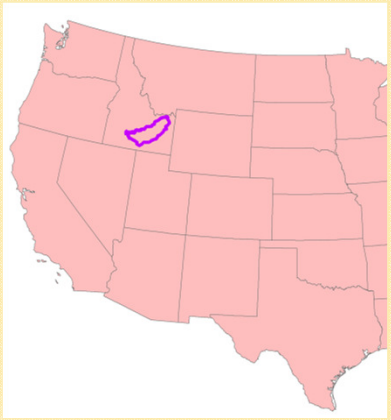
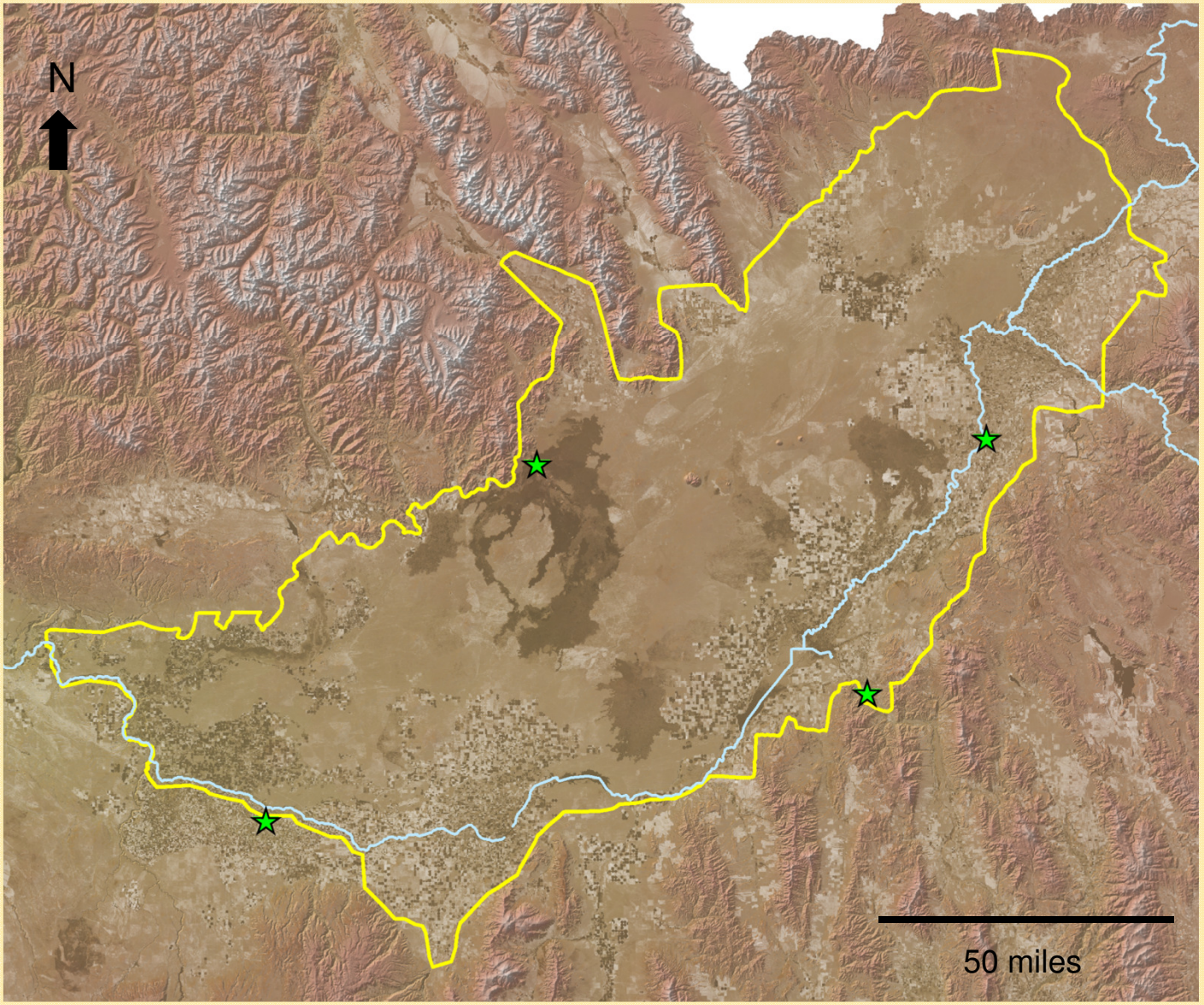
Transition to 2.0

Matt Anders

May 26, 2010

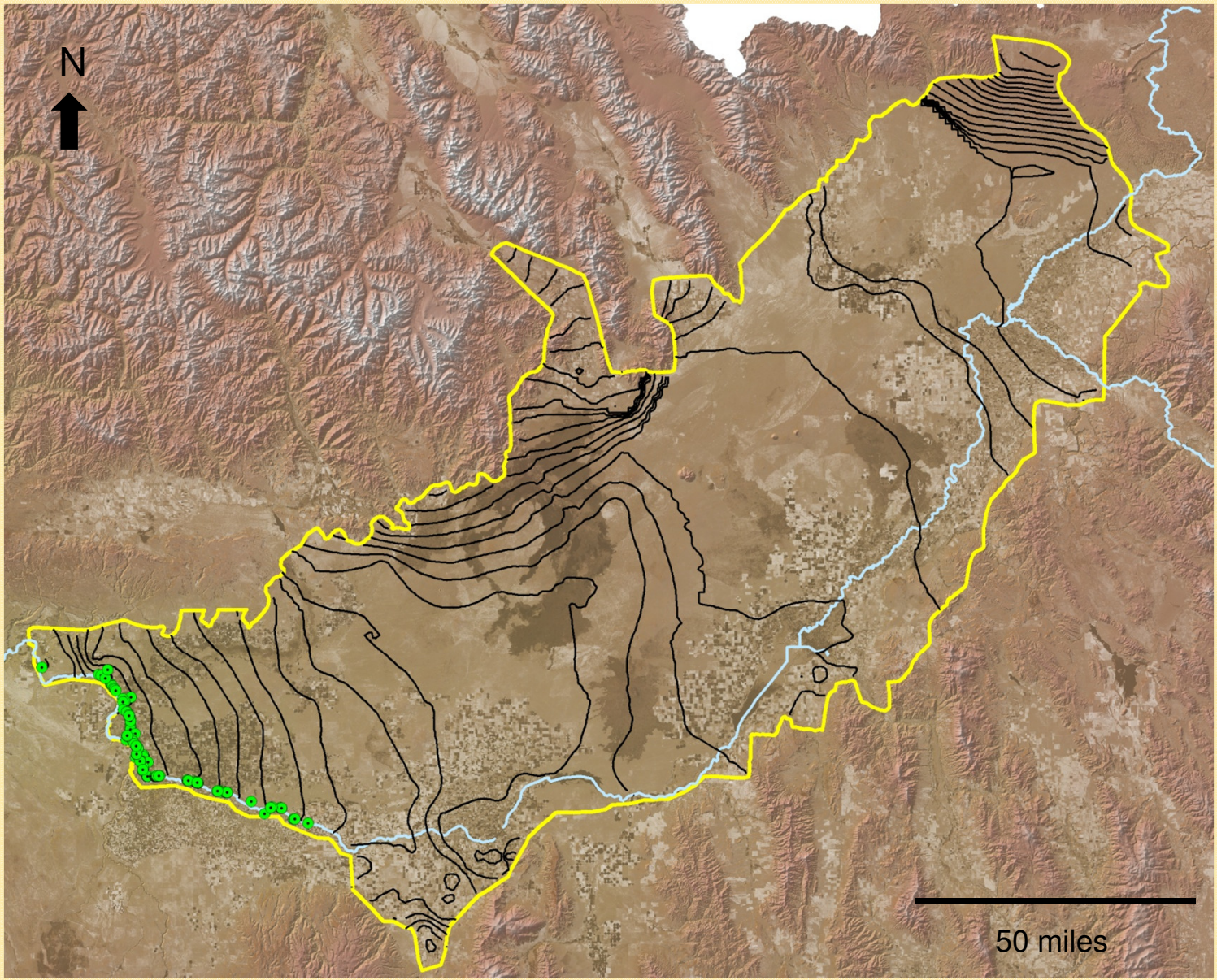
Location





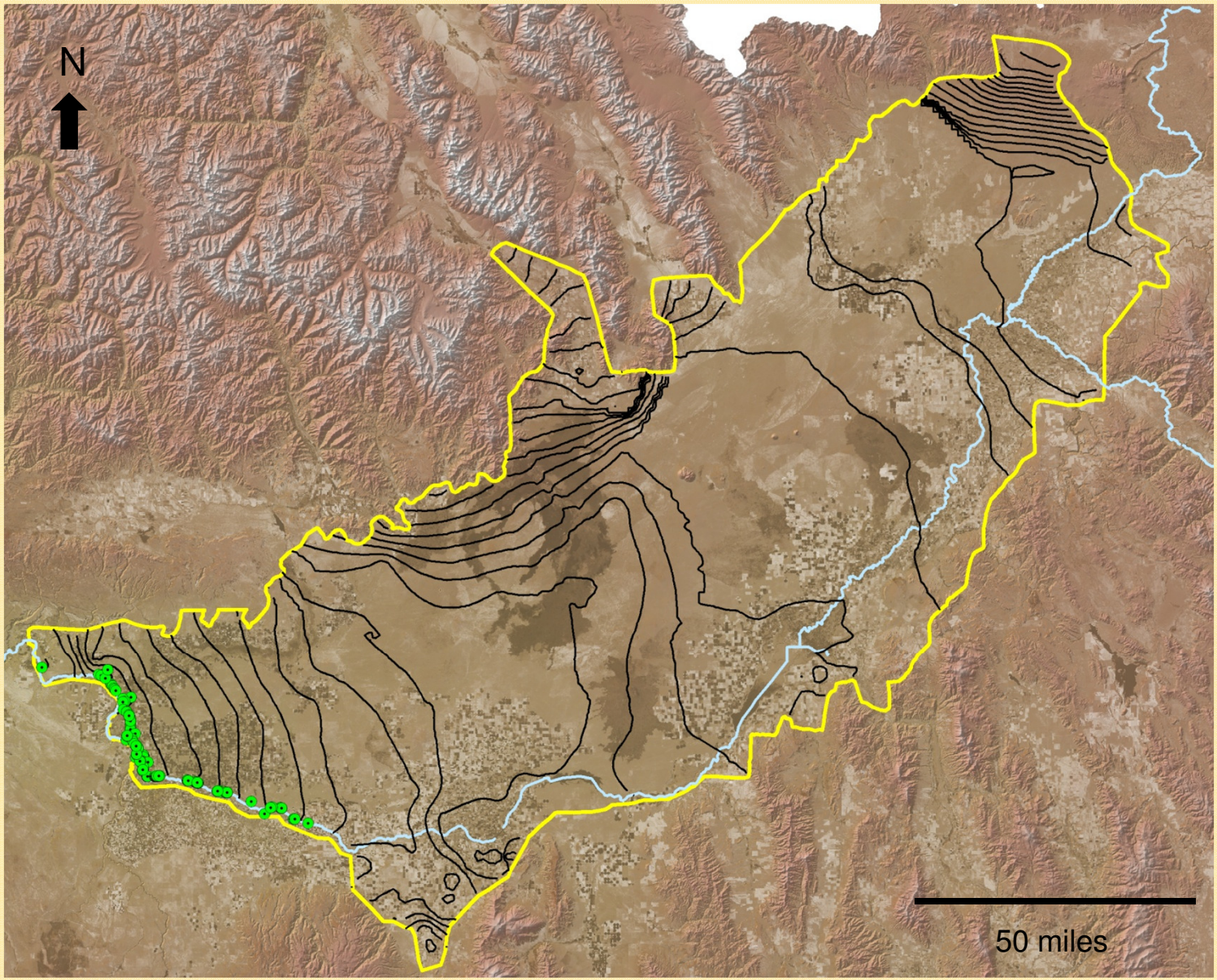
Geology of the ESPA

Groundwater Flow



Flowpaths

Aquifer Discharge



Springs

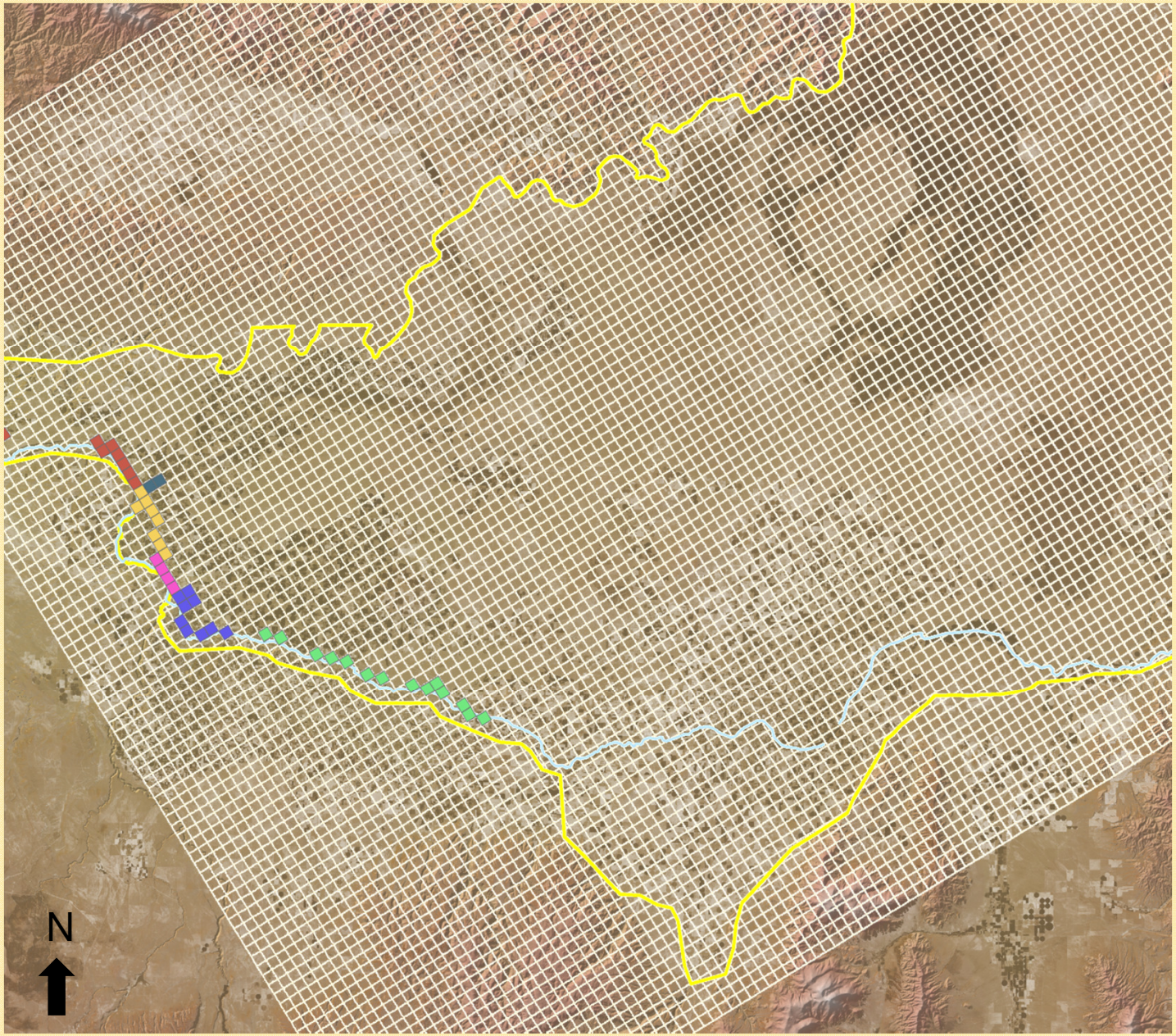
Timeline

- 1880’s - Surface water irrigation began
- 1950s - GW irrigation increase
- 1970s - Water level decline
- 1987 - SRBA
- 1992 - Irrigation expansion moratorium
- 1994 - Conjunctive Management rules
- 2000 - Drought increased need for CM
- 2006 - ESPAM 1.1

ESPAM 1.1

- MODFLOW
- Single Layer
- 1 mile x 1 mile grid
- Steady State
- 6 month stress periods
- 22 years of calibration data
- ~11,000 water level & river gain/loss observations

Model Run

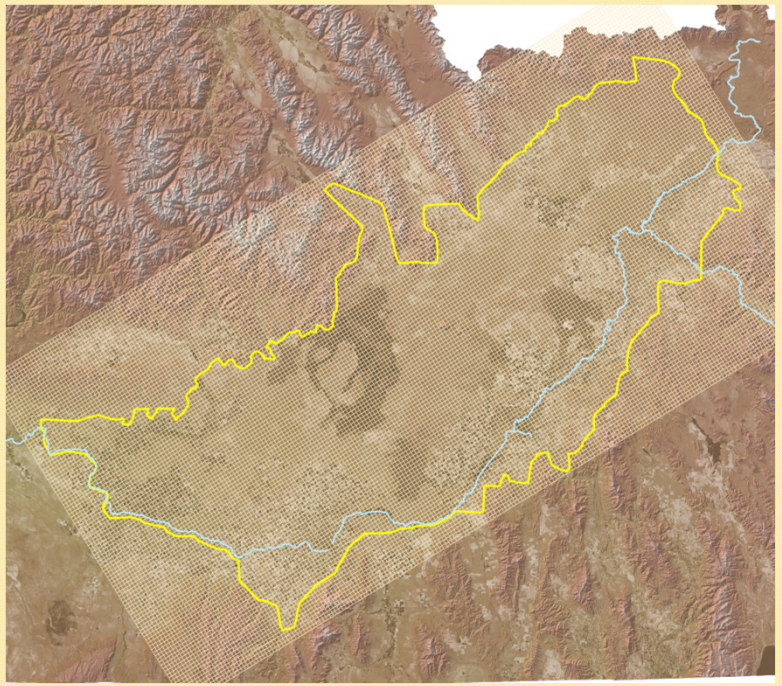


Model Result

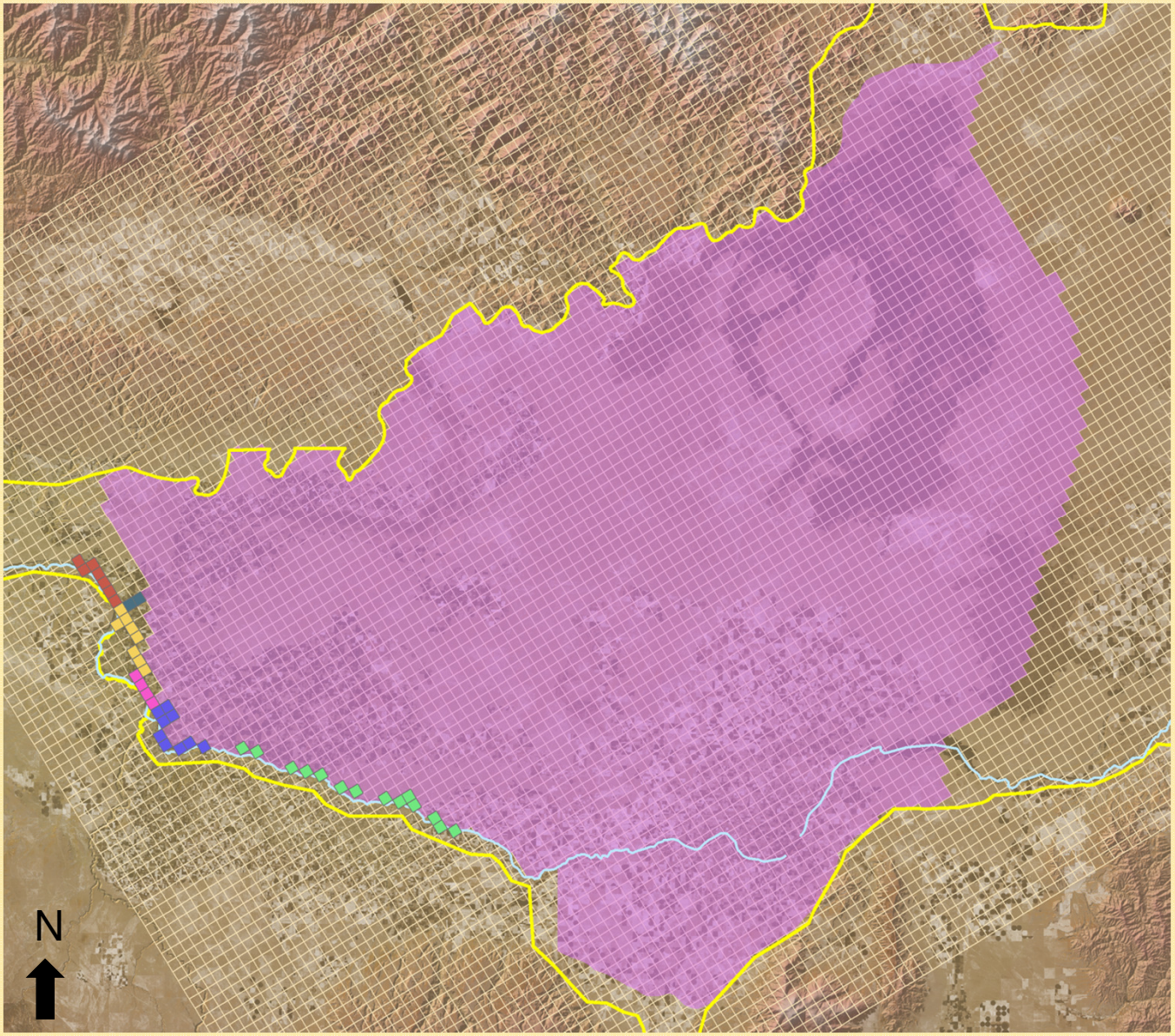
- Model Uncertainty

- Conjuctive Management
  - Reasonable use
  - Full economic development of water resources
  - An appropriator is not entitled to command the entirety of large volumes of water in a surface or ground water source…”

- De Minimus



Trim Line

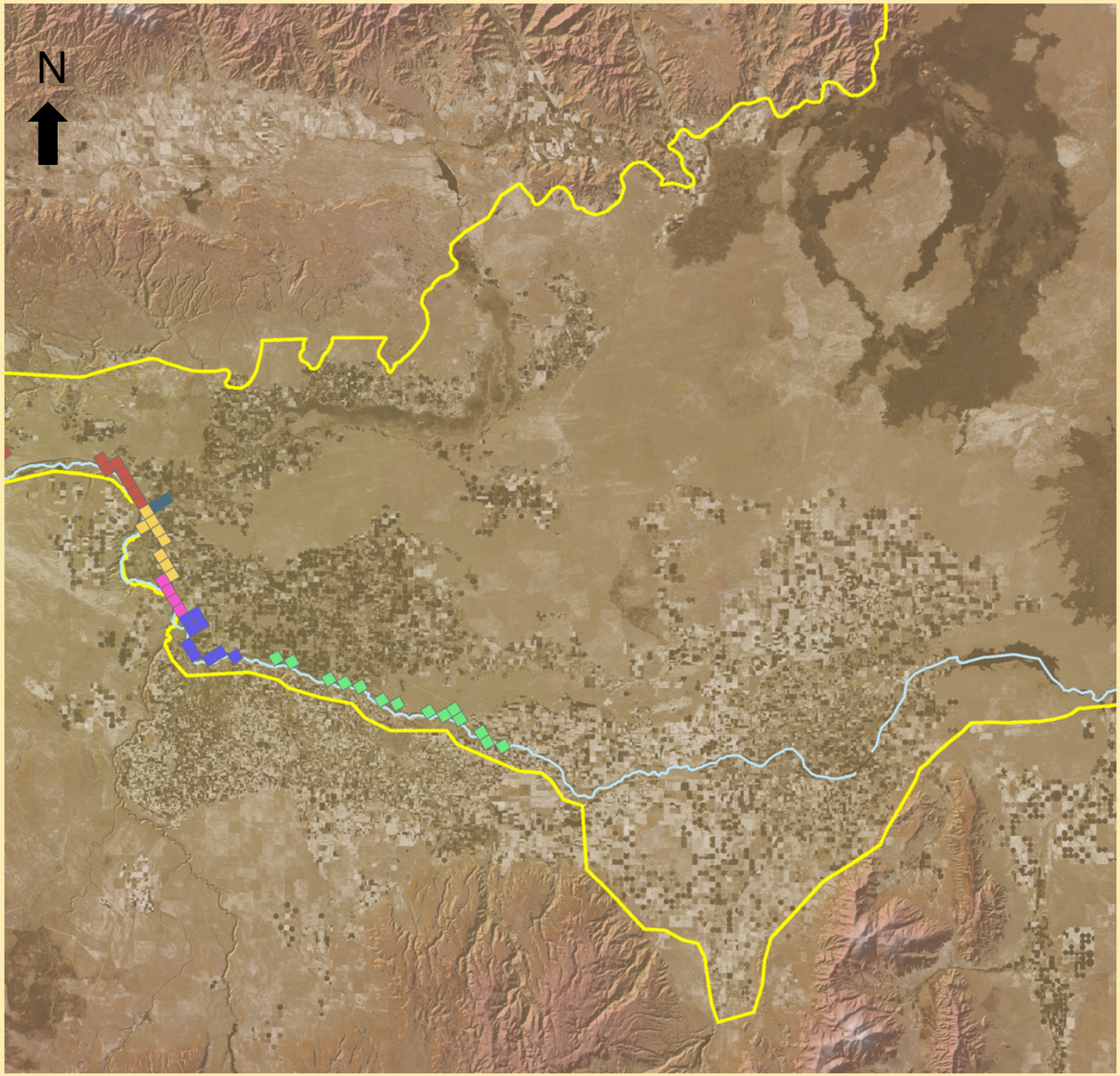


- The area of the aquifer where more than 10% of the impact of groundwater pumping is realized in the reach of interest.

Trim Line Legal Challenges

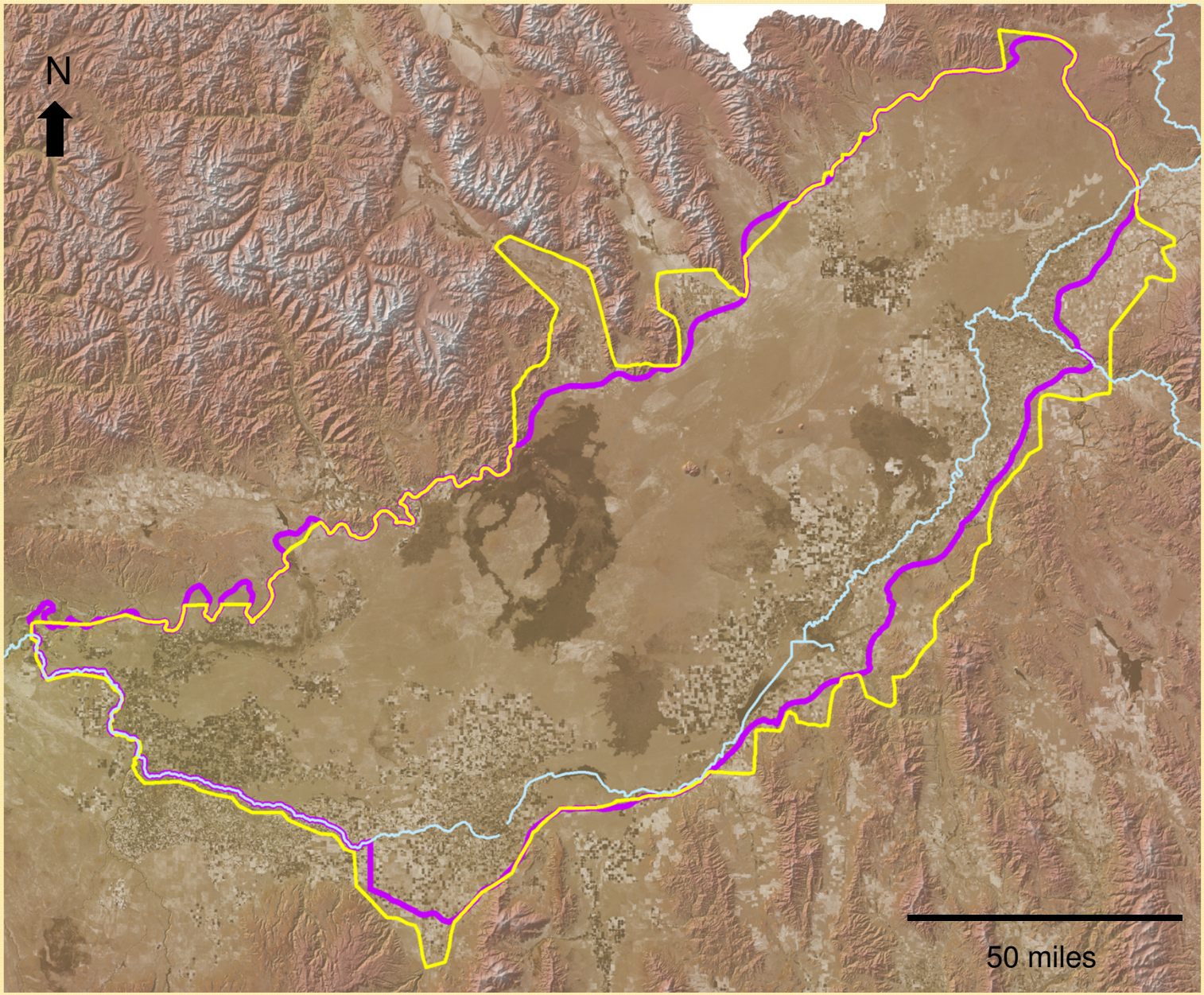
- 2010 Idaho Fifth District Court
  - Spring users: all water users hydraulically connected should be administered
  - Court: “use of trim line for excluding juniors…is acceptable simply based on the function and application of a model.”
- 2011 Idaho Supreme Court
  - Affirmed district court decision

ESPAM 2.0

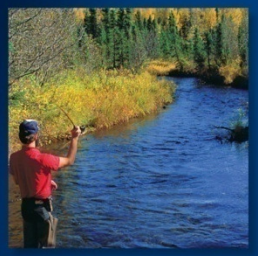


- Fate of the Trim Line?

Boundary Change



IDAHO Department of Water Resources



Questions???

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