

Alaska's Reservation of Water Opportunities: Why Reserve Water?

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Class Highlights

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WHAT HAVE WE LEARNED

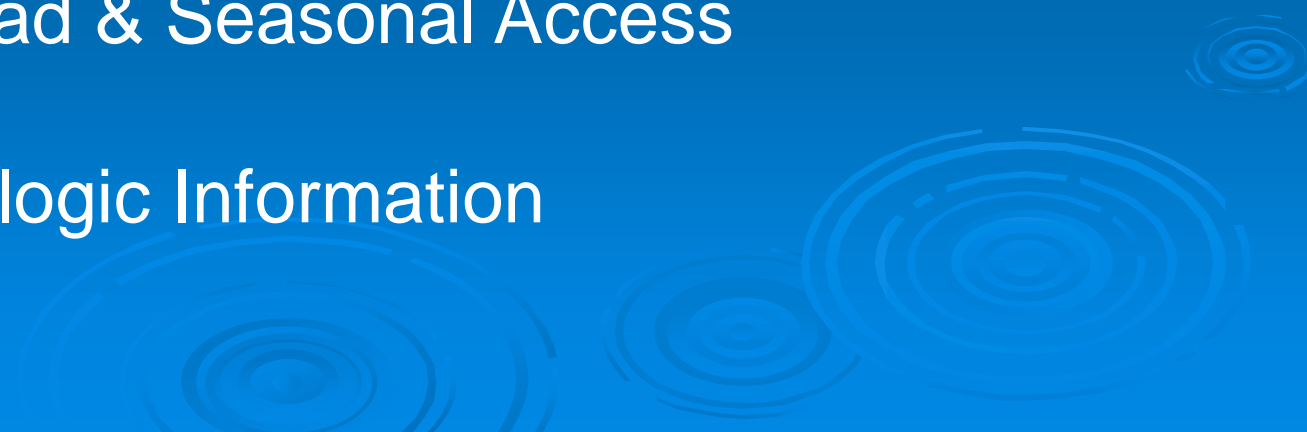
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ALASKA'S WATER MANAGEMENT OPPORTUNITIES ARE UNIQUE!



Water Management Challenges

- Size of AK versus the Lower 48 States
 - Abundance of Existing Clean Water & Intact Habitat versus Elsewhere
 - Extreme Weather (including cold, limited seasonal daylight)
 - Limited Road & Seasonal Access
 - Limited Biologic Information
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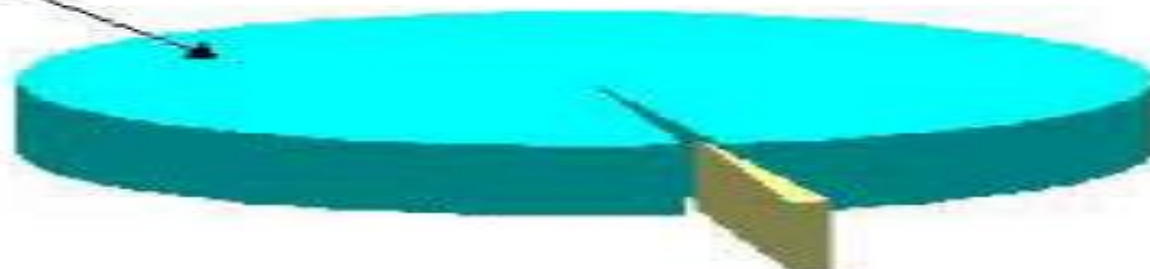
THE GOOD NEWS!

Surface Water Resources Comparison Between Alaska and Contiguous Lower 48 States



Alaska Water Allocation

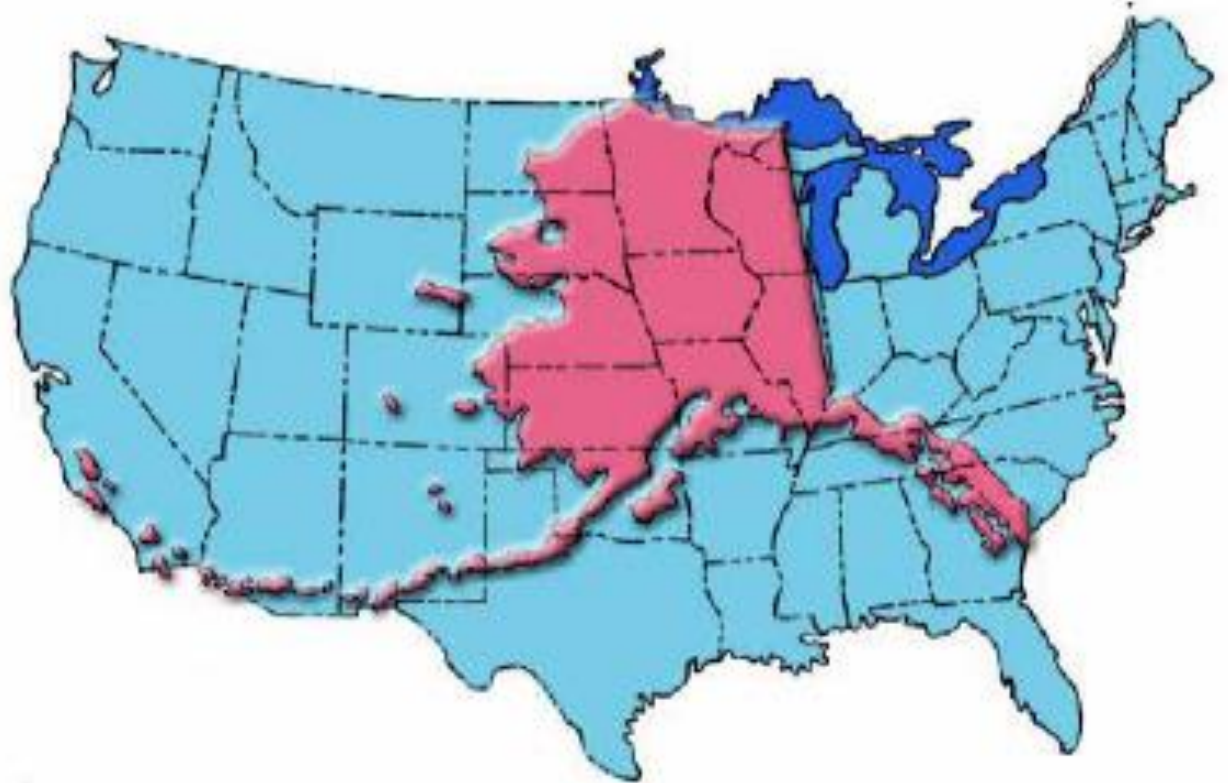
Unallocated > 99%



Allocated < 1%

Size Comparison of Alaska Versus 48 Contiguous States

Alaska's 586,000 square miles are equivalent in area to approximately 20% of the contiguous lower 48 states.



Challenges (continued)

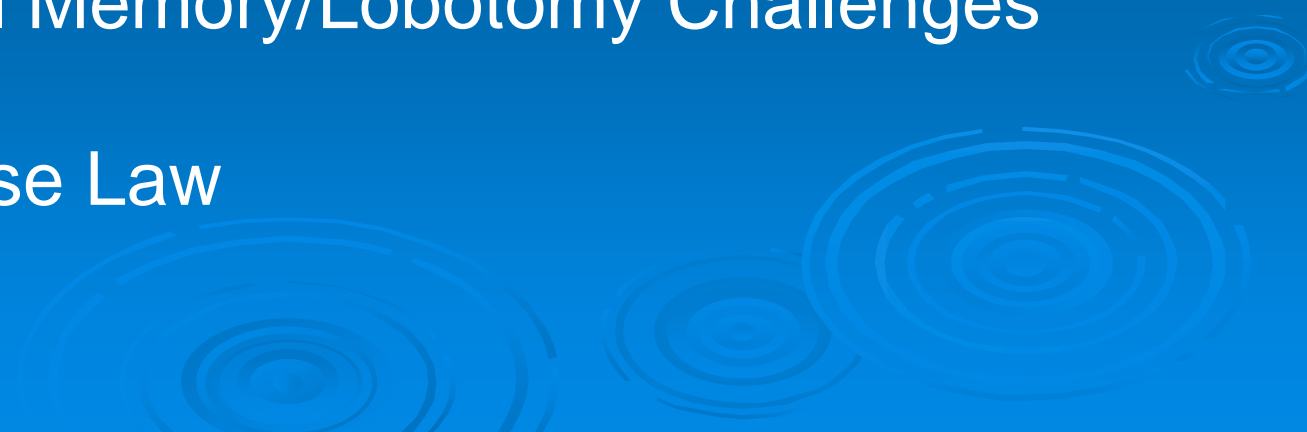
- Limited Hydrologic Information
 - ~500 or less USGS continuous flow gages
 - ~1 Gage/6 or 7,000 Square Miles
 - ~100 or Less Gages Operating Annually: < 500 Historically
 - ~ \$50k/year+ for USGS Gaging
- Thousands of Rivers & Millions of Lake Fish Bearing Waters with Clean Abundant Water



Summary of Alaska's Water Law (Reservation of Water Emphasis)

- **Alaska's Constitution – 1959**
- **Water Use Act – 1966, 1986, 1992, 2001**
- **Regulations**
- **Administrative (Agreements)**
- **Case Histories & Examples**
- **Other Reservation Types of Opportunities**

State Infancy Historical Challenges

- Limited Experience Using the Legal/Institutional Toolbox
 - Variety & Changing Land Ownership Status
(subject to change)
 - Institutional Memory/Lobotomy Challenges
 - Limited Case Law
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Historical Challenges (continued)

- Socioeconomic Shifts (Booms/Busts/Stable)
- Political Shifts
- Long-term Time/\$ Investments (Filing/Adjudication)
- Small Proportion of Water Bodies Reserved to Date & Limited to Subset of Purposes

ELEMENTS!

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Alaska Water Law Use Examples

Instream:

Water needed* in the water body to support vital ecological functions and uses (includes lakes/wetlands)

Examples:*

- Fish & Wildlife/Habitat
- Recreation
- Cultural/Aesthetic
- Navigation/Transportation
- Water Quality

* Ice Conditions, too

Out of Stream:

Water removed from the system or flow regime/water volume/stage altered* (subsurface/groundwater too)

Examples:*

- Power Generation (hydro/fossil fuels/solar)
- Industrial/Manufacturing
- Public/Personal Water Supply
- Irrigation/Agriculture
- Water Export/Transfer
- Hatcheries
- Resource Extraction (Minerals, Timber, Oil, Gas, etc.)
- Ice Roads, Snowmaking, etc.

Why Did Alaska Establish a Reservation of Water Law?

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4 Categories of Instream Flow Uses



John Hyde ADF&G



Robert Angell, AK Div. Of Tourism



(USGS 1996)



(USGS 1996)



4 Categories of Instream Flow Uses



Robert Angell, AK Div. Of Tourism

could use better picture for water quality – so note that frozen WATER USES LANDING OF FLOAT PLANE AND OTHER USES SNOW MACHINES DOG SLEDS EG TRANSPORTATION IN WINTER IS DEPENDING ON WATER LEVELS AND THICKNESS OF ICE.

UNIQUE OPPORTUNITIES

APPROPRIATE WATER TO MAINTAIN WATER QUALITY, FISH, WILDLIFE, RECREATION & NAVIGATION IN ADDITION TO WITHDRAW, IMPOUND AND DIVERT PURPOSES

AUTOMATIC RESERVATIONS OF WATER ARE ESTABLISHED FOR WATER EXPORTS FROM LARGE HYDROLOGIC BASINS



**ANYONE CAN FILE FOR A WATER RIGHT
(APPROPRIATION OF WATER)**

TO

WITHDRAW, DIVERT, IMPOUND & RESERVE

WATER THAT IS IN THE BEST PUBLIC INTEREST

SURFACE/SUBSURFACE WATER BODIES ARE SUBJECT TO APPROPRIATION

**(CONSIDERED 1 SOURCE IF HYDROLOGICALLY
CONNECTED)**

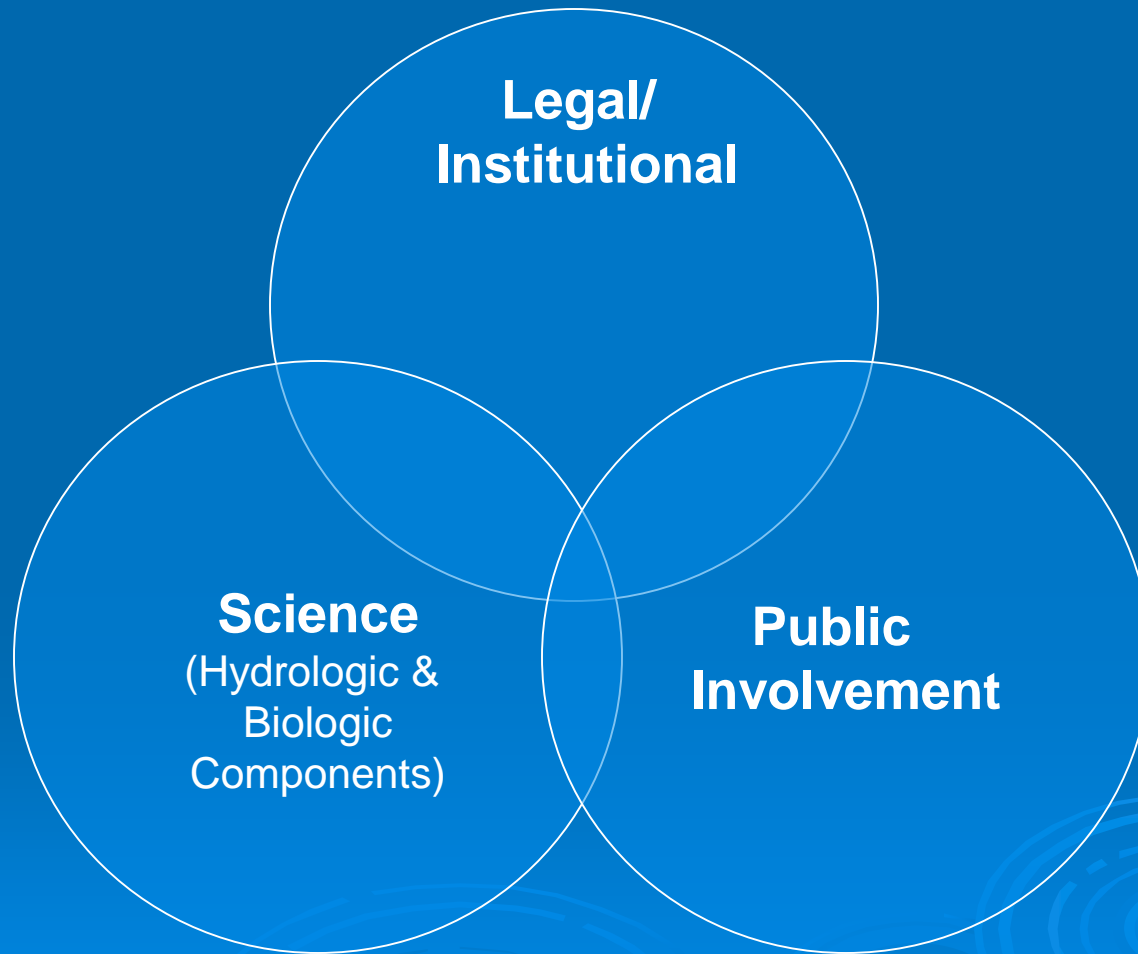


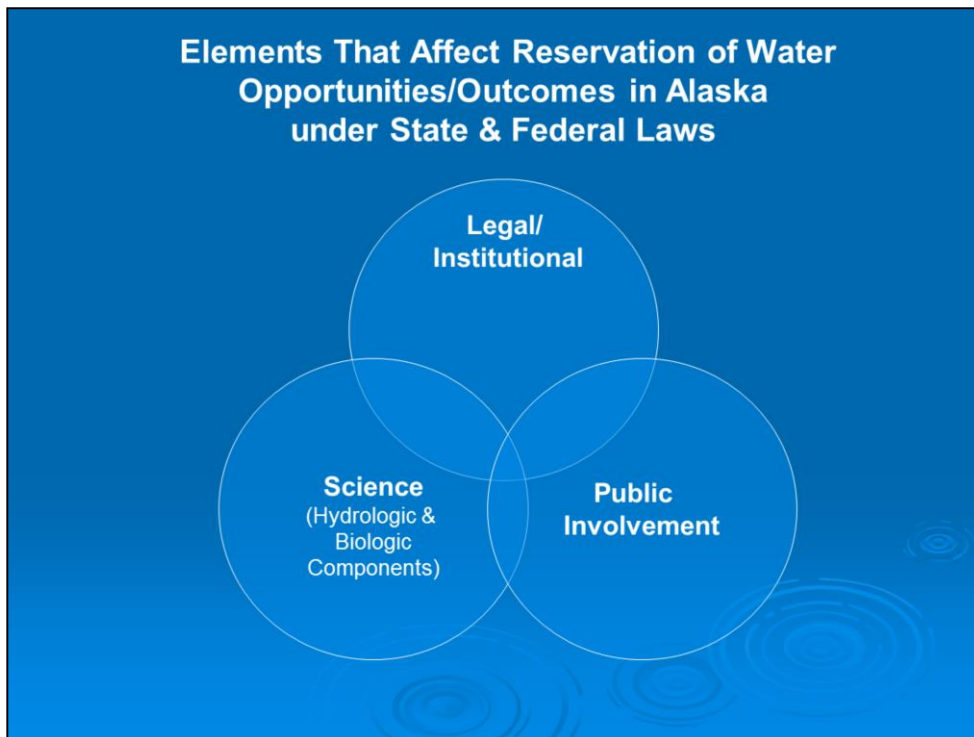
**APPROPRIATIONS MUST BE
DETERMINED TO BE IN THE BEST
PUBLIC INTEREST (AS 46.15.080)**

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Elements That Affect Reservation of Water Opportunities/Outcomes in Alaska under State & Federal Laws





The decisions and actions that all natural resource managers make are driven by the complex interaction of public input, laws, policies, science and judicial outcomes. The manner in which managers integrate information from each of these elements will determine what our planet and our quality of life looks like.

Scientific Elements

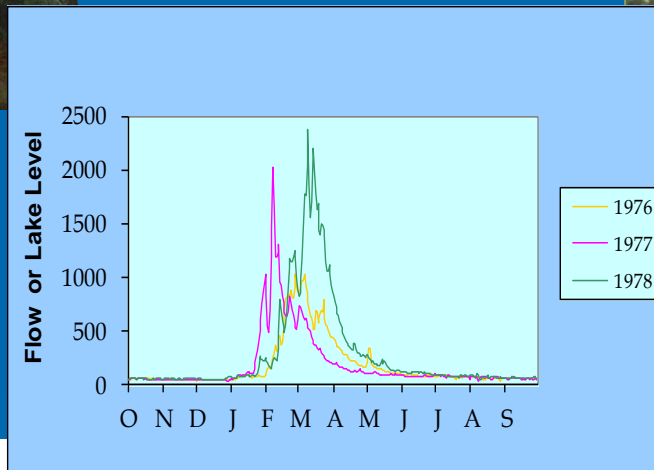
Geomorphology



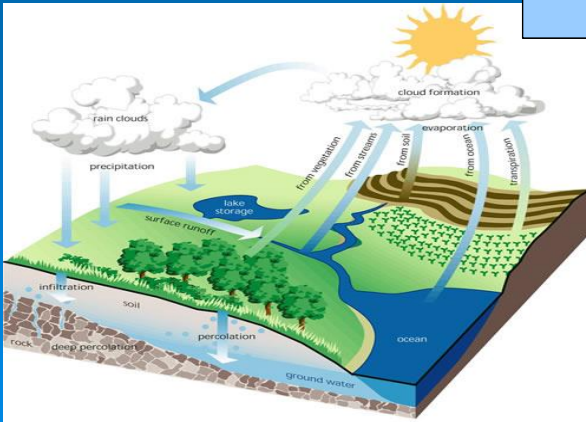
Biology



Hydrology



Connectivity



Water Quality



RECOMMENDATIONS

- Develop Statewide & Regional Long-term Water Uses and Needs Plans & Prioritize
- Collect & Analyze Long-term Seasonal Baseline Water Quantity & Quality Availability Information & Define Relationships
- Collect & Analyze Data Required to Better Understand Seasonal & Long-term Watershed Ecological Functions & Relationships to Human Socioeconomic Needs/Values

RECOMMENDATIONS - continued

- Joint Funding Requests (Federal, State, Academic, Private (including Tribal))
- Public/Stakeholder Education/Involvement
- Participate in Regional/National Initiatives
(e.g. Drought Action Plan Implementation, USGS Water Smart/Census, LCC, NFHP, SSSF, other watershed scale efforts)

Use Graphics that Display Appropriate Geographic Information and Scale for Alaska

RECOMMENDATIONS - continued

- Expand Upon/Mimic ADF&G MOU Agreement with ADNR
- Review Welker Waterways Audit – Use Smaller Basin Definitions
- Train & Maintain Dedicated Interdisciplinary Staff Expertise

RECOMMENDATIONS - continued

- File Reservation of Water Applications under AS 46.15.145

WHY?

**It is the Best Public Interest to Define
Baseline Water Availability and How
Much Water is
Available For Which Purposes**

Its Common Sense!

QUESTIONS?

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