3.10.2020

Research Spotlight Forum

Social Sciences & Decision Making

Trade-offs, Heterogeneity and Efficiency

Jingjing Wang, Assistant Professor

Department of Economics

University of New Mexico

wangj@unm.edu

SAND2020-3610 PE

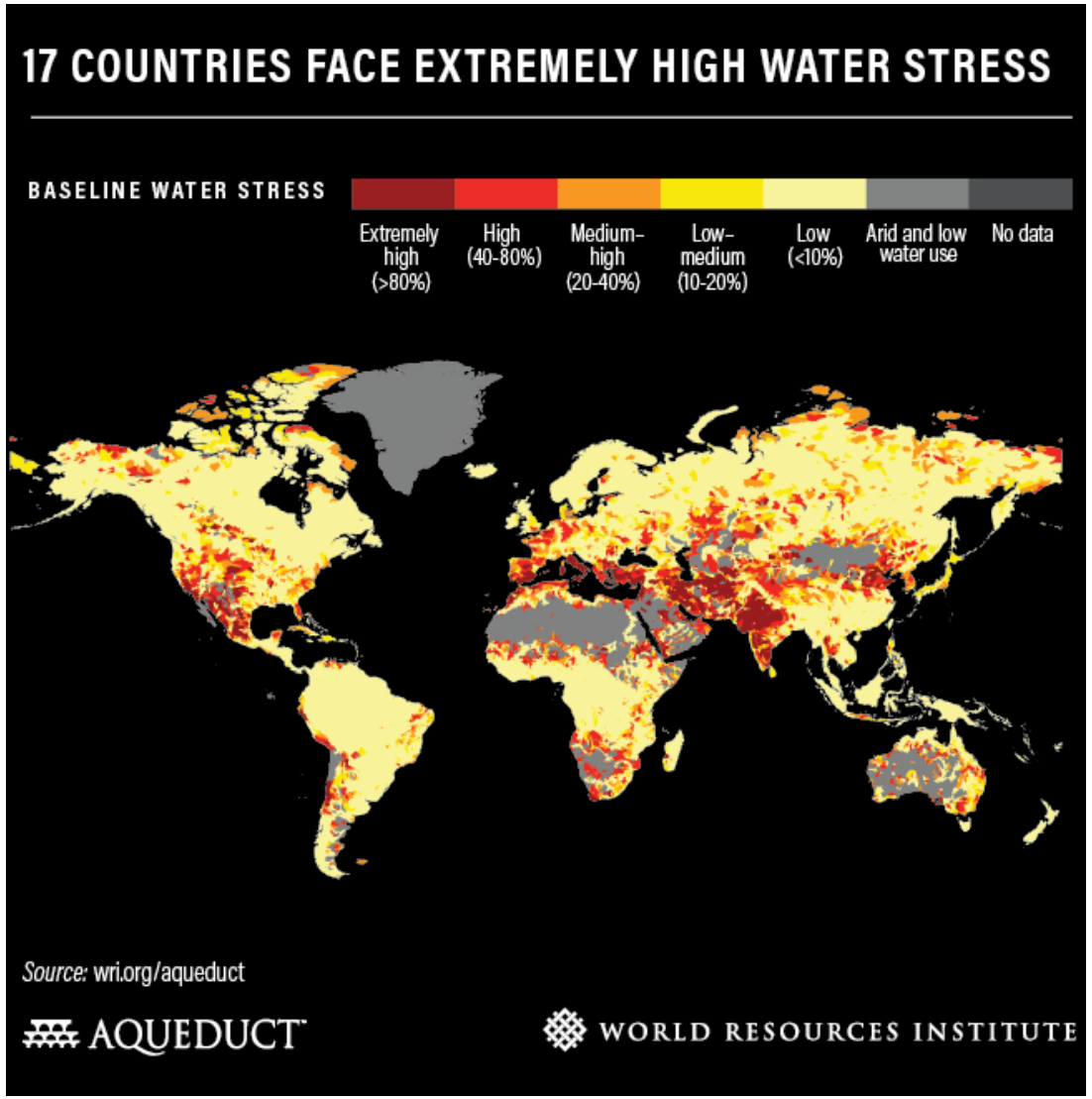
ABOUT YOURSELF

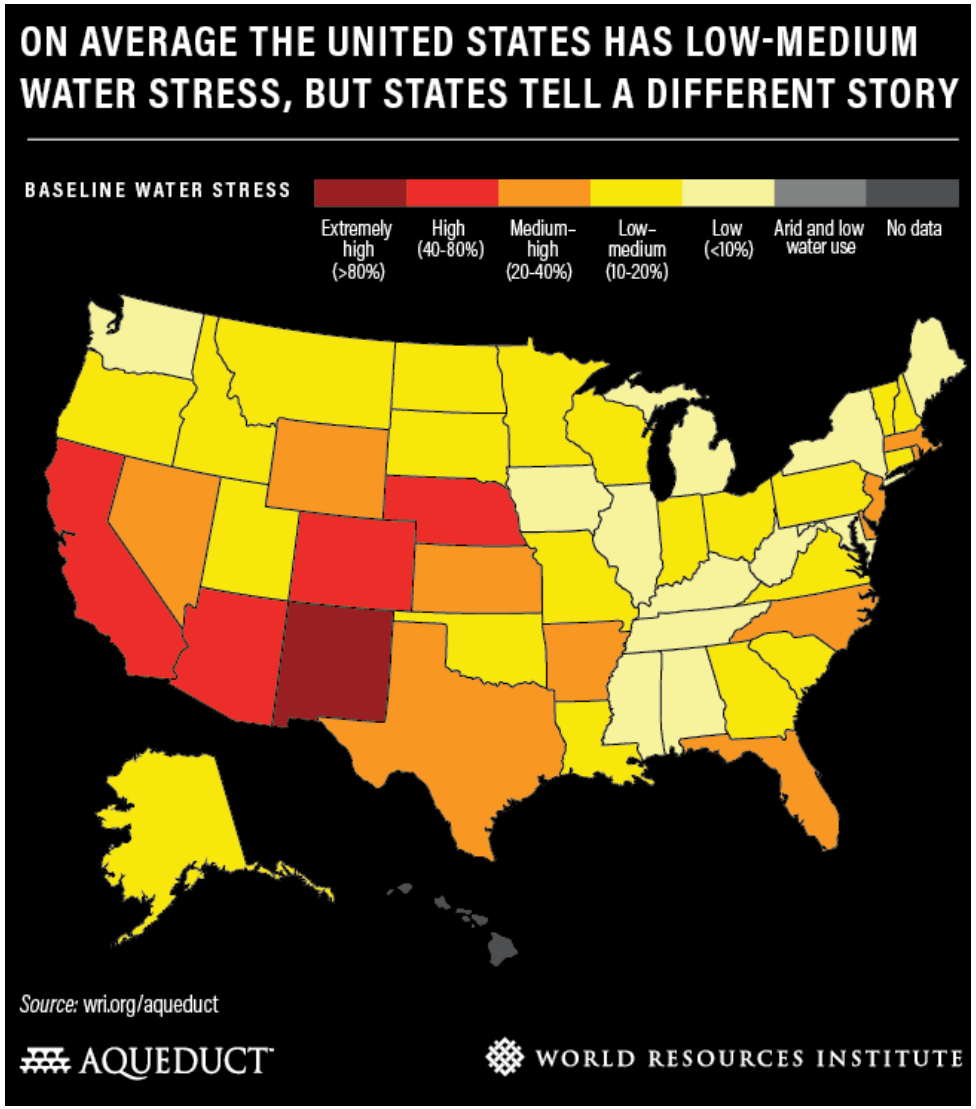
- Biography
  - Assistant Professor of Economics, UNM, 2012-present
  - Ph.D., Environmental and Natural Resource Economics, University of California at Riverside, 2012
  - M.S., Environmental Science, University of California at Riverside, 2011
  - B.E., Environmental Engineering, Tsinghua University, 2007
- Research areas
  - Water resources management
  - Nutrients management
  - Renewable energy
  - Integrated modeling
  - Mathematical and statistical programming
- Research group
  - Environmental and Natural Resource Economics
  - 2 Ph.D. students

Keywords:

Nitrogen pollution, water, health, bioenergy, climate change.

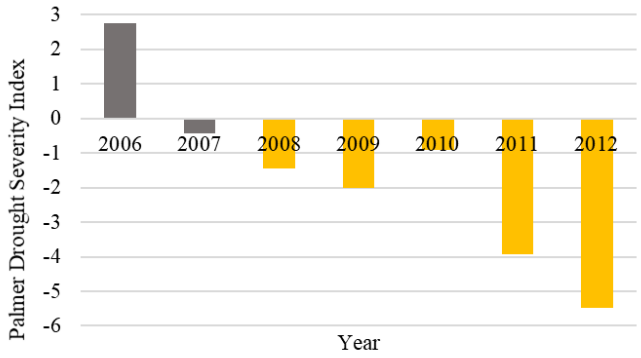
CURRENT WORK: Urban Water Demand

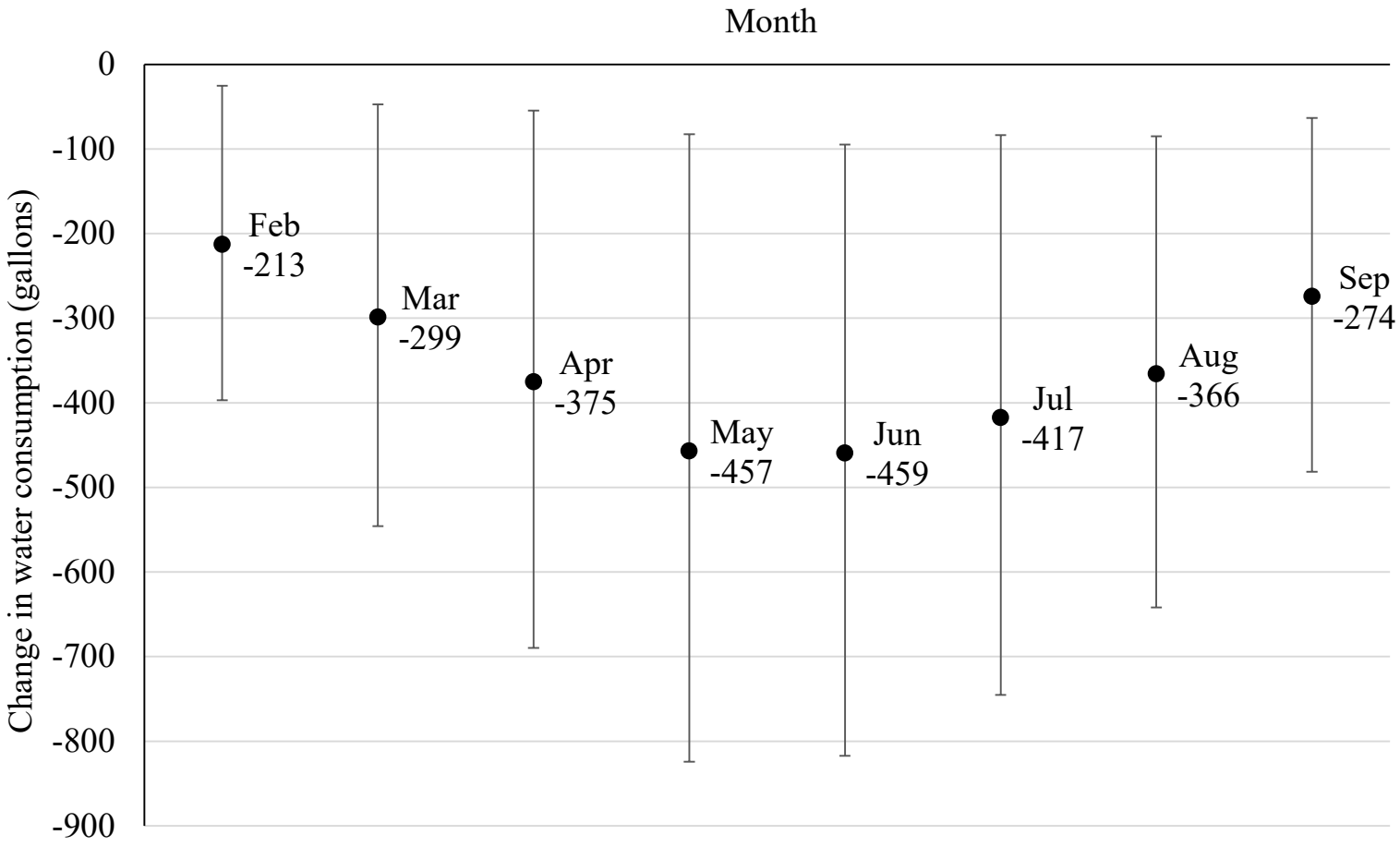




CURRENT WORK: Urban Water Demand

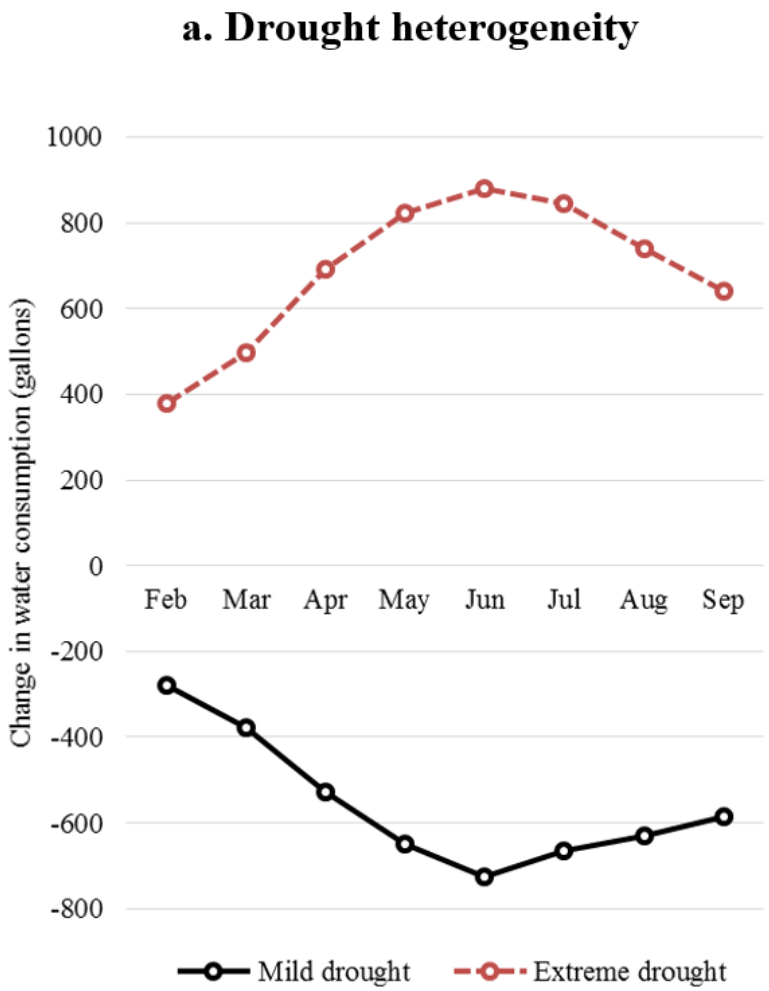
Photo: Brian J. Matis/Flickr





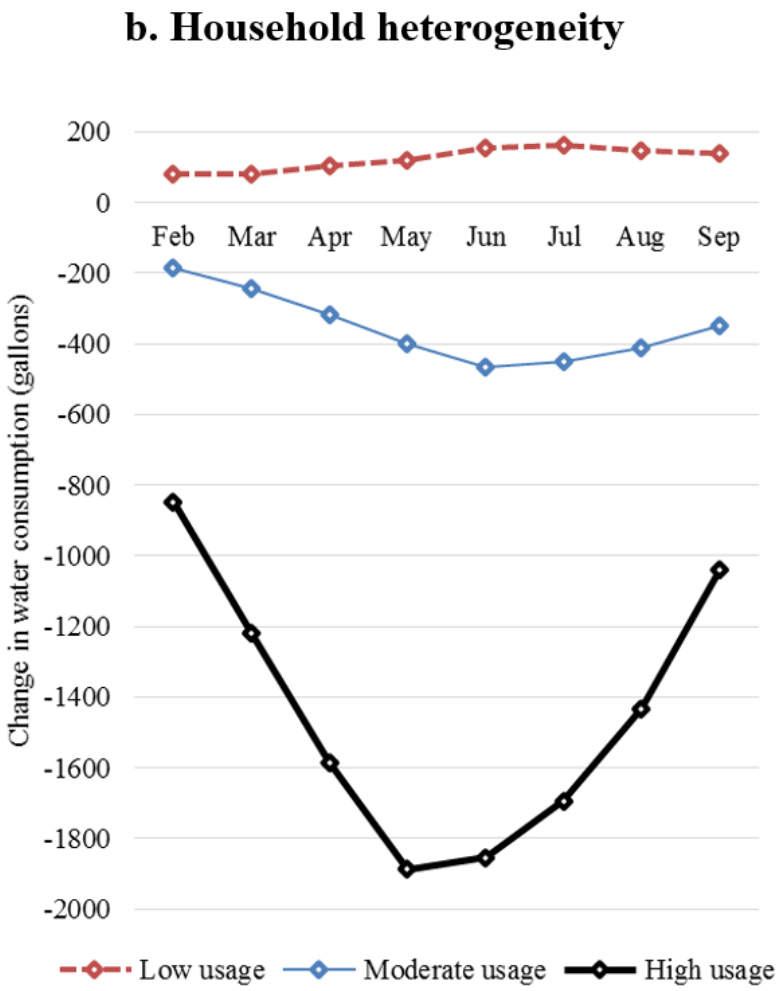
"Less Is More, No Matter What? Conservation, Efficiency and Water Education Programs" (with J. Chermak)

CURRENT WORK: Urban Water Demand



"Less Is More, No Matter What? Conservation, Efficiency and Water Education Programs" (with J. Chermak)

CURRENT WORK: Urban Water Demand



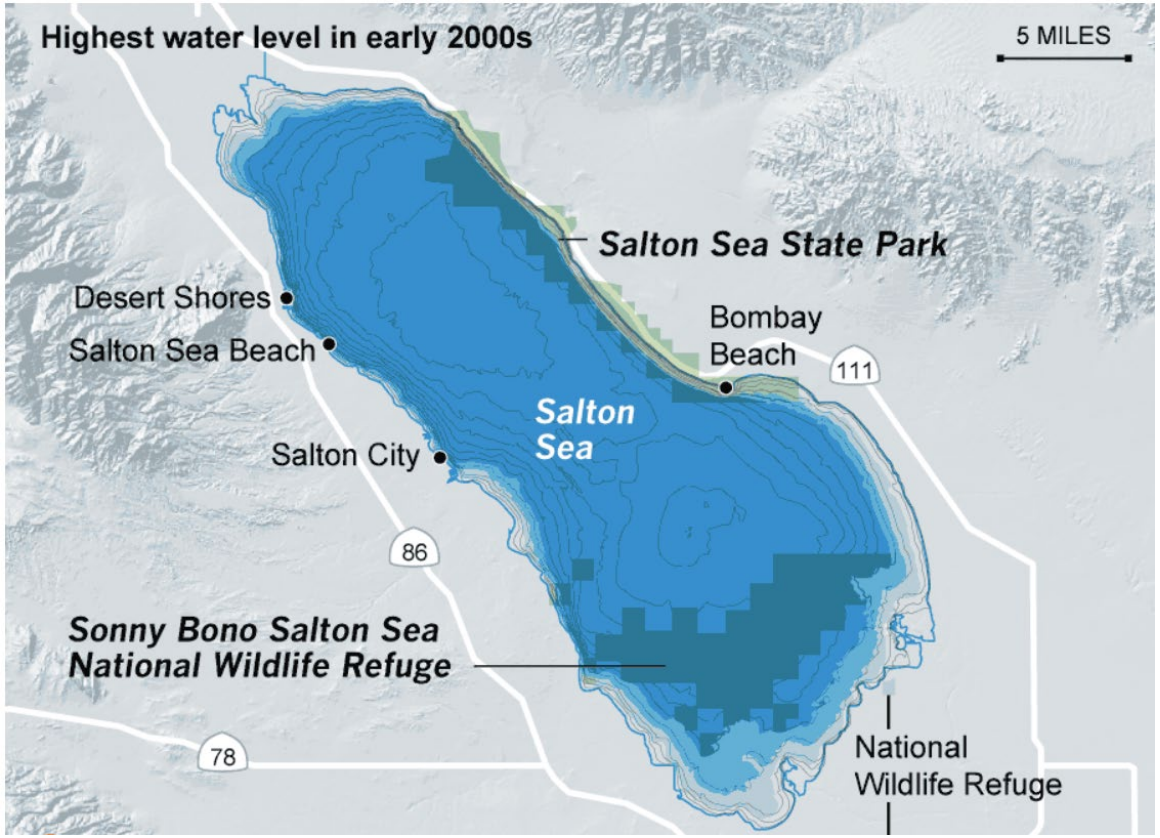
"Less Is More, No Matter What? Conservation, Efficiency and Water Education Programs" (with J. Chermak)

CURRENT WORK: Salton Sea

Photo: Legislative Analyst's Office

Photo: USGS NASA Earth Observatory

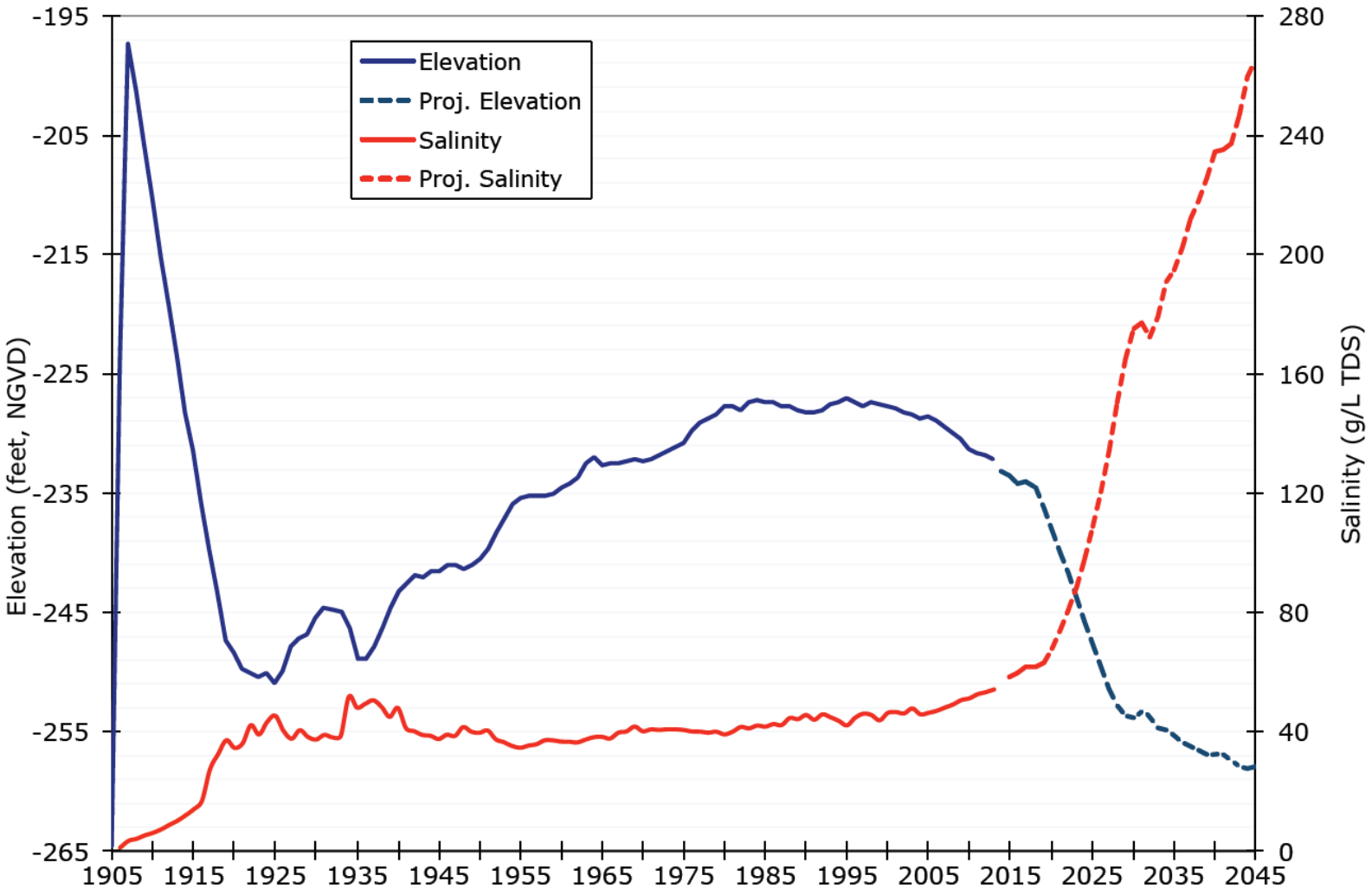
CURRENT WORK: Salton Sea



Source: Los Angeles Times, 2014

Photo: Matthew Dillon/Flickr

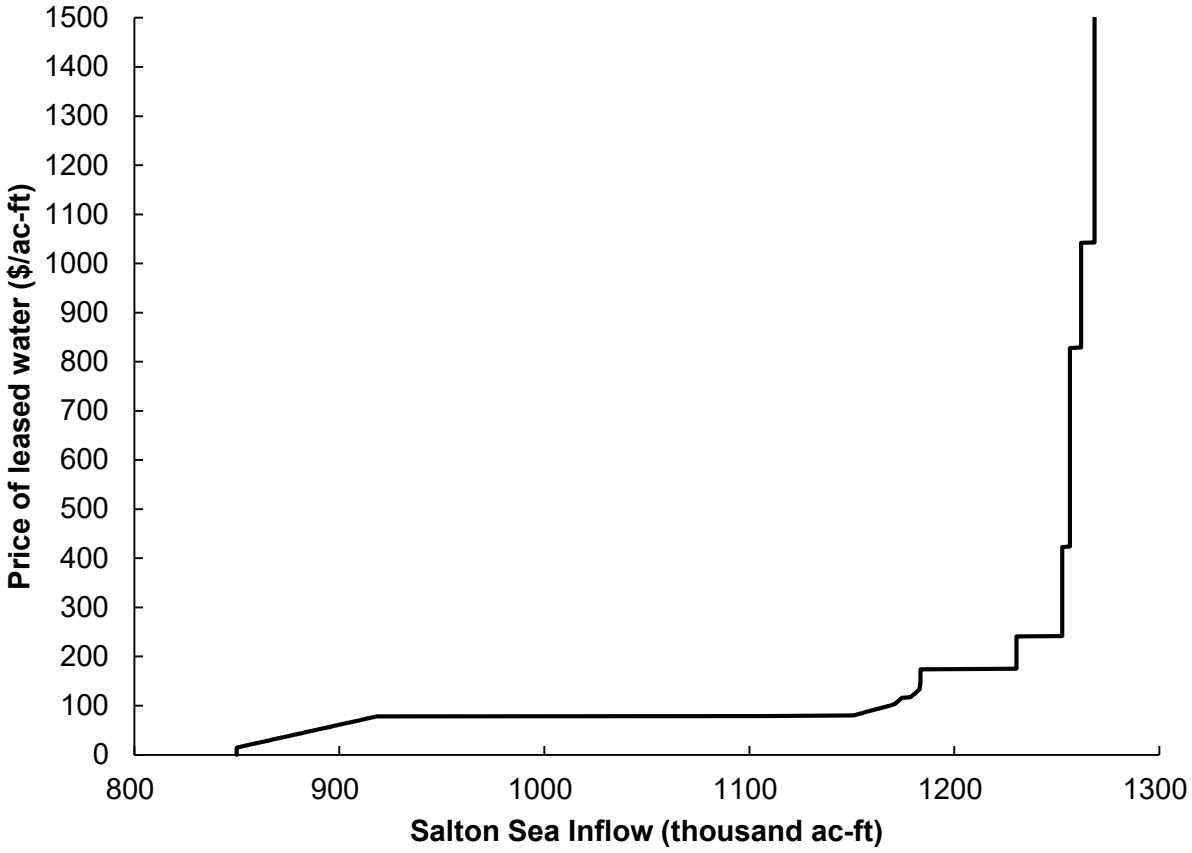
CURRENT WORK: Salton Sea



Source: Cohen, M.J., 2014. Hazard's toll: The costs of inaction at the Salton Sea. Pacific Institute, 50 pp.

CURRENT WORK: Salton Sea

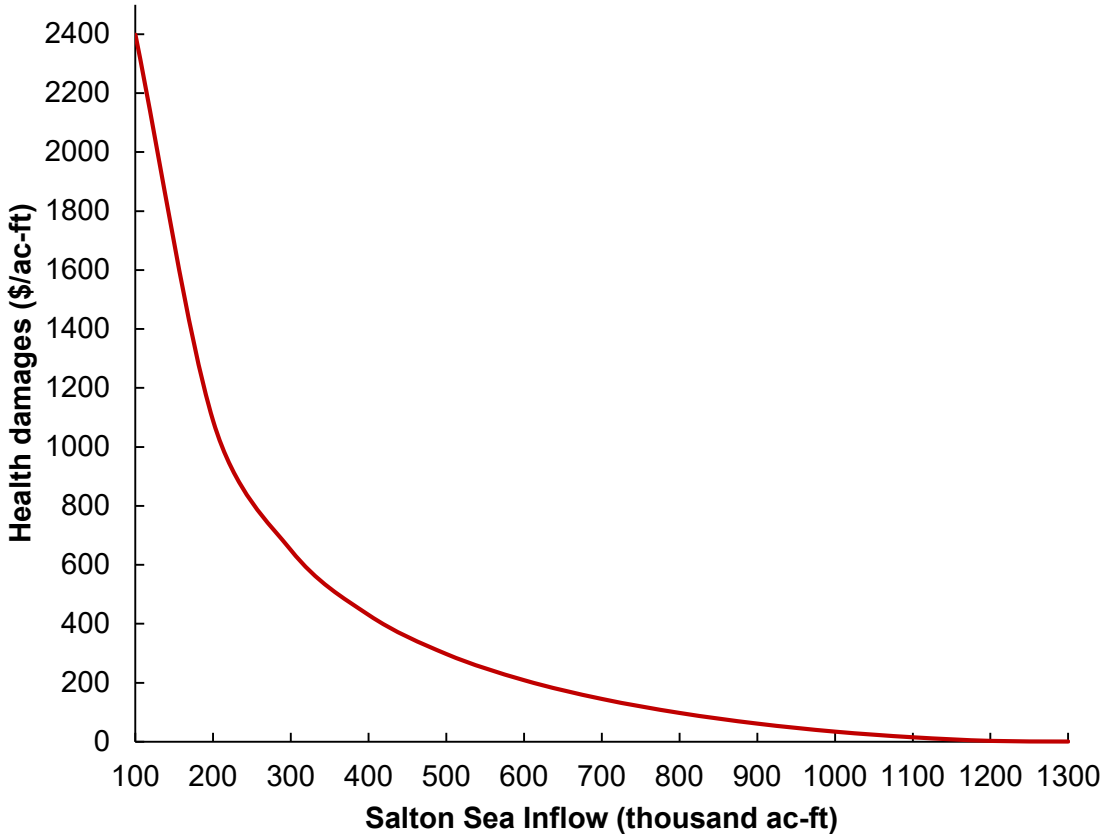
Supply Curve



"Refilling the Salton Sea to Improve Public Health? A Hydro-Economic Analysis" (with B. Jones & J. Fleck)

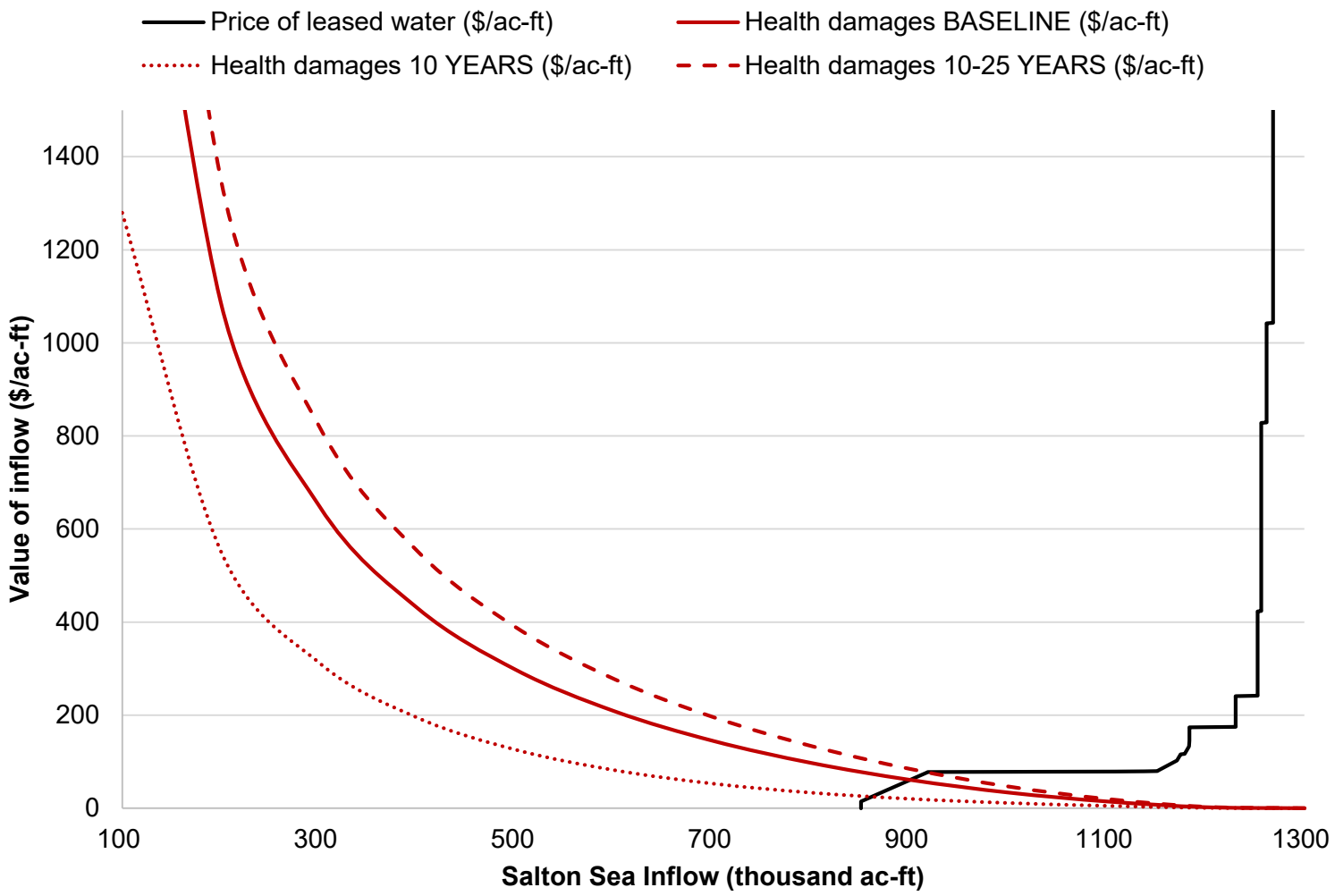
CURRENT WORK: Salton Sea

Demand Curve



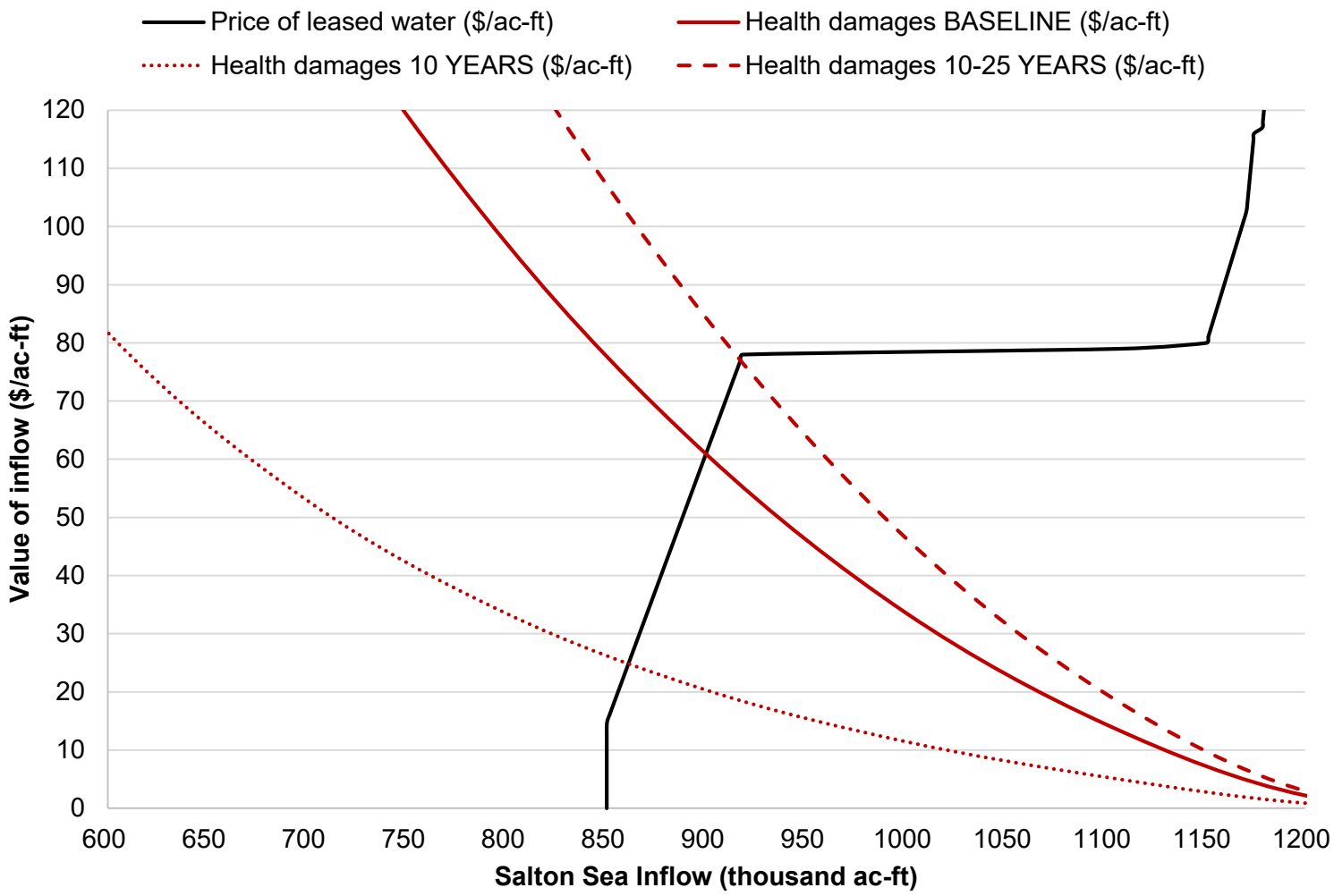
"Refilling the Salton Sea to Improve Public Health? A Hydro-Economic Analysis" (with B. Jones & J. Fleck)

CURRENT WORK: Salton Sea



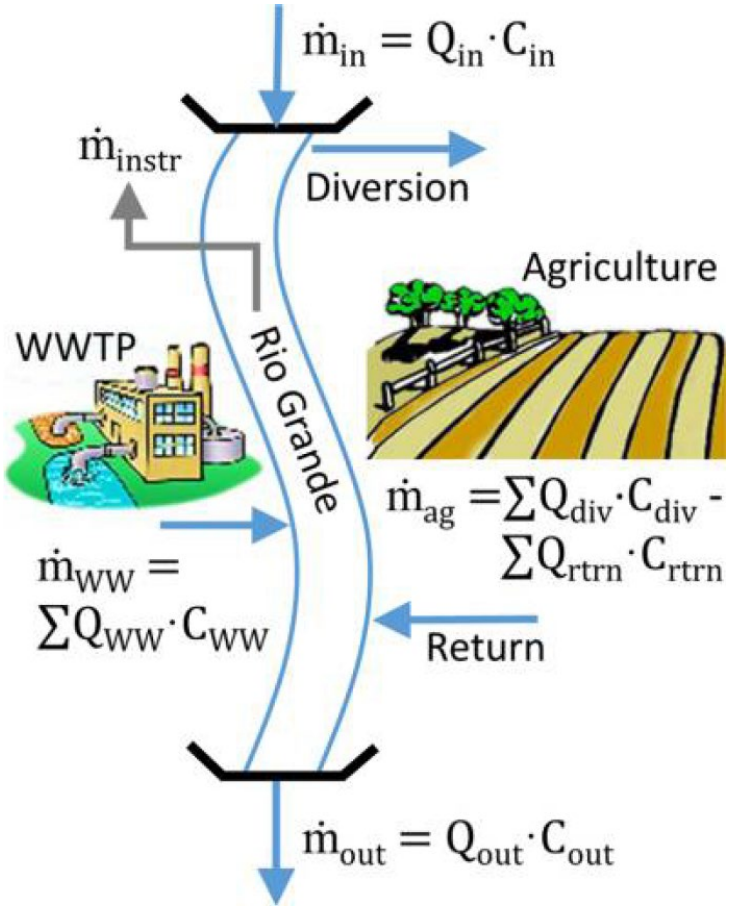
"Refilling the Salton Sea to Improve Public Health? A Hydro-Economic Analysis" (with B. Jones & J. Fleck)

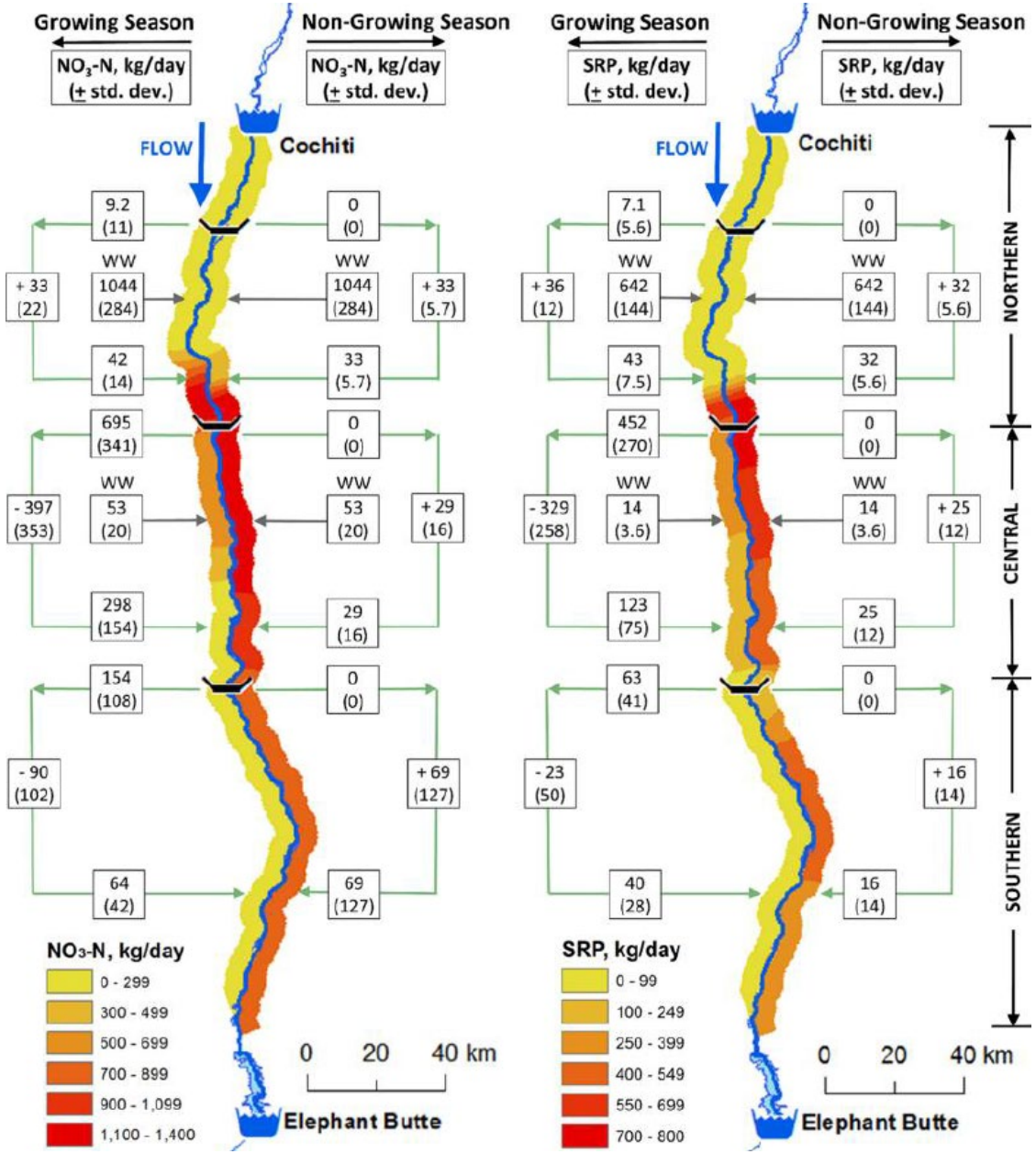
CURRENT WORK: Salton Sea



"Refilling the Salton Sea to Improve Public Health? A Hydro-Economic Analysis" (with B. Jones & J. Fleck)

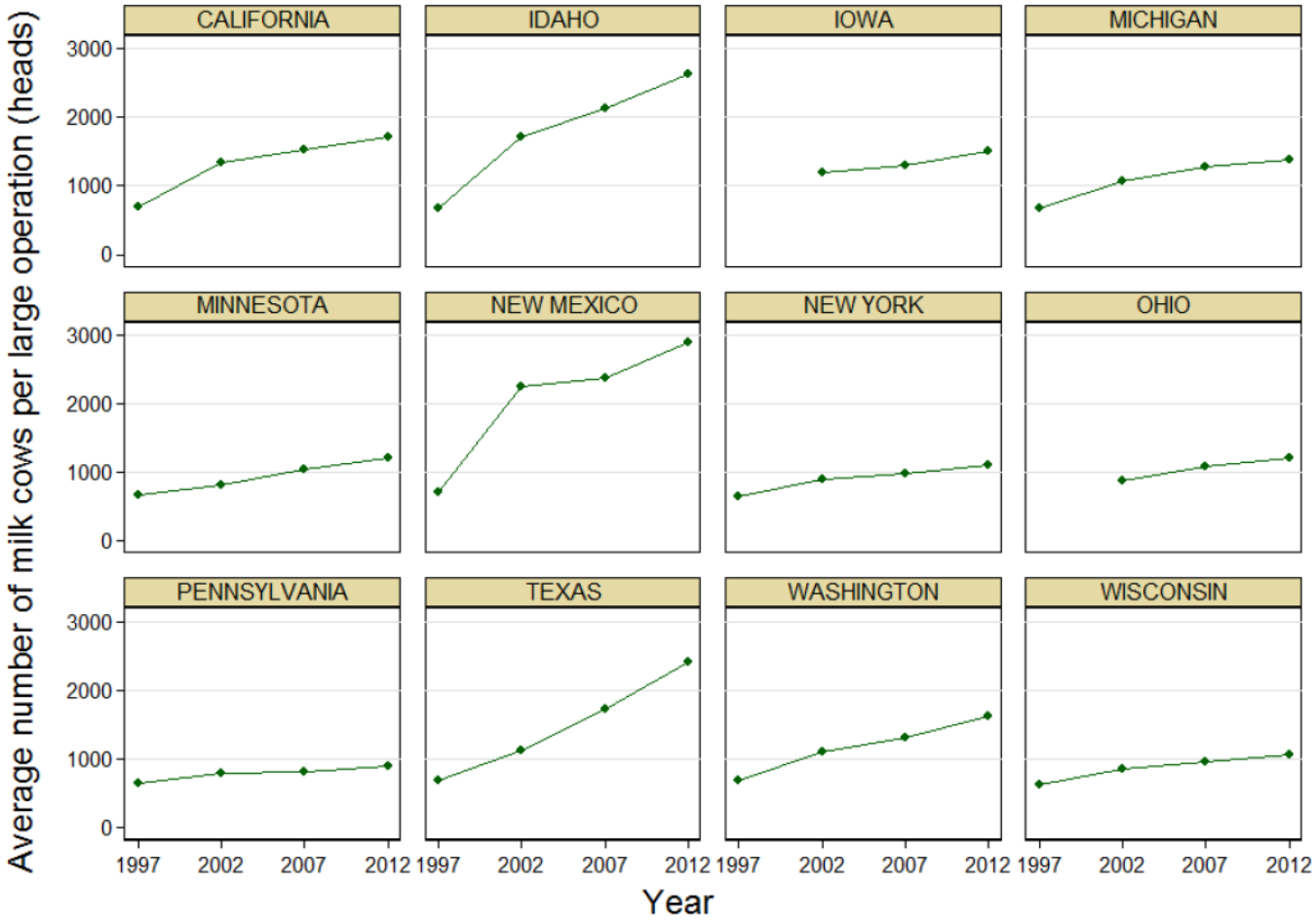
CURRENT WORK: Nitrogen Surplus

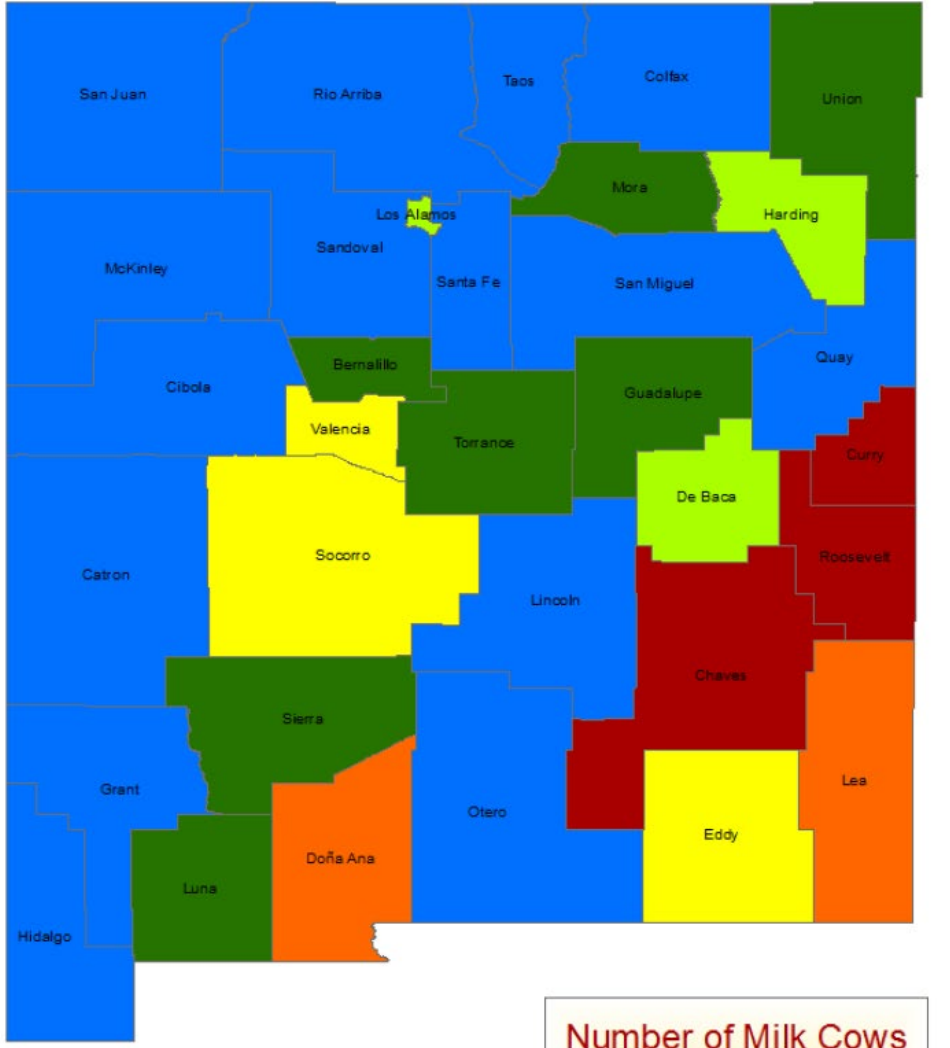




Mortensen, J.G., González-Pinzón, R., Dahm, C.N., Wang, J., Zeglin, L.H. and Van Horn, D.J., 2016. Advancing the Food-Energy-Water Nexus: Closing Nutrient Loops in Arid River Corridors. Environmental Science & Technology, 50(16), 8485-8496.

CURRENT WORK: Nitrogen Surplus





Number of Milk Cows
- (D)
- 0
- 1 - 200
- 10,000 - 12,000
- 31,000 - 44,000
- 50,000 - 76,000

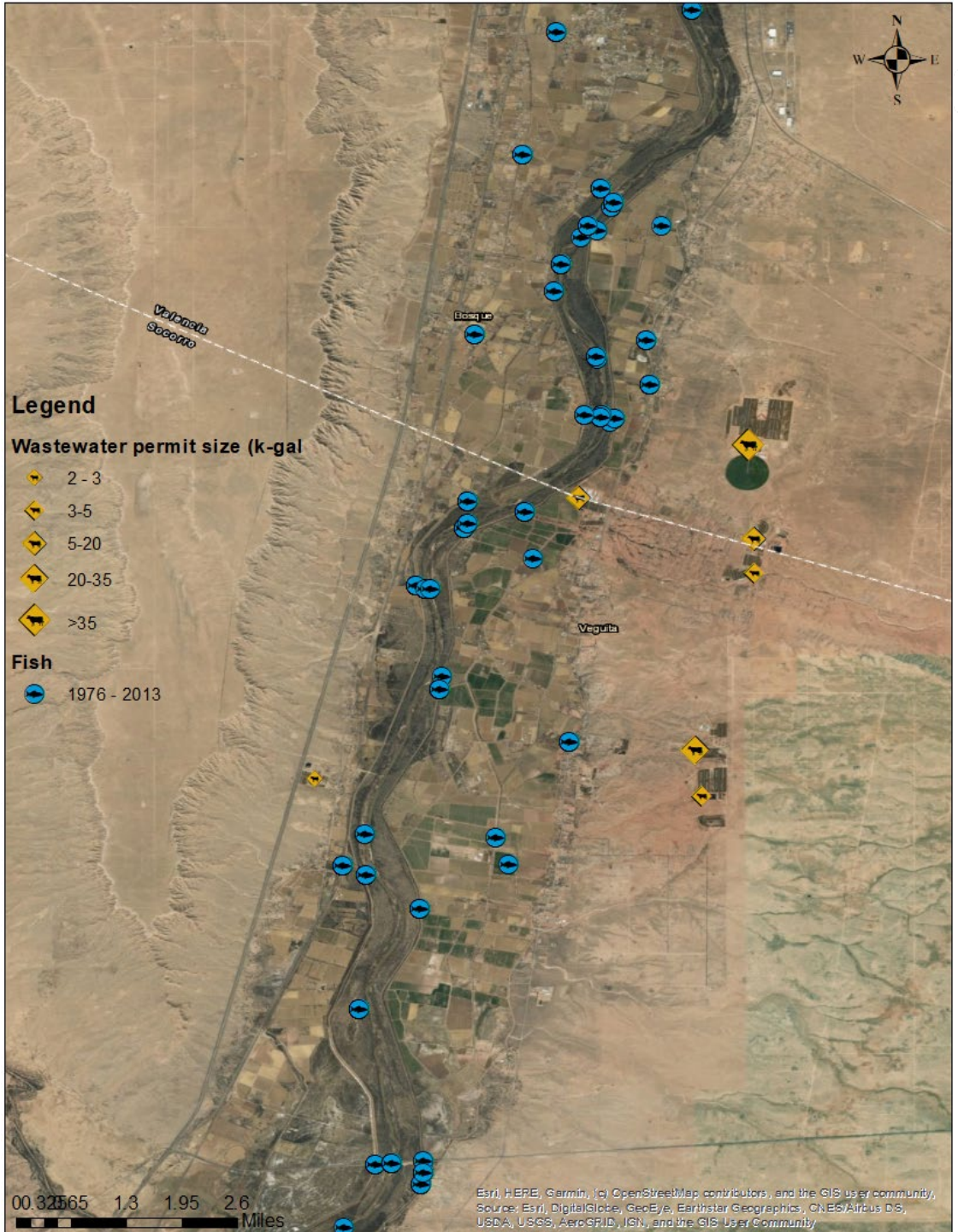
Note: (D) = number omitted to ensure privacy

0 37.5 75 150 Miles

Wang, J. and J.R. Joshi, 2015. Exploring Policy Alternatives for Controlling Nitrate Pollution from New Mexico's Dairies. Technical Report 369, New Mexico Water Resources Research Institute.

CURRENT WORK: Nitrogen Surplus

Photo: Google Map



"Integrated ecological-economic modeling for evaluating sources and impacts of nitrogen surplus in arid-land ecosystems: a pilot study of the Rio Grande" (with T. Turner)

FUNDING SOURCES

- University of New Mexico, Sustainable Water Resources Grand Challenge Seed Grant

RESEARCH NEEDS

- Remote sensing of urban greenspace and cropland
- Remote sensing of concentrated animal feeding operations (CAFOs)
- Integrated phys-hydro-bio-econ modeling