

GROUP 3: “COMING TO OUR SENSES”

Scarce water /scarce energy

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Indicators for scarce/expensive water:

- The cost of everything has gone up: consumer goods, services, etc
- Development and population growth is restricted
- Population/development is more compact (through zoning, etc) (the group was not in agreement on this)
 - Urban, less rural
 - High density, vertical cities
 - Modular planning
 - Abandoned infrastructure
- Population exodus from area
- Less food production
- Use of alternative energies has increased
- Total paradigm shift, we have completely reexamined our relationship to water, how we produce and use it
- There is much more social and political instability
- Agriculture is throttled
- Pumping water is less feasible
- Food shortages
- The gap between the rich and the poor has widened
- There is technological innovation
- Mixed environmental impacts
 - Environment is breaking down; or
 - Environment is in recovery
- Economic downturn/depression
- Genetic improvements to crops
- More small, local farmers
- Increased awareness of population’s impact
- We are more self-reliant; smaller communities, more local
- More community connectivity; in-person and electronic
- Water rights are consolidated
 - Water markets
 - Fewer water rights holders
 - Transfer rural/urban
 - More contention
- Innovative water uses; increased efficiency
 - Reprioritize water uses: toilet flushing, survival needs, recycle/conserve
- More competition for water use
 - Junior users cut out
- Going out of business
- Political upheaval
 - End of junior/senior rights concept

- Constitutional changes
- Centralized control
 - Water rights holders have increased control and influence
- Dramatic changes to public and private landscapes: lawns, parks, golf courses, etc
- Acre foot of water costs \$1,000 or more
- Piped rivers
- Cistern in every backyard
- Pueblos have more water rights than others and are selling water
- More recharge/dams
- Middle Rio Grande adjudicated
- We're importing water
- Ability to pay is not the only criteria for water rights
- Dual/triple/multiple systems: potable/non-potable
- Agricultural uses change, become more efficient; technological advances
- Increased contention between jurisdictions
- Per capita use is down
- Local food production increases; small, backyard farms
- Greenhouse development
- Restrictions on digging wells; metering well water
- Scarce water could result from our decisions to maintain ecosystems; diverting water to restore ecosystems
- Substantial changes to diet
- Water use labels on products (how much water went into the production)
- Increased risk of polluted water
- More decoupling of water and energy
- Increase in water shortage emergencies

Indicators for scarce/expensive energy:

The group identified a number of energy indicators that would also be water indicators as copied from above.

- The cost of everything has gone up: consumer goods, services, etc, as a result of higher transportation costs
- Transportation is prohibitive
 - Use of transit and bicycles has increased
 - People and goods travel shorter distances
- Food shortages due to logistics of transportation
- Development and population growth is restricted
- Population/development is more compact (through zoning, etc)
 - Urban, less rural
 - High density, vertical cities
 - Modular planning
 - Abandoned infrastructure
- Population exodus from area
- Less food production
- The air is cleaner; population is healthier

- Use of alternative energies has increased
- Families are smaller (the group was not in agreement on this)
- There are fewer jobs
- Our energy footprint is smaller
- Total paradigm shift, we have completely reexamined our relationship to energy, how we produce and use it
- It is cheaper to live in subdivisions
- More energy is locally generated; increased incentive to produce our own energy
- There is pushback from energy providers; they benefit from the higher prices
- There is much more social and political instability
- Agriculture is throttled
- Pumping water is less feasible
- The dollar is less valuable; currency exchange rates
- The gap between the rich and the poor has widened
- There is technological innovation
- Mixed environmental impacts
- Social restructuring
- Economic downturn/depression
 - Global economy shrinks
- More efficient use of energy/conservation
- Genetic improvements to crops
- More small, local farmers
- Increased awareness of population's impact
- We are more self-reliant; smaller communities, more local
- Mix of extremes
- More community connectivity; in-person and electronic
- Shifting use of energy; fewer luxury items and leisure activities
- Diverse energy production
- Continued use of coal
- Higher crime due to density of population
- Losing small farms
- Importing more food
- Energy use labels on products (how much energy went into the production)

All of the above indicators of scarce/expensive energy and water are dependent on our preparedness as well as outside influences, such as other states using water before it gets here, etc...

What the 2025 world looks like:

- Everything changes. History reverses itself. Population declines and reverts back to basic survival. Harvests are half of what they were in past years. There are no funds for infrastructure maintenance.
- More government intrusion in private life.

- Energy and water scarcity have generated numerous innovative technologies; conservation-minded development policies and have changed citizen behavior. While lifestyles have had to change, this boring, arid region is still a wonderful place to live.
- The world is more hostile and isolationist with major political upheavals that lead to centralized controls on almost everything. There is more disparity between the rich and poor, especially nations, which reverses the shrinkage of recent decades.
- Energy is scarce, which effects human life. To address the scarcity, we need to change our way of life. Water rights have to be reprioritized.
- Our resources of both energy and water are inadequate for the indefinite use of either or both. Major changes in our use and valuation of both are needed to reduce the demand. Technological innovation will occur, but will be inadequate. Personal, public and business use must be reduced.

Headlines along the way: from present to 2025:

- Obama rejects Keystone pipeline
- Conservation-minded residents find happiness in boring, arid Southwest
- Regional community conversations underway in Middle Rio Grande Valley
- Adjudication court invalidates traditional water rights
- Middle East cuts back on oil production/export
- Courts uphold EPA authority to register GHGs (6H6s?)
- Lost driver busted for third navigation waste violation
- Massive arctic oil spill shuts down exploration
- Feds order water use reductions due to Colorado River shortfall
- Investors flee nuclear stocks in wake of San Andreas power plant meltdown
- Southern Colorado river basin states (CO, AZ) place call on New Mexico water (Basis would be redistricting on 2020 census)
- Water is the new gold: prices top \$100,000/acre foot
- Albuquerque closes its last golf course
- Popular revolt against high prices for water and energy
- Solving the water and energy crisis locally
- Schools close across the state
- Quality of life has markedly decreased as a result of gluttonous consumption
- The rich get richer, and the poor get poorer
- Water authority GPCD drops to 95, Yuhas retires
- ABCWUA offers rebates for composting toilets
- The Rio Grande River has been downgraded to a large ditch
- People leaving New Mexico for lack of water and higher cost of living
- More former middle class people falling into the poverty class
- Severe drought reaches ninth consecutive year
- Texas sues to prevent Rio Grande ice harvesting
- Agricultural innovations produce economic and produce gains
- Navajo Nation sells/leases Colorado River water to Las Vegas. State of New Mexico OSE protests impacts
- Cities overwhelm farmers in vote to repeal water rights priorities system

- Whiskey for drinking; water for fighting; lots of social unrest
- Cattle industry dies as demand for beef drops
- Population declines over past 10 years
- Global conference fixes prices of gold (2025)
- Increased awareness of resource overuse has resulted in conservation and innovation
- Brownouts, blackouts and water shortage paralyze city
- What good are water rights if there's no water?
- Infant mortality rate on the rise