

Task Order 3:

- a) Using the proposed alignment of the diversion pipeline perform a hydraulic analysis to determine the total energy requirements to move water from the source (Kansas) to the destination (Colorado). Specifically how much head is needed to move the water against pipeline friction, and up the mountains.
- b) Once the “by-hand” analysis is completed use the internet and determine how far apart lift stations can be in a typical large volume water transmission system (i.e. there are other such systems in the world, how far apart are the lift stations, and why).
- c) Construct an initial framework for a hydraulic model using links (pipes) about 20 miles long, and requisite lift stations in EPA-NET. Recall that node elevations matter; so be sure you estimate the elevations of the land surface along the proposed pipeline alignment.
- d) Select appropriate pumps for the lift stations, include manufacturer pump curves and provide evidence that the pumps will function in the proposed system.

Technical Memorandum Due: 26 FEB 2013