



In partial fulfillment of the requirements for the degree of

Doctor of Philosophy
J. Leah Jones

will defend her dissertation

**Understanding collaborative governance of the food-energy-water
nexus: The cases of Phoenix and Cape Town**

Monday, March 22, 2021
11:00 AM (MST)

<https://asu.zoom.us/j/88120558036>

Faculty, students, and the public are invited.

Supervisory Committee:

Dr. Dave White, Chair

Dr. Rob Melnick, Member

Dr. Rimjhim Aggarwal, Member

Abstract

The food-energy-water (FEW) nexus refers to the interactions, trade-offs, and relationships between the three resources and their related governance sectors. Given the significant interdependencies, decisions made in one sector can affect the other two; thus, integrated governance can reduce unintended consequences and lead towards increased resource security and sustainability. Despite the known benefits, many governance decisions continue to be made in “silos,” where stakeholders do not coordinate across sectoral boundaries. Scholars have begun to identify barriers to the implementation of integrated FEW nexus governance, yet there is still minimal understanding of the reasons why these barriers exist and no theoretical framework for evaluating FEW nexus governance. Integrating the theory

of collaborative governance with the concept of the FEW nexus provides an opportunity to better understand the barriers to and structures of FEW nexus governance and to propose solutions for increased collaborative FEW nexus governance in practice. To investigate this governance system, I examined the collaborative governance of the FEW nexus in the context of extreme urban water challenges in two urban case cities: Phoenix, Arizona, USA and Cape Town, South Africa. First, I performed a media analysis of the 2018 Cape Town water crisis to understand the impact of the water crisis on the FEW nexus resource system and the collaborative governance employed to respond to that crisis. Second, I conducted a systematic case study of FEW nexus governance in Phoenix, Arizona to understand barriers to collaborative governance implementation in the system and to identify opportunities to overcome these barriers. Finally, I presented a framework of indicators to evaluate the collaborative governance of the local FEW nexus. This dissertation will advance the sustainability literature by moving the concept of FEW nexus governance from theory and conceptualization towards operationalization and measurement.