AWRA 2011 ANNUAL WATER RESOURCES CONFERENCE
Albuquerque, New Mexico
November 7-10, 2011

IMPORTING WATER: HOW TO THINK ABOUT ENERGY AND SUSTAINABILITY?

Denise Fort*

ABSTRACT: The relationship between water and energy has been brought to public attention recently, especially with respect to water use and water pollution associated with each form of energy production. The use of energy in delivering and treating water is less well understood. The pumping and delivery of water often requires substantial energy, as illustrated in California, where the California Water Project uses 2-3% of all water consumed in the state. (NRDC, Energy Down the Drain, 2004). Water planners are not held responsible for energy consumption by project beneficiaries and costs are paid during the project life, not as part of the construction budget. There is a related dimension to the decision to develop and move water supplies from distant locations to municipalities. When a municipality seeks these sources of "new" water it is an implicit admission that existing supplies are inadequate. The "new" sources of water may come with limitations, however. In examining case studies across the West, these limitations are found to be significant. For example, new water projects may propose to import water from rivers that have substantial claims on them, and climate change may increase the risk that flows will not be adequate to meet all claims. Projects that rely on groundwater mining are *per se* unsustainable, because the groundwater source will be exhausted at some time in the future. How should society think about the energy costs and the sustainability of the search for new water? The authors suggest that there are a host of water management approaches that should be compared to water importation. Conservation, demand management, water transfers and water recycling may be less costly, when sustainability is included in the bottom line. Further, the energy costs of these projects must be taken into account before projects are chosen. These include the emission of greenhouse gasses and other pollutants in producing the energy, and even the water that is used to produce power to acquire new water. A full cost accounting would lead to the greater use of demand management before pursuing costly water supply projects and more reliance on renewable energy in the water cycle.

* Professor, University of New Mexico, 1117 Stanford, NE, Albuquerque, NM 87131 USA, Phone: 505-277-1094, Email: fortde@law.unm.edu