IOGCC and ALL Consulting assembled a team of cooperators to
assemble facts, opinions, and trends for produced water in the
United States to learn how these factors affect the ability of the industry to satisfy the oil and
gas demands of the country.

The team includes representatives of IOGCC member states, various federal agencies and non-
governmental organizations, including the “Citizens for Resource Development.” The research-
ers have leveraged specialists from around the country and have already completed site visits to
case study areas in a dozen states. Although the issues vary throughout the country, the issue
of produced water management continues to be a leading issue with regard to successful re-
source development.

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For more information about the project, including documents, links, presentations, and other information, visit the
Project Web Site at http://www.all-llc.com/iogcc/prodwtr. Contact Mark Carl of the Interstate Oil & Gas Compact
Commission or Dan Arthur of ALL Consulting.
The research sponsored by DOE and IOGCC will have wide-spread benefits to the oil and gas industry, to the producing states, and to the nation as a whole. Research findings will lower the cost of managing water, thereby encouraging operators to keep marginal wells online and to initiate new E&P projects despite questionable economics. Research will help regulatory agencies devise new regulations and perhaps new exemptions for existing regulations to make water management easier while still maintaining environmental protection. These reinforcing benefits will have the following outcomes:

- Establishing lower cost management options that are robust, compatible to local conditions, and readily permittable.
- Innovative combinations of treatment, beneficial uses, and disposal can result in lower operating costs.

Produced water has long been a fact of life for the Petroleum Industry. In most oil reservoirs, water makes up most of the reservoir and a large percentage of the daily production. What is the fate of this water? Most of this water is separated, filtered, minimally treated, and returned to the reservoir in order to maintain or increase reservoir energy while some of the water is poor quality and is best pumped into deep salt water disposal zones. But some of this water is used at the surface for agriculture and industry and more could be treated and used if the economics were correct.

EPA water quality regulation target chlorides in surface waters. The national criteria for chloride (230 mg/L for long-term exposures) are recommended by the EPA (EPA, 1988), however, individual States are allowed to recalculate site specific criteria based on local aquatic species. If improperly enforced, chloride criteria have the potential for eliminating the option of discharging high quality produced waters to the surface. Unless regulations are written to allow flow-based and watershed-based permits, beneficial use of the water will be eliminated.

Can produced water be transformed into a product instead of a waste? Can government regulators and land managers cooperate with industry to encourage innovative management techniques? This is the subject of current IOGCC – US DOE research.

"Meeting the needs of our growing economy also means expanding our domestic production of oil and natural gas, which are vital fuels for transportation and electricity and manufacturing. The energy bill makes practical reforms to the oil and gas permitting process to encourage new exploration in environmentally sensitive ways. “ – President George W. Bush in an address to the Sandia National Laboratory in Albuquerque, NM April 2005