

UNDERSTANDING WATER RIGHTS IN ALASKA

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Alaska's state constitution defines water as a public resource, but no one has automatic rights to use water.¹ The constitution and Alaska law allow the state government to decide who can use water, how much they can use, and for what. That's true on both private and public land, and for all landowners —government agencies, businesses, and individual Alaskans.

Anyone who plans to use a significant amount of water needs to get water rights, which are legal rights to specific amounts of water, from specific sources, for specific purposes.² The Alaska Department of Natural Resources (DNR) processes water-rights applications and decides whether to issue water-right permits and certificates.

And anyone who gets water rights has priority over those who apply later, if other proposed uses would conflict with theirs.³

ALASKA'S WATER USE LAW

Alaska's water law has been described as the broadest in the country. It allows not only government agencies but also individuals and private and non-governmental organizations to apply for rights to use water as well as to *reserve* water in place.⁴ The Alaska Legislature wrote the water code governing use of water soon after statehood, and amended it to include language about reserving water in 1980.

WHY ARE WATER RIGHTS IMPORTANT?

Alaska is different from other states: it is less developed, it has plenty of water, and it has fewer competing demands for that water. Still, there have been some conflicts over water—and as time goes on, and the economy and population grow, there will be more. Right now we have opportunities other places no longer have, to decide how best to allocate this critical public resource.

WHY THIS PAPER?

Many Alaskans don't understand the rules governing water rights—or when you need them and how to apply. A 2013 survey sponsored by Ecotrust, a non-profit organization, found that in particular most Alaskans aren't familiar with reservations of water. Just 5% of respondents said they knew much about water reservations, and a third said they knew nothing.⁵ Based on those survey results, Ecotrust asked ISER researchers to write this paper, broadly explaining water rights and identifying sources with more detail.

DNR also recommends that anyone planning to apply for water rights should first talk with DNR personnel, to learn more about what's required and what to do.⁶

TWO KINDS OF WATER RIGHTS: USING AND RESERVING WATER

• *Right to use water.* Using water can mean taking it from streams, lakes, or underground, but also changing the way it flows or damming it up. The use has to be a "significant" amount. Single-family houses that have their own wells but use less than 500 gallons of water a day don't need water rights. But anyone who uses more than 500 gallons a day for ten days a year, or 5,000 gallons in a single day, needs water rights.⁷

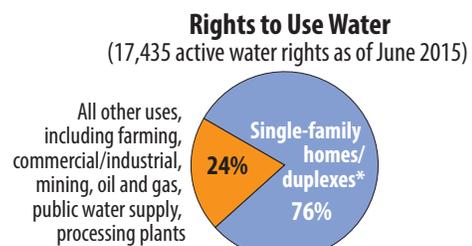
• *Right to reserve water.* Reserving water means keeping it in place—protecting a specific flow of water, for a specific period of time, in sections of streams or rivers, or reserving water to maintain lake levels. The most common reason for reserving water is protecting fish and wildlife—their habitat, or migration, breeding, and rearing areas.⁸

How many rights to use and reserve water has DNR issued so far?

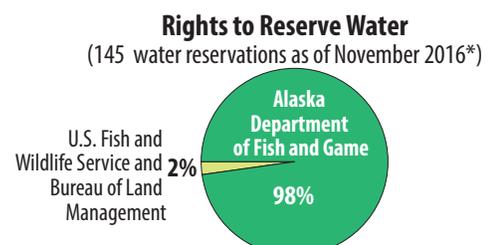
• *DNR estimates there are about 17,500 active water-use rights.*⁹ Roughly three-quarters are for single-family houses or duplexes with wells using more than 500 gallons of water a day, or taking more than 500 gallons a day from streams or lakes.¹⁰ All other uses account for one-quarter.

• *As of November 2016, DNR had approved 145 water reservations, all to protect fish and wildlife habitat.* The state Department of Fish and Game holds almost all those; federal agencies hold three.¹¹ In 2015, DNR approved the first reservation for a non-governmental organization, the Chuitna Citizens Coalition, but it is on hold pending resolution of appeals.¹²

Figure 1. Existing Water Rights in Alaska



*Residences that use 500 or more gallons of water daily from their own wells or from surface water. This does not include homes using public or community water systems.



*Excludes 5 reservations for water export. The first reservation approved for a private group was on hold in early 2017, pending resolution of appeals by opponents.

Source: Alaska Department of Natural Resources, Water Resources Section

WHAT SPECIAL WATER-RIGHT CIRCUMSTANCES ARE THERE?

Several things make water-rights issues different in Alaska.

- *Water rights haven't yet been issued for most of Alaska's waters.*¹³ In other states, the water has largely been appropriated.
- *Stream-flow data have been collected for only about 1% of Alaska's rivers and streams.*¹⁴ (A recent state report defines in-stream flow generally as "the rate or volume of flow in a river or the volume of water in a lake."¹⁵) Collecting flow data—which is required for all reservation applications and some use applications—is difficult and as well as expensive in Alaska's vast roadless areas.
- *U.S. Supreme Court doctrine reserves water on Native American reservations.*¹⁶ *But Alaska has only one reservation*—the Annette Island Reserve in Southeast. Most land Alaska Natives own is held by corporations created under the 1971 Alaska Native Claims Settlement Act.¹⁷ The Supreme Court doctrine does not cover water on those corporation lands, which are private rather than reservation lands. Some Alaska Native organizations have applied to DNR for reservations of water.¹⁸

HOW DOES DNR DECIDE ABOUT ISSUING WATER RIGHTS?

The Alaska Water Use Act and the regulations used to implement it require DNR to take specific steps when considering applications.

Criteria for Water-Use Rights

When DNR gets an application for the right to use water, Alaska law says it has to determine that the proposed use:

- Wouldn't "unduly affect" anyone with an existing use-right. DNR can approve more than one use of water from the same source, but those who get rights first have the first claim, if potential new uses conflict with theirs; that's known as "prior appropriation."¹⁹
- Would be beneficial—meaning that the applicant, other people, or the public—would actually benefit from the proposed use.
- Is in the "public interest," as measured by: benefit to the applicant; no harm to other people; alternative uses of water; effects on fish and wildlife, public health, the economy, recreation, and access to navigable water; the reason for and ability of the applicant to carry out the project.²⁰

DNR is also required to issue notices when it is considering applications, except for applications to use less than 5,000 gallons per day.²¹

- Everyone with existing water rights, or pending applications that might be affected, have to be notified, as well as the Alaska departments of Fish and Game and Environmental Conservation, and the general public.
- People and agencies have 15 days after they're notified to object to the proposed use.
- DNR decides whether the objection is justified—but people who disagree with DNR's decisions can appeal first to the DNR commissioner and then to the courts.

Criteria for Water Reservations

State law recognizes four reasons for establishing water reservations:²²

- Protecting fish and wildlife habitat, or migration, breeding, rearing areas
- Allowing for recreation and park uses
- Maintaining adequate water for navigation and transportation
- Ensuring water quality or sanitation

DNR has to follow the same public-notice process for applications to reserve water as it does for water-use applications, using the same criteria as for proposed water uses. It also has to find:

- Existing water rights won't be affected.
- The applicant has shown there's a need for the reservation.
- There is enough water available for the reservation (that is, water not already appropriated).²³
- The reservation is in the public interest.

WHAT ABOUT TEMPORARY USES OF WATER?

Alaska law also allows DNR to issue temporary authorizations for non-permanent, shorter-term uses—water used during road construction or mine exploration, for instance. These can be for up to five years per authorization, and can be re-issued after they expire.

DNR doesn't have to take into account all the criteria it does for water-right applications, or give public notice, before issuing temporary permits. But it does have to consult with the departments of Fish and Game and Environmental Conservation.

DNR can also impose conditions to protect existing water rights, as well as fish and wildlife or other public interests—and it can revoke temporary authorizations, if it decides that's necessary to protect the water rights of other people or the public interest.²⁴

HOW DO RIGHTS TO USE WATER AND TO RESERVE WATER DIFFER?

Rights to use water and to reserve water are the same in important ways: both are property rights, and both give those who have the rights priority over latecomers. But there are also differences.

Data Required for Applications

- *People applying for the most common water uses (like household water wells) don't have to provide data on stream flow*, because they are applying to use groundwater.
- *Those applying for the largest water uses—100,000 gallons or more daily—have to submit data on average stream flow.* That can be the "best available data" or a "reasonably accurate" estimate, obtained through hydrologic methods.²⁵ DNR can also put conditions on water-use permits, requiring more or different kinds of data. For example, it can require those developing large mines or hydroelectric systems to collect flow or use data for years, before they get permanent water rights.²⁶
- *Those applying for water reservations have three years to collect additional data required, after DNR accepts their applications.* State regulations direct DNR to "specify the time period to fully quantify the proposed reservation, which may be no longer than three years" after it accepts an application.²⁷

So applicants should talk with DNR at the outset, to figure out what data will be necessary. DNR requires at least five years of stream-flow or lake-level data; it has determined that five years is the minimum time needed to establish if there is enough water available for the reservation.²⁸ Besides hydrologic data, other kinds of data are often required, particularly fisheries data; as we said earlier, the most common reason for establishing water reservations is protecting fish and wildlife.

Approval Process

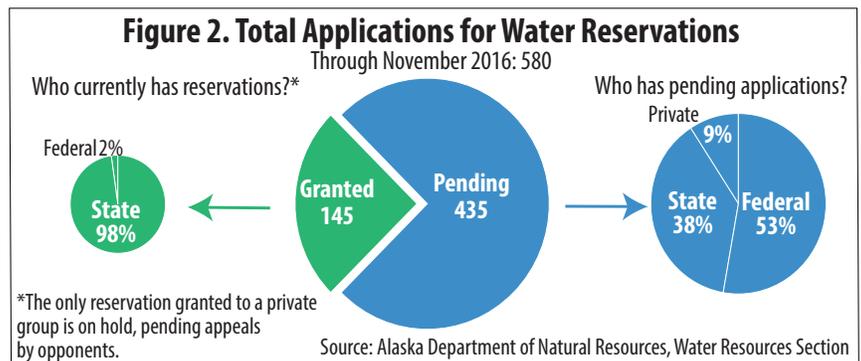
- Applicants for rights to use water can start using the water, once DNR makes the decision to issue a water-use permit—which will be after it has given public notice and any appeals are finished. Then, applicants have to build systems for using the water and document how much water they are using, before DNR issues the final water right.²⁹
- Applicants for water reservations get the final in-stream water right when DNR makes a final decision—after it has given public notice and any appeals are finished. When DNR accepts an application, it is assigned a temporary filing date, giving it priority over later filings, while the applicant collects any additional required data.

Terms of Rights

- Water-use rights are permanent, as long as the water is being used. They may be bought or sold separately from the land, but typically when land is sold, water rights on the land are transferred with it.³⁰ DNR can revoke a use right, if the right-holder doesn't use the water for five consecutive years.³¹
- Water reservations are, under the law, reviewed every 10 years, and can be reviewed earlier. DNR can revoke a reservation, if it determines the reservation no longer meets its purpose or required conditions.³²

Time and Expense

- Permits to use water can be in place 2 to 10 years—and sometimes extended longer—before DNR grants permanent water rights.³³
- Developers of large projects—like mines—have to supply stream-flow and other data when they apply for water-use rights, and the time needed to collect that specific data can be years. (But keep in mind that water-use rights are only a part of what developers need to go forward with big projects. Federal law requires broad assessments of potential effects on the environment. Many federal and state agencies also have to issue various permits—and all of that can take many years and lots of money.)
- Getting approvals for water reservations can take a decade or longer.³⁴ In November 2016, 75% of all the applications DNR had received were still pending. Of those, 53% were from federal agencies, 38% from the state Department of Fish and Game, and 9% from private groups (Figure 2).³⁵
- Collecting the data required for water-reservation applications is expensive. Getting stream-flow data can cost \$150,000 to \$300,000, depending on logistics, according to USGS hydrologists.³⁶ Collecting fisheries data can also be quite costly and take time. Deciding how much water is needed to protect fish requires knowing the type of habitat and how fish use a particular stretch of the stream. But in some cases, applicants are able to use data that have been collected previously.³⁷



WHAT ABOUT WATER ON FEDERAL LAND?

As we said at the outset, the state government decides who can use or reserve water in Alaska. But when the federal government reserves land for specific national purposes—say for parks or military bases—it also reserves enough water to protect those purposes. This right is established under the *federal reserved water rights doctrine*, and the priority date of the reserved water right is the date the federal land was reserved.³⁸

Federal reserved water rights are not the same as state-approved water reservations: these federal reserved rights exist, without being determined through the state process that requires documenting the benefits and quantifying the amount of water needed.

The state can require that federal reserved rights be quantified if it initiates a “basin-wide adjudication.” That is a state court proceeding that identifies, quantifies, and prioritizes all water rights in an entire river system, including surface and subsurface water.³⁹ To date, there has never been such an adjudication in Alaska.

Federal courts have recognized that federal reserves in Alaska—which have various purposes and cover millions of acres—do reserve enough water to protect the designated purposes, under the reserved water rights doctrine.⁴⁰ But the nature, quantity, and implications of these reserved rights have largely yet to be worked out.

CONCLUSION

Unlike in other states, in Alaska anybody can apply for rights not only to use water but to reserve it in place. But getting those rights can either be fairly straightforward—say, getting rights to well water for a house—or time-consuming and expensive, as it can be for those who want to establish water reservations, or get rights to a lot of water for major industrial uses.

So anyone who plans to apply for water rights should consider this paper just a general guide—and read the more detailed documents we cite in endnotes, as well as talk to DNR personnel about what steps to take under specific circumstances.

Alaska’s water is a public resource—but over time the state will face many more decisions about how to balance competing demands. The future allocation of Alaska’s water will depend mainly on how the state’s water use law is interpreted in practice.

ENDNOTES

Note to readers: a number of the documents cited below are included in a supplemental file, online at www.iser.uaa.alaska.edu. Documents in the supplemental file are marked with an asterisk (*).

1. Constitution of the State of Alaska, Article VIII, Section 3; Alaska Statutes 46.15.030.
2. Alaska Statutes, 46.15: Water Use Act; and Title 11, Alaska Administrative Code, Chapter 93, Water Management.
3. This is the “prior appropriation” doctrine used in Alaska and other western states. In the eastern U.S., landowners adjacent to water bodies are generally entitled to “reasonable” use of the water; these are known as riparian water-rights.
4. Alaska Statute 46.15.145: Reservation of Water; 11 AAC 93.141: Application for a reservation of water (www.legis.state.ak.us/basis/aac.asp#11.93.141). A few other western states allow reservations of water under limited circumstances, but a number of others allow only state agencies to apply for water reservations. See footnote 23, page 77, in George A. Kimbrell, “Private Instream Rights: Western Water Oasis or Mirage? An Examination of the Legal and Practical Impediments to Private Instream Rights in Alaska,” in *Public Land and Resources Law Review*, Volume 24, 2004. *
5. DMH Research, Portland, Oregon. *Alaska Water Quality: Survey and Interview Report*, January 2014. The survey had 478 respondents from online panels, and DMH then weighted the responses to represent the geographic distribution of the state population. Online panels are made up of people who have agreed to be surveyed on issues important to their areas. The respondents are self-selected, rather than randomly selected; random samples are structured to represent the entire population. *
6. DNR’s Water Resources Section has offices in Anchorage (907-269-8600), Fairbanks (907-451-2790), and Juneau (907-465-2533).
7. *Water Rights in Alaska*, a DNR fact sheet, provides more information and a full definition of “significant” use. *
8. *Reserving Water for Instream Use*, a DNR fact sheet, provides more information. *
9. E-mail from Michael Walton, Water Resources Section, DNR, June 11, 2015.
10. To put use of 500 gallons of water per day in context, an EPA fact sheet reports average daily water use by families of four in the U.S. is about 400 gallons per day. *
11. Personal communication, Kim Sager, DNR Water Resources Section, November 16, 2016.
12. In October 2015, DNR approved a water reservation for Chuitna Citizens Coalition in lower Middle Creek, a salmon stream in the Chuitna River drainage in Upper Cook Inlet. PacRim Coal plans to develop a coal mine in the area and had also applied for rights to use water from Middle Creek. The company has appealed DNR’s decision, as has the Alaska Mental Health Trust Authority, which owns much of the land where the mine would be.
13. The Alaska Department of Fish and Game reports that only about 1% of Alaska’s water has been allocated as of 2015. * The U.S. Geological Survey estimates that Alaska waters make up 35% of all surface water in the U.S. *
14. U.S. Fish and Wildlife Service, *Hydrology of Alaska*. *
15. Page 2 in Joe Klein, *Instream Flow Protection in Alaska*, 2014, Special Publication No. 15-16, Alaska Department of Fish and Game, April 2015.
16. Water on Native American reservations is protected under the the Federal Reserved Water Rights Doctrine (also known as the Winters Doctrine.) For an explanation of the origins and applications of that doctrine, see Bureau of Land Management, *Federal Reserved Water Rights*. *
17. The Alaska Native Claims Settlement Act (ANCSA) awarded Alaska Natives 44 million acres, to be managed by regional and village corporations created under the act.
18. In December 2015, tribal organizations with pending applications for water reservations were Curyung Tribal Council, Eklutna Native Village, Cheesh-na Tribal Council, Chickaloon Native Village, and New Koliganek Village Council. See page 22, Joe Klein, *Instream Flow Protection in Alaska, 2015*, Alaska Department of Fish and Game, April 2016.
19. The exception is that water for a public water supply takes priority over all other uses. See Alaska Statutes 46.15.150; 11 AAC 93.240.
20. Alaska Statutes 46.15, sections 080 and 260.
21. The Alaska Constitution (Article VIII, Section 10) requires public notice before disposals of state land or interests therein, and is the basis for the public notice requirement in the law (Alaska Statutes 46.15.133). The exception to the notice requirement is detailed in 11 AAC 93.100.
22. Alaska Statutes 46.15.145: Reservation of Water; 11 AAC 93.141: Application for a reservation of water (www.legis.state.ak.us/basis/aac.asp#11.93.141).
23. See note 22.
24. Alaska Statutes 46.15.155; 11 AAC 93.210. Temporary water use. <http://www.legis.state.ak.us/basis/aac.asp#11.93.210>
25. 11 AAC 93.040: Application for a Water Right
26. E-mail from Michael Walton, Water Resources Section, DNR, June 19, 2015.
27. See www.legis.state.ak.us/basis/aac.asp#11.93.142.
28. Personal communications, Mike Walton and Kim Sager, Water Resources Section, DNR, December 12, 2016.
29. Alaska Statutes 46.15.120; 11 AAC 93.130. Issuance of a certificate of appropriation of water.
30. *Water Rights in Alaska*, a DNR fact sheet. *
31. Alaska Statutes 46.15.140. Abandonment, Forfeiture, and Reversion of Appropriations.
32. Alaska Statutes 46.15.145. Reservation of Water.
33. 11 AAC 93.120. Issuance of a permit to appropriate water.
34. For example, Table 2 of *Instream Flow Protection in Alaska, 1999-2009*, Joe Klein, Alaska Department of Fish and Game, shows that getting approval for water reservations the department had applied for through 2009 often took 15 years, and that some applications filed in the late 1980s or early 1990s were still pending in 2009.
35. See note 11.
36. Personal communication, Jeff Conaway, U.S. Geological Survey hydrologist, Alaska office.
37. Personal communication, Bob Loeffler, former director, DNR Division of Mining, Land, and Water.
38. The doctrine of federal reserved water rights was established by a U.S. Supreme Court ruling in 1908, and extended and clarified under later court cases and in law. See, for example, the Bureau of Land Management’s discussion, *Federal Reserved Water Rights*,* and Todd A. Fisher, *Winters of Our Discontent: Federal Reserved Water Rights in the Western States*, 69 Cornell L. Rev. 1077 (1984).* For an overview of the McCarran Amendment, see U.S. Justice Department, Environment and Natural Resources Division, *The McCarran Amendment*.*
39. See discussion of the McCarran amendment, cited in note 38. Also, personal communication from Thomas Meacham, J.D., noting that in other western states, the adjudication process is known as a “general stream adjudication,” but in Alaska the process is known as a “basin-wide adjudication,” because the state requires that adjudication of water rights in an entire river system includes both surface and subsurface water rights.
40. See U.S. Court of Appeals, Ninth Circuit, 09-36125: *Katie John, et al. v. State of Alaska, et al.*, July 5, 2013, and also an earlier decision, U.S. Court of Appeals, Ninth Circuit, *Alaska v. Babbitt*, 1995, sometimes referred to as *Katie John 1*. These are federal court rulings on whether federal reserved water rights could be used as a basis for enforcing the subsistence provisions of the Alaska National Interest Lands Conservation Act (ANILCA) on federal reserves.

About the Authors and Acknowledgments

Marie Lowe is an applied anthropologist and associate professor of public policy at ISER. Linda Leask is ISER’s editor. The findings in this publication are theirs, and shouldn’t be attributed to research sponsors, ISER, or the University of Alaska Anchorage.

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