

"Those three reservoirs above us are trying to do the impossible... because this three-reservoir system encapsulates probably the problems across the entire Western United States for that balance between irrigation, recreation, and flood control." - Ada County Emergency Management

WHO HAS POWER ON THE BOISE

Informal Relationships in Water Management

"The general population doesn't realize how highly managed this river is. I think people don't know who controls and who's responsible for what." - Idaho Dept. of Water Resources

BACKGROUND

The Boise River is the lifeblood of the Treasure Valley. Its waters support the livelihoods and ways-of-life for over 650,000 people. In order to make this possible, the river has been heavily engineered – through dams, reservoirs, and thousands of miles of canals – and is managed by myriad government agencies and NGO's who have different interests in the river. These interests clash, leading to conflict over how to best use the river's resources. In investigating the complexity of these different missions and functions, we seek to identify the formal and informal relationships between players in the network. Formal relationships tell us how these groups and individuals work together on paper and through mandate. Informal relationships, which can be understood only through careful study, tell us about how the unspoken rules and systems that keep things working.



WHO ARE THE MAJOR PLAYERS IN THE SYSTEM?

WHAT FORMAL RULES AND ROLES CONNECT THEM?

HOW DO INFORMAL CONNECTIONS SHAPE THE SYSTEM?

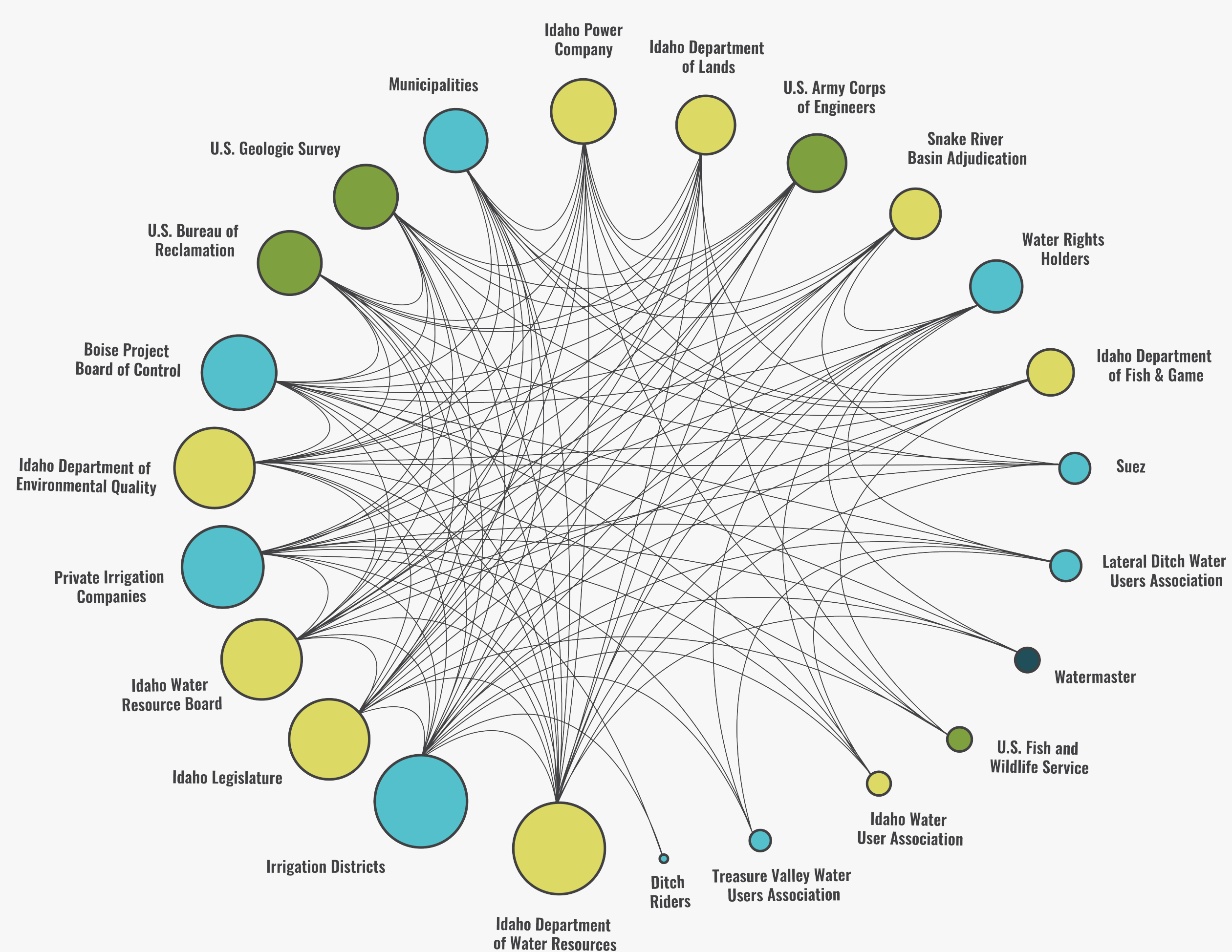
WHAT ARE THE SYSTEM'S STRENGTHS AND WEAKNESSES?

RESEARCH QUESTIONS

FORMAL RELATIONS

Rules, Statutes, Mandates

Researchers used interviews, focus groups, and document and website review to identify the key government agencies, NGOs, and individuals in the water management system. We then conceptually mapped their "formal" relationships—ways in which they are required to work with one another because of laws, rules, statutes, or mandates. On paper, then, the system can be represented by the figure below.



FINDINGS The system seems robust, when formal relationships are the primary metric. Examining the formal relations of 23 of the most influential agents produces a polycentric network with seemingly robust connections and significant overlaps in functions.

FUNCTIONAL ROLES

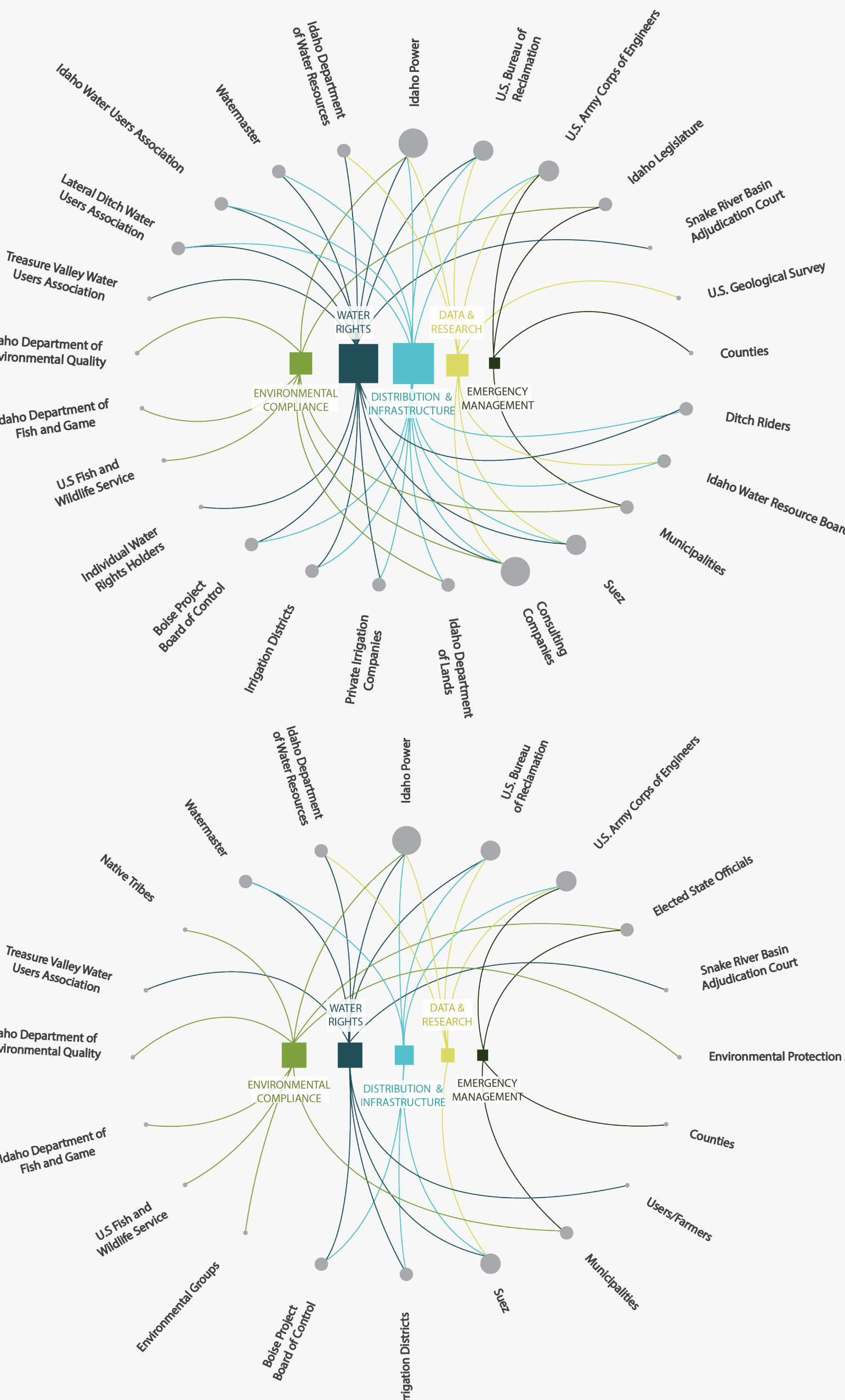
Missions Matter

One finding from our study suggests that the water management system is deeply compartmentalized, with various agencies and organizations primarily driven by their missions; there are very few actors or agents who have a "systems-level" view of water management and its various aspects, and groups often only work with one another when their missions intersect.

To represent this, we identified five functional roles that government agencies and NGO's play in the water management system:

Environmental Compliance (water quality) | Emergency Management
Data and Research (water quantity) | Water Rights | Distribution and Infrastructure

Functions of major agents identified by the researchers



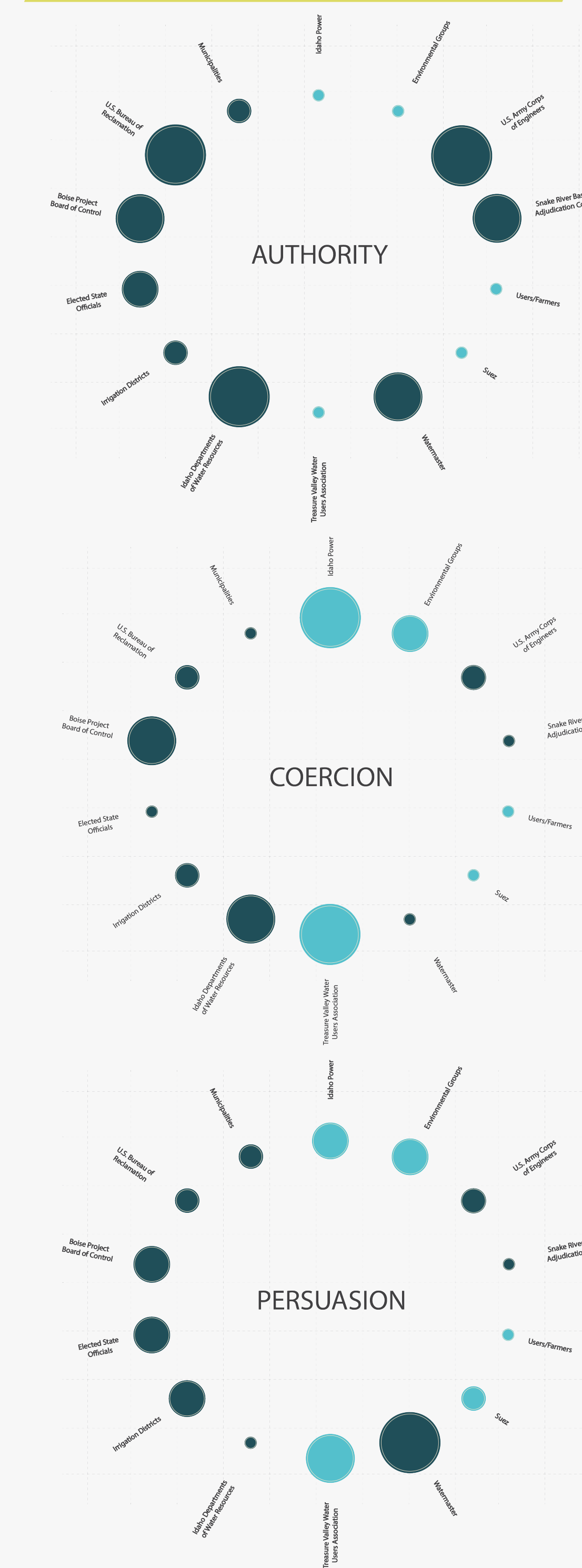
Major agents as identified by members of these agencies and organizations

POWER

The Different Faces of Power in Water Management

As part of our research, we asked focus group participants how they perceive who wields power and influence in the system. Using the list of groups and individuals they came up with, and drawing from research on power in social psychology, we identified power as functioning in three different ways in the water management system.

Based on our interviews, focus groups, and document reviews, we then scored each of these groups and individuals on a scale of 1-5 (5 being most powerful) for each of these three definitions of power.



FINDINGS

The system lacks redundancy. Although the system currently functions well in terms of efficiency, reliability, and affordability, it may not be robust to significant challenges, such as major climate change pressures or population growth. **There are major communication gaps.** Agencies, NGOs, and individuals who work in the system are often not communicating from a systems-level perspective; excessive pressure is placed on a few key communicators, such as the Water Master, to keep things working. **There are important stakeholders not represented in the system.** NGOs, municipalities, and marginalized groups such as tribes are under-represented in the system, both formally and informally.



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Authors and Contributors

Christopher Torres
 Ana Costa
 Jennifer Schneider, Ph.D
 Jillian Moroney, Ph.D

Contact Information

christorres783@boisestate.edu
 anacosta@boisestate.edu
 jenschneider@boisestate.edu
 jillianmoroney@boisestate.edu

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