Steps Toward a Sustainable Future

SEO FORUM

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The Ranch
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1) Defining sustainability
   According to the 1987 report from the World Commission on Environment and Development (Bruntland Commission), sustainability is defined as the "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."
2) A strategic plan begins with a strategic vision
   "To provide a sustainable water supply that meets municipal, industrial, agricultural, environmental, and recreational needs through effective water management"
3) Success depends on a good plan. Avoid 'Tragedy of the Commons' type approach (conflict between individual interests and the common good).
   a) Managing a developed resource
      i) Sustainability (to maintain productivity into the future) can be achieved through effective water management that may include preservation, conservation and efficiency—we must learn to live within the limits of our environment
         (1) Preservation—setting aside of natural resources to prevent damage caused by contact with humans or by certain human activities—"keeping the status quo"
         (2) Conservation—reducing the usage of a resource to maintain the health of the resource—"doing less with less"
         (3) Efficiency—focus on reducing waste of a resource—"doing more with less"
   b) Strategic Steps
      i) Need to quantify available sources and demands in each basin including a complete inventory of available storage
      ii) Need to understand affects of climate variability
      iii) Collaboration with federal agencies to avoid federal designations for Wild and Scenic and endangered species (e.g., CWCB instream flows, bypass flows (A-LP), voluntary recovery programs)
      iv) Need improved coordination between water providers and land use decision makers (e.g., HB 08-1141—land use planning and approval tied to sustainable water supply)

v) Reduce demand through effective and appropriate federal conservation programs (Conservation Reserve Enhancement Program (CREP) and Environmental Quality Incentives Program (EQIP)). Utilize new 2008 Farm Bill Programs which focus on agricultural water enhancement activities that conserve ground and surface water (Agricultural Water Enhancement Program (AWEP) and foster partnerships between states or watersheds that share common conservation goals (Cooperative Conservation Partnership Initiative (CCPI)).
vi) Working with the local ground water management districts on strategic plans for conservation of local resources by local efforts (e.g., Ogallala Aquifer, Republican River Task Force Resolution Group)
vii) Potential of Aquifer Storage and Recovery statewide (e.g., Denver Basin, San Luis Valley, Aurora's Prairie Waters Project)
viii) Legislative Action (similar to SB 04-222, whereby Ground Water Plans of Water Management require aquifer sustainability provisions)
ix) Reclaimed wastewater
x) Ensure we are meeting compact obligations
xi) Need adequate staffing and resources for water administration
(1) Staffing
(a) Currently 35 vacancies
(b) Proposal to cut 6 positions permanently
(2) Measurement
(a) Cost and maintenance of data loggers and telemetry equipment (satellite monitoring system)
(b) Maintenance and replacement of measuring devices and diversion structures (many diversion structures are 80-120 years old)—need accurate measuring devices
(c) Proposal to refinance $40,000 of General Fund in Satellite Monitoring System—requires finding an additional 50 cooperators for gaging stations
(3) Reporting and Accounting
(4) Enforcement

c) Decision Making
i) Who makes the decisions?
ii) The need is great for developing system models that incorporate scientific, social, economic, environmental, and administrative interrelationships that will lead to better planning and ultimate legal and institutional systems to support the management of a sustainable water supply
iii) Use of Decision Support Systems

4) Are we getting there?
a) We must realize that the choices that we make on how we live today will affect how we will live in the future. What lifestyle do we want? Need versus want?

b) Are all water uses being adequately administered? Ignoring the facts doesn't change the facts.
    i) Un-replaced out-of-priority depletions
        (1) Exempt wells
        (2) Pre-1981 gravel pits
    ii) Unknown out-of-priority diversions
    iii) Expanded irrigated acreage
    iv) Irrigation efficiency improvements
    v) Designated ground water basins

5) Future water supply and demand strategies
    a) Managing supply (input)
        i) New water supply
            (1) What about future imported water projects? What will be the ultimate factors to build a project? Cost of water? Cost of energy? Cost of infrastructure? Socioeconomic costs? Political costs? Legal constraints?
        ii) Agricultural to urban transfers
    b) Managing demand (output)
        i) Conservation
        ii) More efficient use of existing supplies
        iii) Population growth controls?
        iv) Limit energy demand?