



NASA's Western Water Action Office

From WWAO's value proposition...

WWAO strengthens water resilience to build a more sustainable future for people and communities across the Western US by...

exploring to understand

WWAO forges deep relationships with water decision-makers, their communities, and scientists to **understand the urgent issues** facing the Western United States.



Exploring to understand >

WWAO Water Resource Management Needs Assessments

WWAO works to understand western water practitioner needs, conducting needs assessments since 2016

What is a **need** as defined by WWAO?

- A need is a **gap in water information**, or an **opportunity to improve** an existing information source
- If the need is addressed or the improvement is made, it would lead to a **meaningful improvement** in a specific water management decision making process



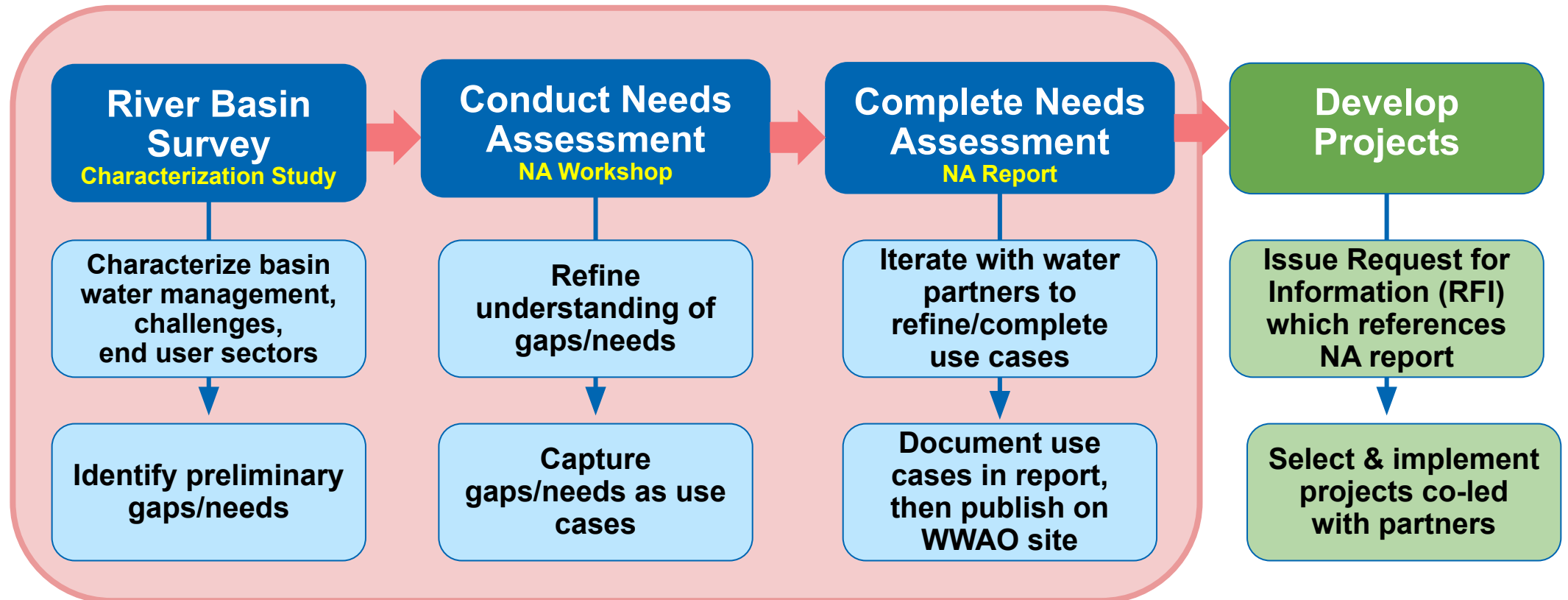
River Basin Approach

- Needs assessments organized around major river basins
- Conduct assessments for major western U.S. basins
- Basins Studied
 - California
 - Upper Colorado River Basin
 - Lower Colorado River Basin
 - Columbia River Basin
 - Rio Grande Basin
 - Missouri River Basin
 - Arkansas-White-Red River Basin
 - Great Basin *in progress*



Basin Needs Assessments

- **A multi-part process** of identifying and understanding water resources needs in the Western U.S.
- **Feeds into an RFI for projects** that address the needs and use NASA data as part of the solution.



Basin needs assessments near completion, what do we see?

- Examined all use cases from completed WWAO NA's (**108 use cases**)
- Binned them into **common themes (or clusters)** *that cut across all the basins*
- **5 key themes emerged:**
 - 1. Groundwater**
 - 2. Watershed Health**
 - 3. Agriculture, Irrigation & Evapotranspiration**
 - 4. Precipitation, Drought, and Reservoirs**
 - 5. Runoff, Streamflow & Water Availability**

Group interactive exercise

- Form breakout groups where you will examine a cluster
- Which use case cluster themes are most relevant to WWAO, especially in terms of scalability and impact creation
- Determine if any low hanging fruit! (*Have any use cases been addressed since 2018? Is a solution around the corner?*)

Image: Columbia River, Bonneville Dam

Credit: Britannica.com, <https://www.britannica.com/place/Bonneville-Dam>

