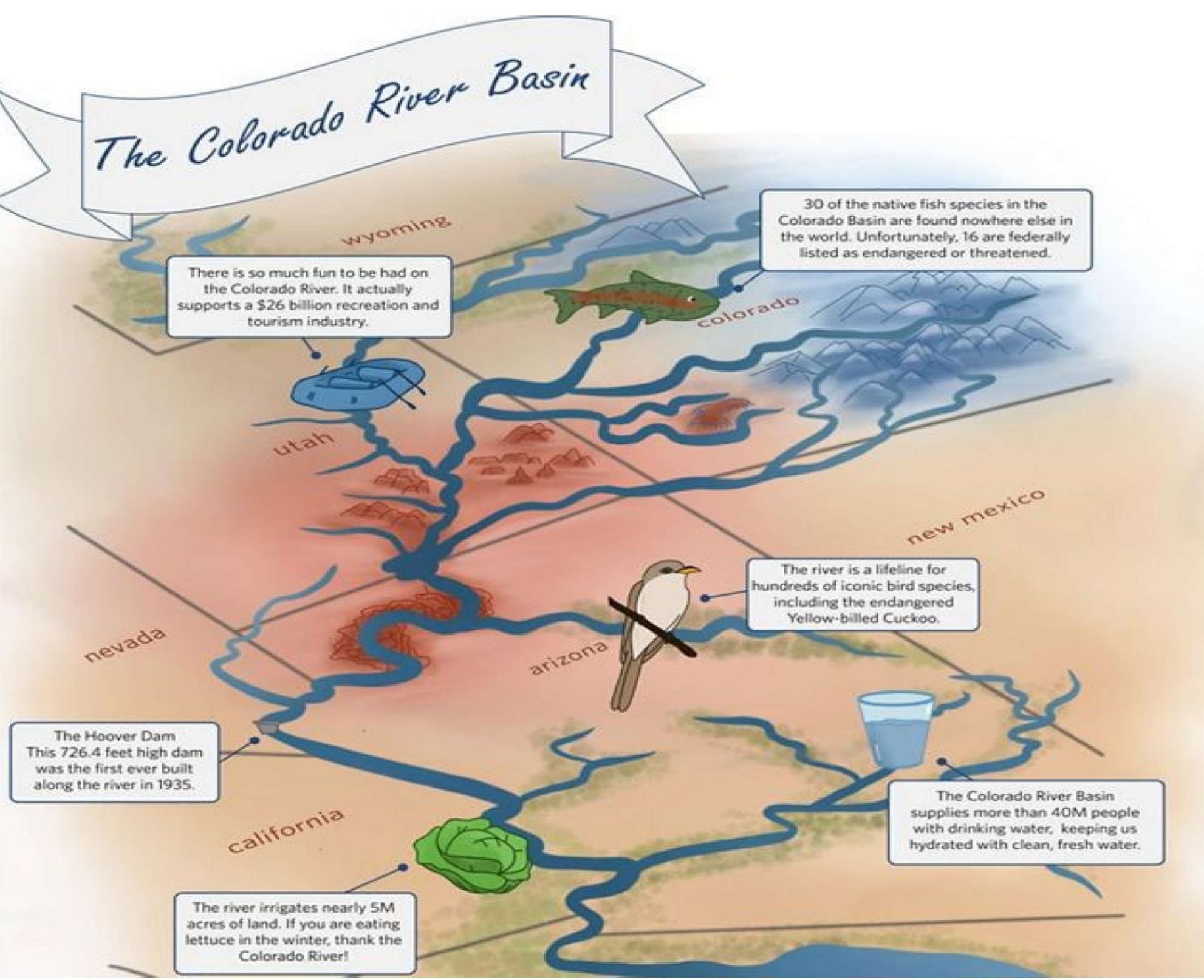


AGRICULTURAL WATER USE IN THE UPPER COLORADO BASIN
WESTERN COLORADO RESEARCH CENTER-GRAND VALLEY (WCRC-GV), MESA COUNTY

Azmal Hossan
PhD Student in Sociology
&
NRT, InTERFEWS, CSU

- Mentors:**
1. Dr. Perry Cabot, Water Expert and Extension Leader, CSU Water Center.
 2. Julee Stephenson, Director of Communications.
 3. Olivia Clark, CSU Extension, Grand County Director.

Background of the Project



The Colorado River and its tributaries provide water to nearly 40 million people for municipal use, supply water to irrigate nearly 5.5 million acres of land, and is the lifeblood for at least 22 federally recognized tribes, 7 National Wildlife Refuges, 4 National Recreation Areas, and 11 National Parks.

Internship Activities



Western Colorado Research Center-Grand Valley (WCRC-GV)
Location: Mesa County, Size: 80 acres
Elevation: 4600 feet
Average annual precipitation: 8 to 12 inches
Average daily minimum temperature: 41°F
Average daily maximum temperature: 64°F
Two Major Projects:
Irrigation and Water Resources & Integrated Cropping System

Construction of a Drip Irrigation System and Involvement in Farming Activities



- Basic land preparation,
- Irrigation system installment,
- Plantation (Hemp, Sweet Corn, and Watermelon), cultivation, early harvest work,
- Data collection on soil moisture, evapotranspiration, flow measurement and forage sampling.



Lesson Learned

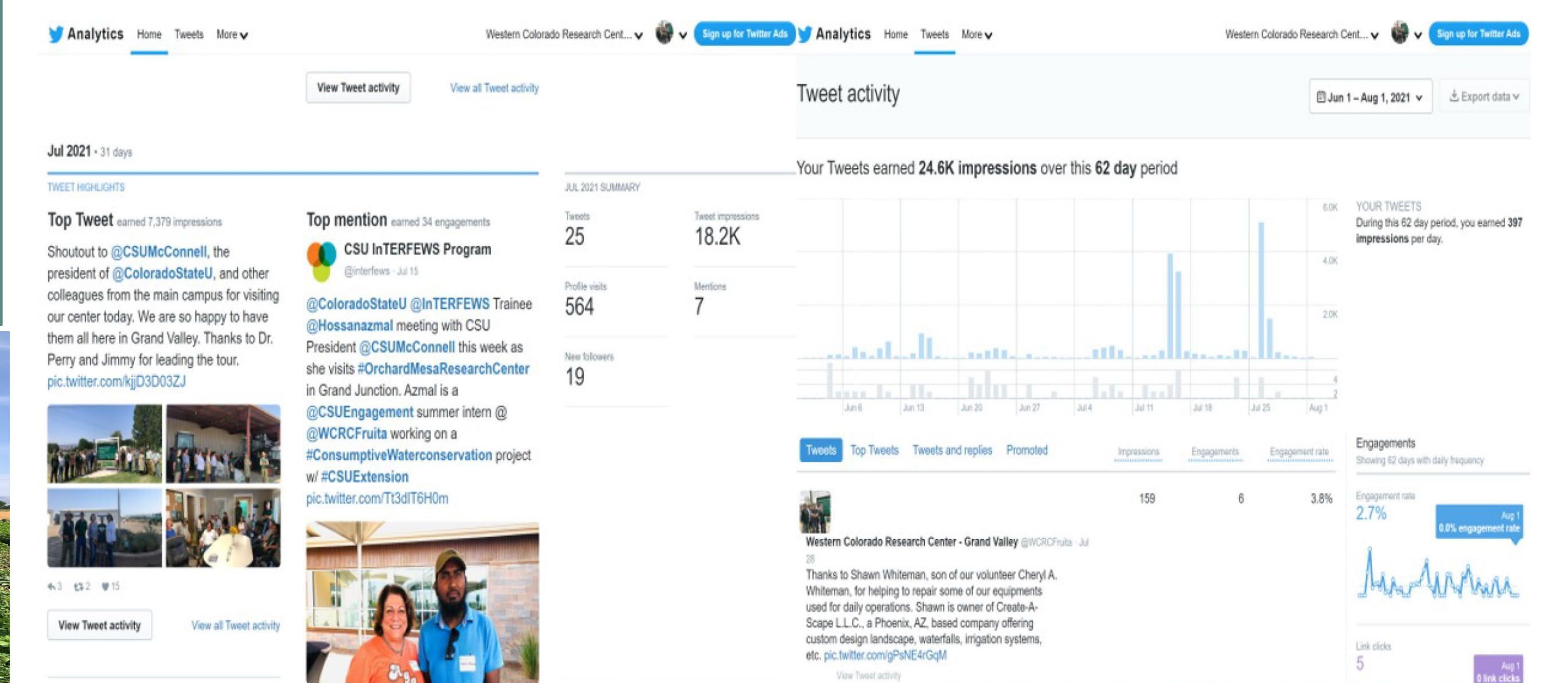
CSU Extension Mission Statement

“Empower Coloradans to address important and emerging community issues using dynamic, science-based educational resources.”

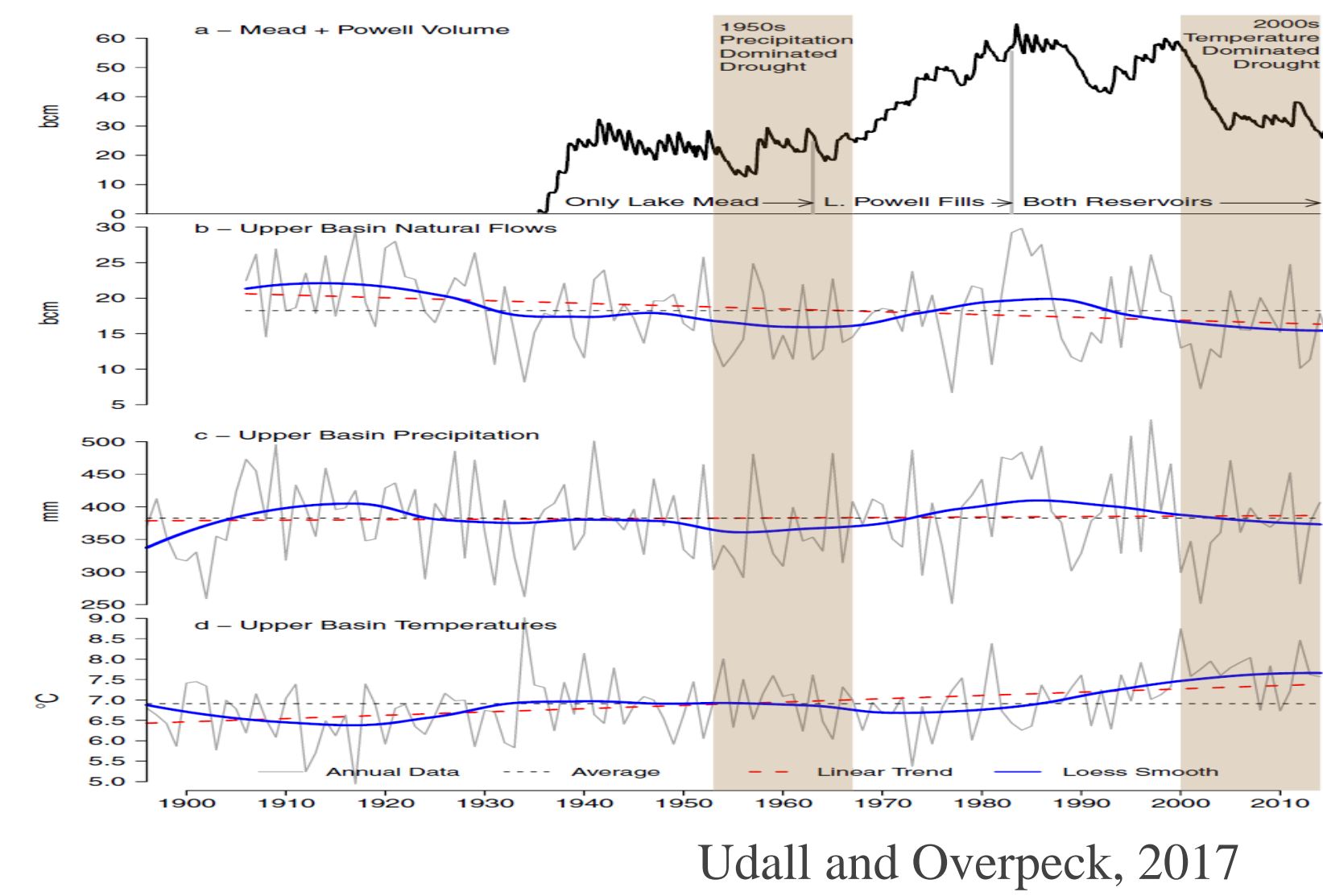
21st Century Competencies:

1. Specialized knowledge in the connection between agriculture and water resource management in the arid region.
2. Understanding about a modern irrigation system (Drip system).
3. Working experience in an interdisciplinary research project combining engineers, natural and social scientists, communication experts, extension practitioners, and local communities.
4. Training in science communication (both oral and written).
5. Established professional network.

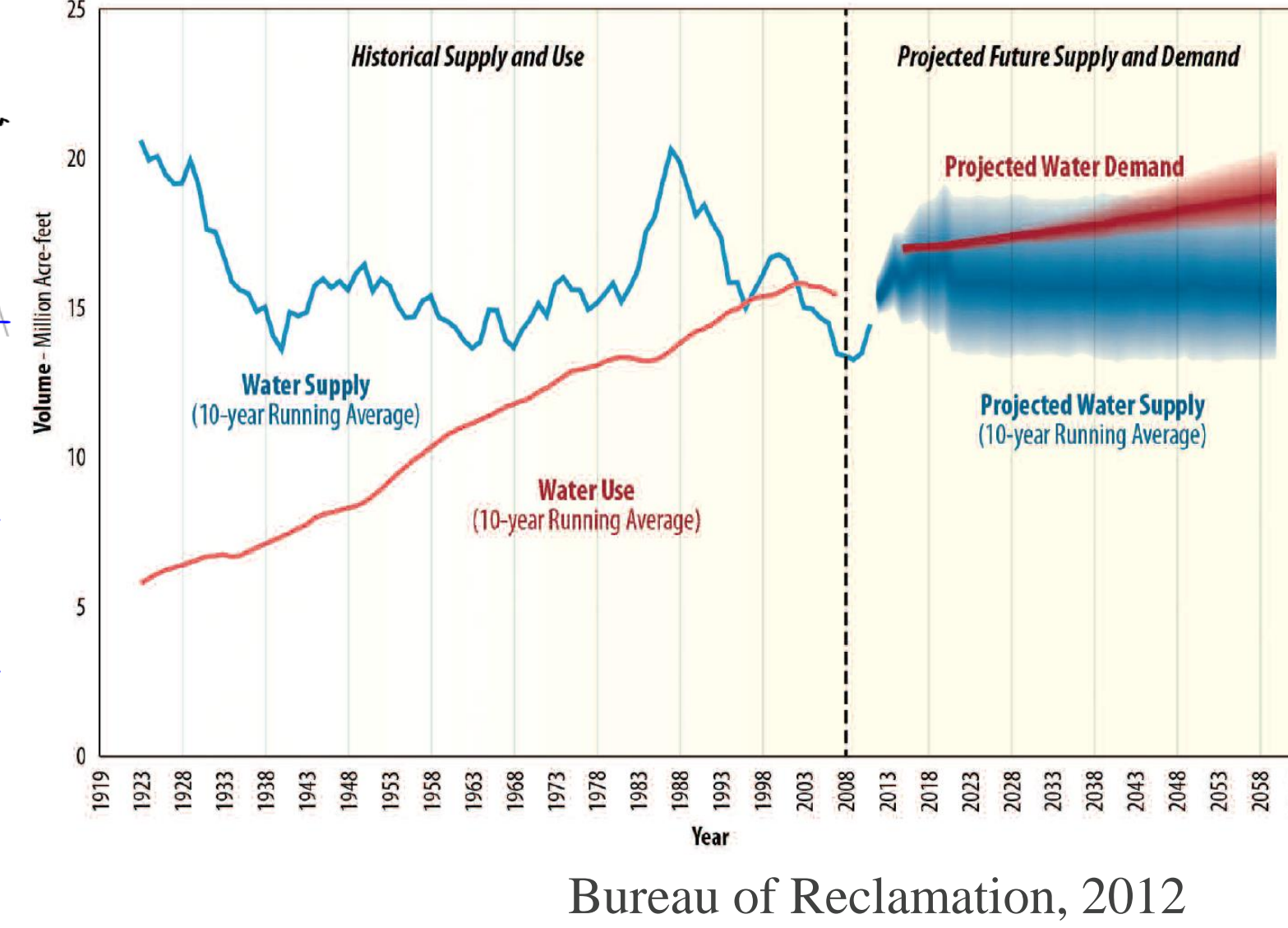
Social Media Analytics



Historical Scenario of CRB



Imbalanced Supply-Demand



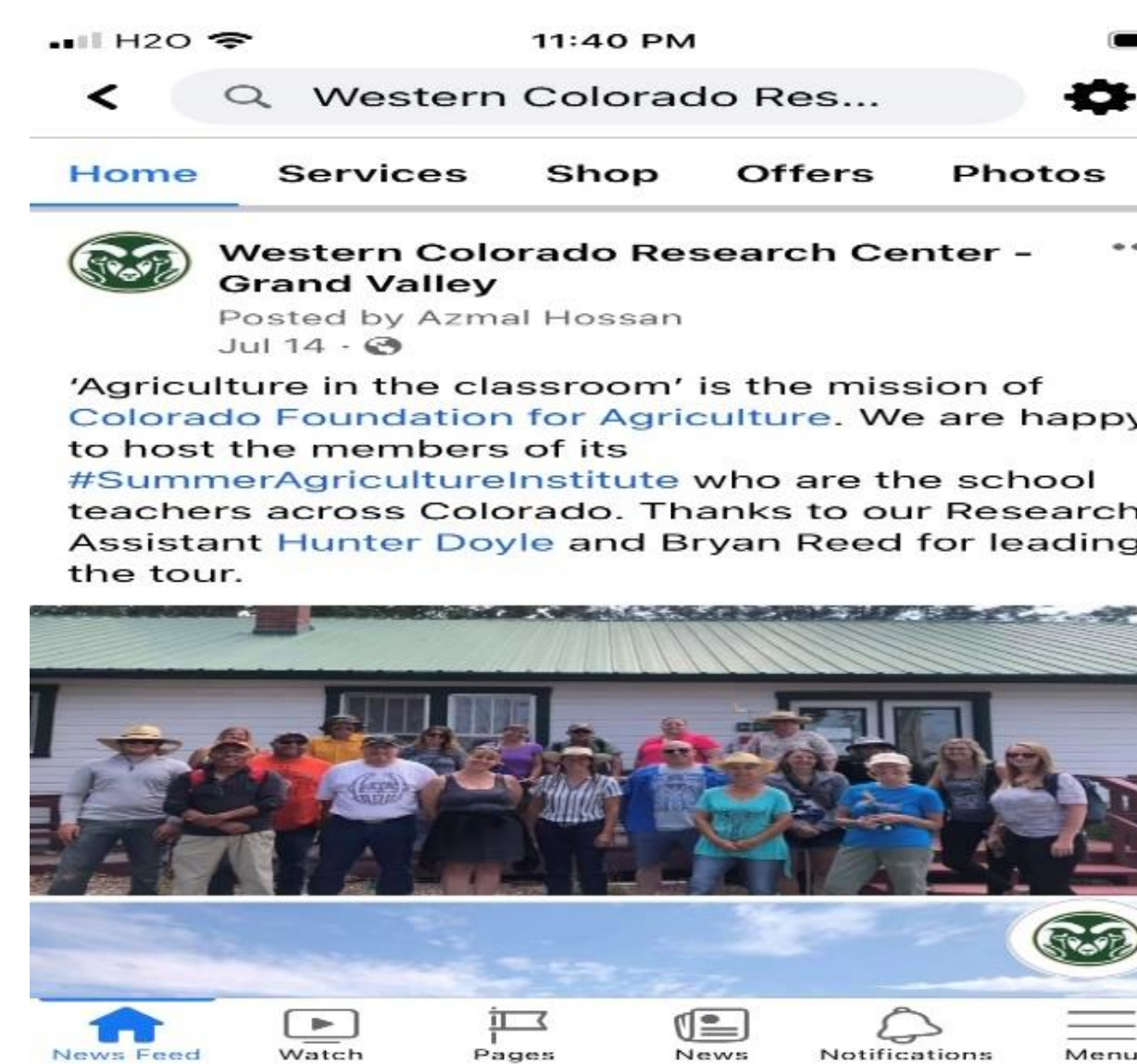
Internship Goals

1. Field research experience on consumptive water conservation to support CSU’s statewide engagement mission.
2. Taking on a supportive role for extension outreach through various forms of social media..

Implications for My Education

1. Aligned with my PhD research project on food-water nexus.
2. Fulfills my InTERFEWS apprenticeship requirement.
3. Real-life experience in modern irrigation project designed to help local communities to conserve consumptive water.
4. Development of a professional network.

Science Communication



Conclusion

- Western slope of Colorado is highly water-stressed and there is a growing demand-supply gap due to climate change, population growth, urbanization, and industrialization.
- Agricultural producers are under the pressure to conserve water.
- Legal, social, and political structures are barriers to conservation efforts.
- WCRC-GV plays a significant role in CSU Extension mission with special focus on water conservation.
- Social media is a dominant tool for community engagement and outreach.