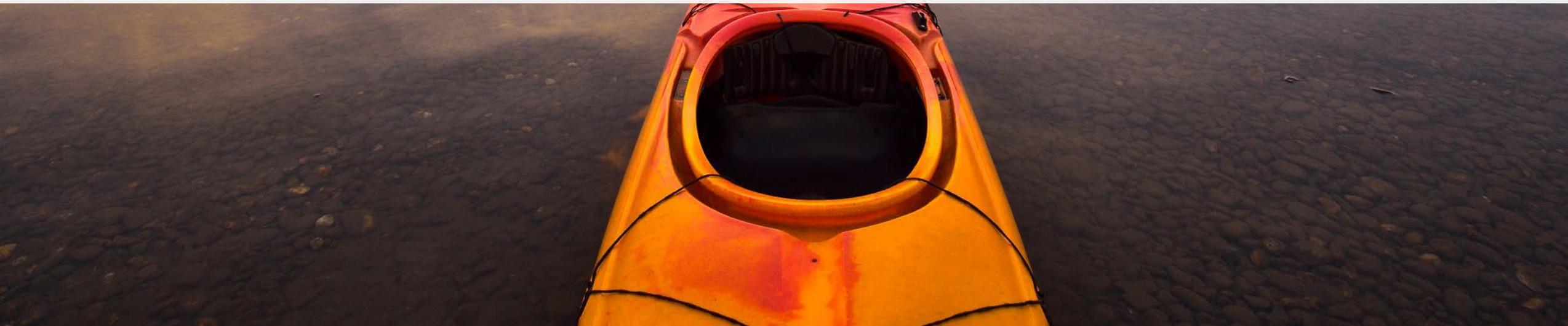




DOWN RIVER

BY: HEATHER HANSMAN

Matt LeCerf

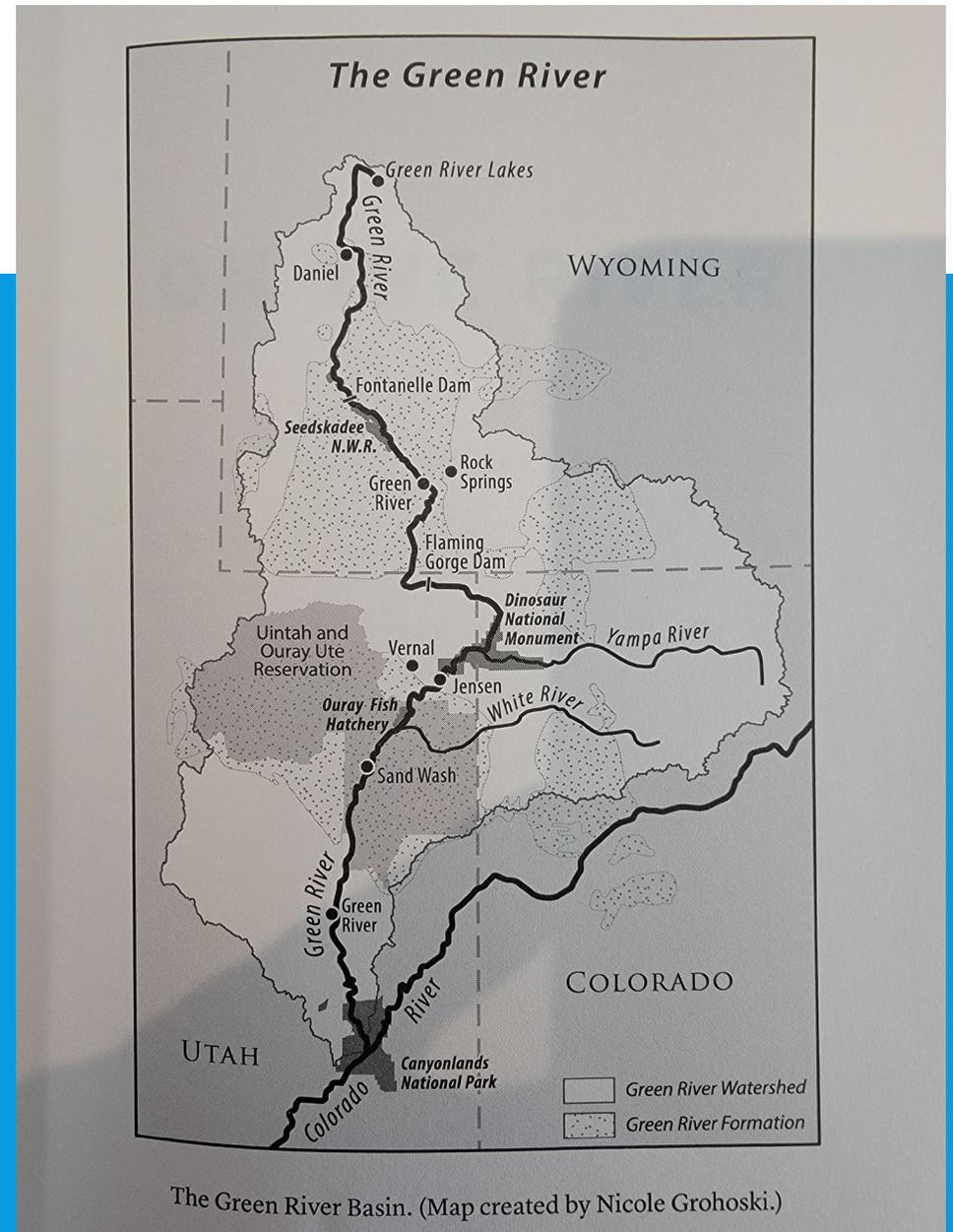


HEATHER HANSMAN

- Started as an 18 year old as a river guide in Maine
- Moved to Colorado at 21 years old
- Feels tied to the future of water based on her past of being a river guide in Main and Colorado.
- Wanted to understand the complicated ways in which water is used and where the conflicts lie in a system that needs to change to accommodate more people and less water
- Ultimately decides to paddle the Green River to the confluence of the Green and Colorado River.

GREEN RIVER

- Green River is the largest, most remote, and least developed tributary on the Colorado River
- There is still water in the Green River that can be accessed – one of the few if only remaining parts of the Colorado River Compact that does have water remaining.
- Green River runs for 730 miles



WATER DROPLETS

- Colorado River Compact 1922
- Allocated 18 million AF in the river
 - This was done during an extremely wet year, so in theory the system was broke when it started because it was “water short”
- Historical records show about 13 million AF of water flows through the system
- People who use the water from the Colorado River use about 15 million AF
- Estimates suggest 3.2 million AF water gap by 2060

WATER DROPLETS

- Upper Basin – 7.5 million AF compact
 - Colorado – 51.75%
 - New Mexico – 11.25%
 - Utah – 23%
 - Wyoming – 14%
- Lower Basin – No Compact + 1 million excess
 - California – 4.4 million AF
 - Nevada – 300,000 AF
 - Arizona – 2.8 million AF
 - Mexico – 1.5 million AF

WAYS IN WHICH WATER IS USED AND HOW IT'S ALL INTERRELATED

- Hansman tells the story about the ways in which water is used in the system through storytelling about her interactions with various entities and interest groups who use the Green River and its water resources. The books focus is to make the reader think about the impacts, challenges, and the finite resource of the Green River as a water source and the western water system as a whole. These stakeholders include:
 - Farms
 - Cities
 - Dams
 - Fish
 - Recreation
 - Future Risks
 - Future Plans

FARMS

- Nobody, farmers included are willfully wasting water.
- Some grow grass on their land due to nothing else able to grow
- Cobbled land together to make the land viable to make a living during the Homestead Act
- Senior Rights on the Boulder Ditch Company (Wyoming) - Receives 2 CFS for every 70 acres of land he ranches
- Water rights directly off the Green which runs through his property
- A USE IT OR LOSE IT MENTALITY – PUT THE WATER TO USE, so they don't get "screwed" in the future
- Flood irrigation as well – lot of water for minimal results
- Sees flood irrigation ending and in these desert areas, those who live on the land will not be beneficiaries
- Acknowledges people are only looking at this problem from their own side and now working hard enough to find an approach that serves everyone – farmers, fisher, environmentalists, cities are only self serving
- Working to align food production and conservation.
- Land is in a Conservation Easement
 - Creating small-scale storage and habitat creation at the headwaters
- National Young Farmers Coalition – Farmers over 65 outnumber those under 35 by 6:1 ratio

CITIES

- Working constantly to develop water projects
 - Harder to get water back than to develop those projects
- The system compels us to be bad stewards of water because we're constantly looking to use the water rights so they can lock them in for the future, even if we don't know what the future looks like.
- Water is being driven by economics.
- Some are being good conservationists – Vegas reduced water consumption by 36% between '02 – '17 while growing by 500,000.
- Utah uses more water per capita than anywhere in the country (cheap rates causes bad behavior)
- Central Utah Project moves more and more water to the Salt Lake Region 102,000 AF, but only 40,000 AF used right now.

DAM

- BLM & ACOE – built 180 dams
 - 10 largest dams and 2/3 of hydro electric are in the west
 - Dams changed the seasonal hydrology, but they also limit the risk of water shortages by building stability and storage in a fragile natural environment.
 - Wyoming Water Plan calls for 10 storage projects to be built by 2026 – off channel from the Green River.
 - Rivers make cities livable, dams make the cities livable year-round.
 - Dams can stress watershed and there is an active debate to leave the Green River in its current condition and let the water go downstream.
 - Flaming Gorge and Fontenelle Dams
 - Adaptive Management – having parties come together and discuss the items rather than a top down government controlled decision.

FISH

- Fish Recovery Program
 - Working to reintroduce species from the Endangered Species Act back into the native environment
 - The fish reestablish in the controlled environment, but river flows controlled by dams, water temperature and other factors impact the ability of the fish to reacclimate
 - Releasing flows to accommodate a fish which impacts farmers and others is hard to understand and justify – balancing environment and fish over people is hard for us to understand.
- Fishing Trips
 - Impacted by the dam when flows are too high
 - Impacting their livelihood, local economy
- Wild and Scenic Rivers Act
 - Yampa River (tributary of the Green) under review since 1970
 - Only ¼ of 1% of all rivers are designated

RECREATION

- On the Green River, several water projects including the Echo Park Dam Project were halted due to environmental and recreational concerns.
- What is the value of recreation on the river
 - Rafting tours rely on the river and need consistent flows
 - They DO NOT have the ability to acquire water rights for recreational purposes – courts have held that this is not a beneficial use, even when recreation contributes \$646 billion to national consumer spending.
 - Colorado River generate \$26 billion annually
 - Fishing and Recreational uses on the river – Advocates want to protect the river – “we save what we love and we love what we know”
 - There is an argument behind every use of the water – nobody’s really wrong, we just don’t have enough water for everyone to be right in the west.

FUTURE RISKS

- Energy & Power
 - Oil and Gas Extraction + Hydro Power Risks
- Tribal Water Rights
 - Not part of the Colorado River Compact
 - More senior than the Compact
 - Not accessing their full allocation currently
- Climate Change
 - Least controllable and largest impact
 - Warmer temperatures = Less Water
 - Compact framework didn't take climate change into consideration

FUTURE PLANS

- There is water policy that suggests there is enough water, but that goes contrary to the Doctrine of Prior Appropriations.
- Rework the river compact to promotion of conservation that doesn't penalize a water user if they use less – beneficial use
- Conservation Exchange – compensate water owners when they don't use the water and send it downstream – Incentivize water conservation
- Basin management rather than state by state management so water can be delivered and moved to where it is needed most.
- Making these changes is going to be difficult when culture and behaviors are so ingrained into how we think about water.