subsistence use; and
  - (iii) estimate how differing water levels or flows in the proposed reservation of water would affect the amount or quality of habitat available for rearing, spawning, or migration.

We note that the last piece of information – how habitat changes at different water levels – is the most difficult. Yet it is also the most important for balancing. Without knowing how much habitat will be lost at different water levels, DNR cannot know what water level is needed to balance the loss of economic activity. There is more information about this requirement in the next issue of this submission.

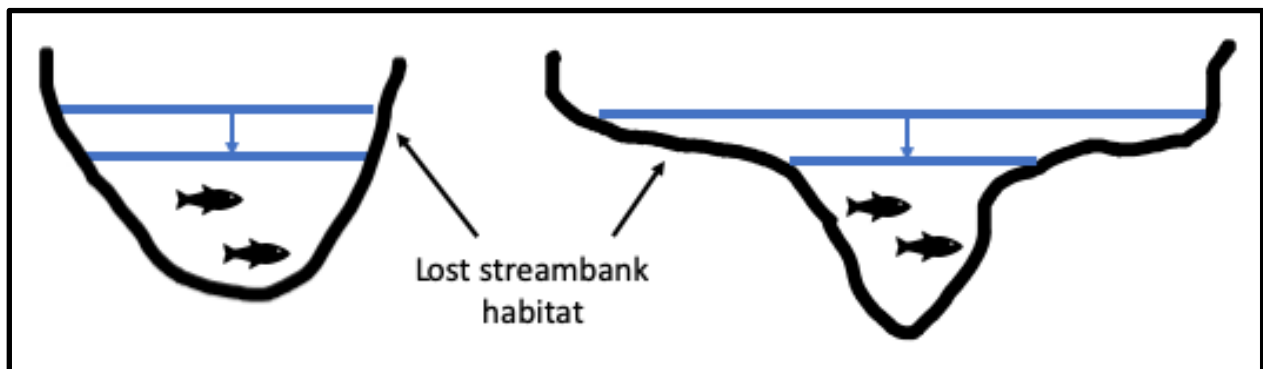
- Add a new paragraph:  
11 AAC 93.142(b)(xx): the application must:
  - (i) identify existing land uses and property rights at the proposed reach or upstream in the watershed that may be affected by the proposed reservation of water; the information should include any permits issued by DNR in the last five years, existing mining claims, and other such uses;
  - (ii) identify and to the extent possible quantify the recreational, subsistence, and economic uses occurring in the watershed upstream from the proposed reservation of water;
  - (iii) identify whether any economic activity near the proposed reach and upstream in the watershed is likely to trigger a permit process that will

- address water management or water use issues that could protect water use for habitat in the proposed reach; and
- (iv) identify the mineral, oil, or other resource potential in the proposed reach or upstream in the watershed.

### Use a site-specific methodology to determine the volume of water to be reserved

**Existing Practices.** There are a variety of methods available that correlate the flow of water in a stream with the presence and quality of fish habitat. To our knowledge, the Pacific Northwest states use site-specific methodologies to make important IFR decisions. Alaska may be the only state that allows the use of a desk-top methodology, relying on historic flow measurements that are uncorrelated to site-specific habitat or site-specific hydraulic characteristics of the stream reach. This one-size-fits-all methodology is easy to use but has not been correlated to most stream types in Alaska. There is no way to predict the approximate percentage of the spawning, rearing, or migration habitat that is being protected by an IFR proposal. Further, the methodology is not transparent. It is not explained in DF&G's applications nor in DNR's decisions. Consequently, the public is unable to review DNR's decisions and know whether it is reserving too much or too little water.

Consider the two rough drawings. They demonstrate the effect of a decrease in water level.



In the stream cross-section on the left, the decrease in water level changes very little of the available bank habitat for spawning or rearing. The steep slope of the streambank means that there is little change in the streambank perimeter. A similar drop in water level for the sketch on the right makes approximately three times as much of the bank habitat unavailable. It should matter which stream cross-section exists in the IFR reach. For some streams, very little habitat is gained or lost by a small difference in flow. For others, the opposite is true. One cannot determine the answer without site-specific investigations that survey the stream cross-sections and locate the fish habitat on those cross-sections. DNR's current desk-top method for IFRs does not do this. Most other states use hydraulic or habitat methodologies. These require more work – they require cross-sections and habitat evaluation of the specific stream reaches rather than desk-top evaluation of historic data – but they result in a correlation of specific flowrates with specific habitat availability. In



other words, one can determine what the IFR is protecting and what is being given up. That is not possible with the desk-top, historic flow methodology used by DNR.<sup>7</sup>

In the IFR applications and decisions made over the last decade, there is no discussion of methodology nor site-specific details to justify the particular flowrates chosen for the IFR. DNR's decision for the Middle Fork Koyukuk decision provides a typical example. In that decision, there is no justification for why DNR chose 1,400 cfs as the reservation for the last week in June and 920 cfs for the first week in July. Readers cannot dispute DNR's conclusion because there is no particular reason given for those numbers and no methodology identified by which they were selected. The stated reasoning is very general: "For the adjudication process, the applicant submitted flow recommendations that mimic the natural hydrologic variability to meet the needs of all species life history stages. The Department reviewed these flows and took into consideration the requested flows, current senior water appropriations, and potential near-future uses that may benefit the people of the State of Alaska. Through this process, ADNR adjusted flows to maintain necessary flow for fish habitat maintenance and passage while providing sufficient water for other potential uses."

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It does not make economic, legal, or biological sense to reserve water that is naturally unavailable much of the time. This situation cannot be described as Alaska being open for business. It is a serious impediment to investment, as described previously.

**Recommendation.** DNR should require site-specific investigation using hydraulic or habitat methodologies rather than its method based solely on historic flows without field

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<sup>7</sup> The methodology used by DNR is sometimes called the "flow duration method" or a "modified Tennant method." In any case, it is a desk-top method, and the particular method has never been shown to work on Alaskan streams, though a modified version was tested on Willow Creek in 1984 in a doctoral thesis by Christopher Estes. However, even in that single test, of a stream that is different from many others in Alaska, Mr. Estes concluded: "Without actually conducting a field investigation, it is not possible to translate the true value of Tennant's ratings to the specific resources it is being applied." He goes on to say, that the method can be valid "if calibrated to the site or area studied." He also recommends biological parameters be included. In other words, he cautioned that desk-top methods by themselves are inadequate.

verification. To do so, DNR should add site-specific information to its application requirements. Specifically, it should add the following paragraph to 11 AAC 93.142.

11 AAC 93.142(b) Each application must

(x) identify and explain the methodology to be used to quantify the proposed reservation including:

(A) flowrate and discharge data for the reach

(B) for reservations proposed for the purposes of AS 46.15.145(a)(1), hydraulic cross-sections and habitat information for the reach adequate to determine the effect of the requested flows on the amount or quality of available fish habitat;

(C) a description of how the data will be analyzed.