What are the major challenges to obtaining water for oil shale and oil sands development?

- Within Utah, surface waters are fully appropriated throughout the most prospective oil shale and oil sands area. New groundwater withdrawals are generally limited to domestic or temporary supplies, when they are available at all.
- The Upper Colorado River Compact controls how much water Colorado and Utah may use from the Colorado River System, but the Compact does not say how much water can be taken from the White River.
- The Northern Utah Tribes of Indians have “reserved rights” to water from both the White and Green river systems. Earlier attempts to resolve these claims failed, but put the Tribe’s consumptive rights at approximately 110,000 AF/Y. Development of these rights could displace existing water rights, uncertainty regarding their size and potential uses hampers resources planning.
- The major rivers near Utah’s oil shale and oil sands resources contain habitat for four species of Endangered Species Act (ESA) protected fish. The ESA imposes obligations on federal agencies, agency licensees and permittees, state and local governments, and private individuals that may supersedes state water rights.
- Certainty regarding water rights and their relative priorities is critical to resolving competing water use claims and facilitating water exchanges.

What is the path forward?
- Water right can be bought and sold; changes are allowed subject to state permitting requirements and a prohibition against injury to others.
- The State of Utah holds rights to water stored in the Flaming Gorge Reservoir, some of which is available to new water users. Water may also be available from local water suppliers.
- Determining how much Colorado and Utah can withdraw from the White River will provide clarity for water resource planners and water transfers. ICSE researched relevant law and discussed potential means of resolution.
- Resolving the Northern Utah Tribe’s reserved rights claim will clarify water availability and provide clarity for resource planning. ICSE researched the nature and extent of the Tribe’s legal claims, past efforts at resolution, and impacts on future energy development.
- Continued research on endangered species habitat needs and flow variability under likely climate scenarios will clarify water availability and facilitate improved water resource planning. ICSE completed research regarding applicable ESA requirements and wildlife resources.

What are the major challenges to accessing oil shale and oil sands resources?
- Management is split between several entities, each with different objectives and regulations. Within the Uinta Basin, the BLM controls 49% of 25 GPT oil shale resources, tribes control 19%, private entities control 17%, and the State controls 17%.
- BLM manages for multiple-use and sustained-yield, “taking into account the long-term needs of future generations for renewable and nonrenewable resources, including but not limited to recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values . . . without permanent impairment of the productivity of the land and the quality of the environment.” (3 U.S.C. §§ 1701(7) and 1702).
- BLM’s commercial oil shale leasing program is the subject of ongoing litigation. Commercial leasing is unlikely to occur until these challenges are resolved.
- As of October 2008, Utah’s School and Institutional Trust Lands Administration (SITLA) had issued 99 active oil shale leases covering 97,848 acres of land. SITLA manages to maximize income for current and future beneficiaries, Utah Code § 53G-1-1002(2), and Utah is “open for business as it relates to oil shale.”

What is the path forward?
- ICSE is researching federal and state oil shale management, ways to improve management coordination, and models for resolving resource conflicts.

Produced Water

What are the major challenges involving produced water?
- In 2009, the Colorado Supreme Court held extraction of water to facilitate CBM development is a “beneficial use” and requires a state-issued water right before development can occur. Vents v. High, 205 P. 3d 1156. Colorado amended its water code and now requires a water right for groundwater withdrawals facilitating CBM development. COLOR. REV. STAT. § 77-90-308. Wyoming also requires a water right for water withdrawals associated with CBM production. WYO. STAT. ANN. § 11-3-904.6.
- Since could be a harbinger of legal arguments applicable to oil shale and oil sands developers who rely on comparatively shallow in situ wells and need to dewater formations prior to extracting shale oil. Should de-watering for oil shale or oil sands development interfere with existing beneficial uses of water, in situ oil shale and oil sands developers may face challenges similar to those raised in Inxv.