

CITY/COUNTY WATER AND WASTEWATER OVERSIGHT COMMITTEE
STATEMENTS ON SUSTAINABILITY

Updated JANUARY 10, 2009

SUSTAINABILITY BY JOHN CARLSON

SUSTAINABILITY AS TO WATER IN PIMA CO ENVIRONS TO ME MEANS ENOUGH WATER FOR NOW TO MEET THE PROJECTED POPULATION OVER SAY THE NEXT 20 TO 30 YRS THROUGH CONSERVATION, RE -TREATMENT OF SEWAGE, AND 'NEW' SOURCES. OVER THE LONGER PERIOD OF SAY 30 TO 50 YRS., A NEW ASSESSMENT OF ALL FACTORS ABOVE IN SAY 10 TO 20 YRS, AGAIN TO ESTIMATE IS THERE ENOUGH TO SUSTAIN THE NEWLY PROJECTED POPULATION FOR SEVERAL DECADES. IF THE ESTIMATE IS THAT AFTER 'X' YRS, THERE IS NOT ENOUGH, THEN WE FACE A DECISION ON SAY THE HUGE COST OF DESALIZATION/IMPORT OF SEA WATER WITH THE LONG LEAD CONSTRUCTION TIMING OR RESTRICTION OF POULATION GROWTH BY WHAT EVER MEANS..

DEFINITION OF SUSTAINABILITY BY ROB KULAKOFSKY

Sustainability of water consumption is an oxymoron if not associated with the following four criteria:

- Rate of resource use
- Number of resource users
- Length of time the resource will be used
- Basic human right to safe potable water

The fourth criterion in the list is the most important. However, it will require a paradigm shift in the way our society considers water use. Water is currently considered a commodity to be sold and distributed, often at a profit. Instead, it should be treated as one of the essential foundations of life. It is my opinion that clean water, along with unpolluted air, nutritious food and decent shelter should be considered basic human rights, not commodities available only to those who can best afford them.

When considering sustainability within this context, conservation becomes a matter of moral necessity. Continued expansion of water use over time, without a clear and honest plan of where the water is coming from is not only foolhardy, it is immoral.

The triple bottom line approach has no imperative for the human right to clean potable water. Instead, it contains a nebulous “quality of life” consideration as a part of societal needs.

The triple bottom line approach is the perspective of industry and business. Therefore, it fails to honestly deal with the obvious, but rarely discussed issue of population growth. Increasing population may be good for business in creating a larger consumer base, but population growth also puts an ever tighter squeeze on resources.

In conclusion, there is no such thing as sustainability unless we put the basic human right to clean, potable water as the number one priority. Because nothing is sustainable forever, we must be completely honest as to the first three tiers:

- Rate of resource use
- Number of resource users
- Length of time the resource will be used

SUSTAINABILITY DEFINED BY BRUCE GUNGLE

It is important to understand the difference between “safe-yield” and “sustainable yield” with regard to groundwater supplies in the arid basins of the southwestern United States. In the Arizona ground-water code, “safe-yield” is defined as a long-term balance between ground-water withdrawals and natural and artificial recharge in an Active Management Area (AMA). In other words, the water pumped out of the regional aquifer in an AMA must be balanced, at a minimum, by water that enters the regional aquifer. However, this does not take into account the water needs of groundwater dependent riparian systems, nor the additional negative effects on the social and economic structures of the human community due to ground-water pumping. Examples of the latter might include lost tourist revenue due to the loss of riparian areas and thus species dependent upon them, and damage to buildings and infrastructure due to subsidence caused by groundwater pumping in the basin center while recharge only occurs on the perimeter.

“Sustainability” as defined by Alley, et al. (1999) is, “...managing [ground water] in a way that can be maintained for an indefinite period of time, without causing unacceptable environmental, economic, or social consequences.” Assuming that the destruction of riparian areas is an unacceptable consequence to the citizens of eastern Pima County, then simply replacing gallon-for-gallon the ground water pumped from an aquifer with natural and artificial recharge is not enough: safe-yield does not equal sustainable yield.

Why? Because in addition to ground-water pumping, the plants that comprise riparian systems also withdraw ground water that is then discharged to the atmosphere (evapotranspiration), plus ground water may also flow out of the basin through the subsurface. Because safe yield rules require that only the water pumped be replaced by recharge rather than the entire amount of water discharged from the ground-water system (i.e., water pumped *plus* natural withdrawals by plants *plus* any groundwater that naturally discharges from the ground-water basin), there is no water left over in the water budget for maintaining or rehabilitating riparian systems. By just meeting safe yield rules, then, any remaining ground-water dependent riparian systems in the Tucson AMA will eventually dry up and die, and previously lost riparian areas can never be resurrected. If Tucson Water and Pima County wish to truly achieve sustainable ground-water use in the Tucson AMA, it must be agreed that some amount of water beyond simple safe-yield quantities is to be included in the water budget for the maintenance of existing—and the resurrection of lost—ground-water dependent riparian systems.

Alley, W.M., Rielly, T.E., and Franke, O.L., 1999, Sustainability of ground-water resources: U.S. Geological Survey Circular 1186, 86 p.

ANOTHER STATEMENT ON SUSTAINABILITY BY BRUCE GUNGLE

Bruce Gungle
Committee Member

Below and also attached at the bottom of this document are definitions of "Sustainable Yield" and "Overdraft" used by the Upper San Pedro Partnership, a consortium of 21 local, State, and Federal agencies and private organizations whose collective goal is to ensure an adequate supply of water to meet the reasonable needs both of Sierra Vista Subwatershed residents and the San Pedro River. The Partnership was formerly recognized by Congress in 2004 and works with the Department of Interior (via the USGS) each year to report on progress made toward reaching sustainable yield in the Sierra Vista Subwatershed.

I forward the "Essential Definitions" from the 2006 report to you because it includes a definition of sustainability that draws a clear distinction between "sustainable" and "safe" yields, as well as considers the sustainability of the human community that also depends on ground water. It would seem that this might provide a useful starting point for the Committee's discussion of sustainability as it relates to the Tucson Basin and eastern Pima County.

Water Management of the Regional Aquifer in the Sierra Vista Subwatershed, Arizona—2006 Report to Congress



U.S. Department of the Interior

Prepared in consultation with the Secretaries of Agriculture and Defense and in cooperation with the Upper San Pedro Partnership in response to Public Law 108-136, Section 321



In the subwatershed, the San Pedro River flows perennially (all year) in some reaches and intermittently in others. The ecologic condition of the riparian forest directly depends on the presence of shallow ground water within the flood plain, whereas the SPRNCA's aquatic habitats are directly dependent on stretches of perennial streamflow. This hydrologic context depends on consistent ground-water flow from the regional aquifer system to the stream (Pool and Coes, 1999). The location of perennial streamflow is controlled by geology as well as by the amount and location of ground-water recharge and discharge. The primary perennial reach extends from about 7 miles south of the town of Charleston to 1 mile north of Charleston, where the USGS streamflow-gaging station, San Pedro River at Charleston (station number 09471000), is located.

For many of the above-mentioned reasons, the subwatershed has been the subject of substantial scientific study over the last 15 years. Some of these studies have been sponsored by the Partnership and will provide valuable information for Section 321 reporting.

Essential Definitions

Two essential terms, "sustainability" and "overdraft," were defined in the initial Section 321 report specifically with regard to the Sierra Vista Subwatershed. These definitions are reiterated here to provide context for the discussions that follow.

Sustainable Yield

The Partnership has adopted the general definition offered by Alley and others (1999) for sustainable yield, which is "...managing [ground water] in a way that can be maintained for an indefinite period of time, without causing unacceptable environmental, economic, or social consequences." Therefore, a sustainable level of ground-water pumping for the subwatershed could be an amount between zero and a level that arrests storage depletion, with the understanding that to call a level of use sustainable (other than zero) will entail some consequences at some point in the future. What consequences are unacceptable are not yet fully defined, but will be decided as a collective result of stakeholder discussion, debate, and consensus. The role for science is to frame the range of options within which a goal can be established and to describe and predict the consequences of a given level of pumping.

The essential goal in achieving sustainable yield is to ensure that water of sufficient quantity and quality is available for the subwatershed's social, economic, and environmental needs.

The Partnership has started to identify some specific elements of sustainable yield as shown in table 1. The ultimate definition of sustainability in numeric terms will likely be a complex consideration of many factors. The Partnership will be considering these factors in coming years as studies are completed and additional tools become available. An example of a complicating factor is that effects of pumping on flow in the river will vary through time, and as a function of spatial location in the subwatershed.

Table 1. Initial criteria for sustainable yield

Social and economic	Environmental
<ul style="list-style-type: none"> • Sufficient water quantity for a growing human population • Fort Huachuca remains operational and able to assume new missions unless for reasons unrelated to water • Cost of living, specifically affordable housing and the cost of doing business, remains within the means of a diverse population • Maintain local participation in water management • Sustain water quality 	<ul style="list-style-type: none"> • Ground-water levels in alluvial aquifer within the SPRNCA maintained • Stream base flow and flood flows maintained • Accrete aquifer storage • Riparian habitat and ecologic diversity maintained • Water quality sustained in SPRNCA • Overall riparian condition maintained • Springs in the SPRNCA continue to flow

It is important to note that the term “safe yield” is not interchangeable with “sustainable yield” in this context. The State of Arizona defines safe yield as “a water management goal which attempts to achieve and thereafter maintain a long-term balance between the annual amount of groundwater withdrawn...and the annual amount of natural and artificial recharge...(A.R.S. § 45-562 (A)).” Of key importance to the Sierra Vista Subwatershed is that safe yield does not consider the water required to sustain riparian ecosystems and streamflow and therefore is not used by the Partnership as a management concept.

Overdraft

The definition for overdraft used in this report is: ground-water consumption in excess of sustainable yield. This is consistent with the concept that pumping beyond a sustainable level is “over pumping.”

SUSTAINABILITY BY VINCE VASQUEZ

1. Water management must be based on a participatory approach, involving a balance of technical expertise and expression of community values with an emphasis on consensus building between those representing current and future users, planners, and policy-makers at all levels within the region.
2. All water providers, users, and uses in the metropolitan area are connected by reliance on regional groundwater supplies to meet annual demand and provide a buffer against drought. Water planning should be conducted at the basin scale (defined as the Tucson AMA) and should involve all users.
3. Support shared use of community infrastructure through cost-effective wheeling agreements for delivery of effluent, surface water, imported groundwater, and/or stored renewable supplies to achieve greater integration, reliability, flexibility and reliance on renewable supplies throughout the region.
4. Collectively maximize purchase and underground storage of additional surface water and/or imported groundwater supplies, augmenting local groundwater supplies to further insulate the region from cyclical weather patterns.
5. All local water supplies—groundwater, CAP, other surface water, and effluent—should be cooperatively used for the maximum economic, social, and environmental net benefit of the region expressed in monetized or quantifiable terms.
6. All work products and policies of a local water planning process must be consistent with applicable state laws and policies. In circumstances where local conditions or values conflict with state law and/or policy, the process should seek the appropriate amendments at the state-level.
7. Price signals are an important tool for achieving efficient allocation of water resources. Current retail water rates do not match claims of scarcity and conflict with cultural messages urging conservation.
8. Promote policies that facilitate allocation or reallocation of water resources to highest value uses that yield the greatest economic, social, and environmental net benefit for the region expressed in monetized or quantifiable terms.
9. Commit to understanding the fundamental relationship between water resources and regional economic development in the form of job retention and creation, and the general prosperity of citizens.
10. Promote community-wide conservation goals and standards that maximize acre-feet saved per community dollar spent, focusing policies and finite economic resources on uses/users with the greatest conservation potential.

11. Evaluate proven conservation measures as an alternative to supply acquisition, justifying investment decisions on alternatives that yield the greatest economic, social, and environmental net benefit for the region expressed in monetized or quantifiable terms.
12. Concerns regarding evolving and/or uncertain conditions should be addressed through iterative risk assessments and decision-making processes, systematically reevaluating risk according to potential financial impact to the region and probability of occurrence.
13. A Sustainable Water Resource Management Plan for the region is incomplete without a Budget and Implementation Strategy (Fiscal and Physical). The region must move away from the “plan and pay as we go” approach and develop flexible long-range plans and funding mechanisms to avoid the potential for future crisis management situations.

WATER SUSTAINABILITY

COMMENTS BY JIM BARRY

According to Wikipedia, sustainability can be defined in three ways:

“In an **ecological context**, sustainability is defined as the ability of an ecosystem to maintain ecological processes, functions, biodiversity and productivity into the future.¹ In a **social context**, sustainability is expressed as meeting the needs of the present without compromising the ability of future generations to meet their own needs. When applied in an **economic context**, a business is sustainable if it has adapted its practices for the use of renewable resources and is accountable for the environmental impacts of its activities.”

Based on the committee’s presentations and discussions to date, I come away with some tentative impressions of what sustainability, and water sustainability in particular, might mean.

- Sustainability connotes two sides of the same, or at least a similar, coin. On one side of the coin is the undeniable need to recognize and live within restraints, for our own sake and for the sake of our children and future generations. We cannot squander scarce resources living for today, thereby impoverishing the future. On the other side of the coin is a mandate to empower our children and future generations, providing them with the tools to define their lives in a sustainable manner as they choose to define that.
- Water sustainability must provide for the rights and needs of both people who do and will live here and of the environment within which we all do and will live.
- Water sustainability is a principle and a challenge that evolves overtime, changing in context and intensity with each generation. While some principles, such as restraint and empowerment, are undoubtedly enduring, no generation aspire to, or be able, to impose an inflexible, unchanging definition of sustainability on future generations. That would be the antithesis of sustainability.
- For those of us worrying about water sustainability in our little part of the world in this time of our of responsibility, we must acknowledge some significant facts and construct our slice of sustainability around them:
 - Population in this area will continue to grow, probably significantly. While there are undoubtedly limits to how much this area will grow, those limits are not likely to be reached in our life time. Most of the new population is likely to be new-comers rather than our children. Urban form, including where new populations will locate, are equally important, if not more important, to our immediate water sustainability challenges than the population growth numbers.

- While our existing water resources are sufficient for the immediate term, we must acknowledge that these current resources are both finite and uncertain. The Colorado River water is oversubscribed, with continued growth, drought, and climate change threatening the carrying capacity of the basin. While Tucson Water is currently at safe yield with respect to the aquifer, the target of safe yield for the Tucson AMA looms in 2025. We must begin now to plan for diversifying our renewable water supplies, to ensure against uncertainties for our current population and to provide for the growth that will come. New water resources must be renewable.
- Regarding our present and future water sustainability, we must distinguish clearly between those decisions that we in Tucson and Pima County can control and those decisions emanating from outside of our region and outside of our direct control. We must be vigilant to what is happening regarding growth and water - in Arizona, especially in Maricopa County and Pinal County; within the Colorado River basin; within the Sun Corridor and the so-called “Inland Empire” from Sacramento down through Guaymas; and at the national level.
- There are significant costs for our water and wastewater infrastructure looming. Most of the currently identified capital costs are required for securing our full Colorado River water allotment and providing the infrastructure to secure it and deliver it; for upgrading our wastewater treatment facilities to meet new federal and state discharge limits; and for maintaining, upgrading and rehabilitating existing infrastructure. In the not too distant future, when we are acquiring new renewable water sources, we are likely to discover that they will be significantly more expensive than Colorado River water and pumping groundwater.

I emphasize that these thoughts are **tentative**. I am open to altering, strengthening, or even discarding some or all of my thoughts as I listen to what the rest of the committee has to say.

Joint City/County Water and Wastewater Study Sustainability Themes

By Bob Cook, December 29, 2008

Overarching Principles

- At its base, sustainability is the capacity to continue a desired condition or process either social, ecological or both. Resiliency is the ability of a system to adjust its configuration and function under disturbance. Both concepts are important as we seek to ensure an adequate and unbroken supply of high quality municipal water to area residents and businesses and an effective and safe wastewater system which can function under changing conditions.
- Sustainability must be informed by and integrated with natural systems. All life, including humans and human societies are embedded in natural systems – the ecological context. Human economies are dependent on natural limits of resource availability and the capacities of ecosystems to absorb wastes and convert them to useful resources. Humanity is reaching the limits of peak extraction of many resources including non-renewable fossil fuels – the energy that powers global civilization. Ecosystem damage is increasing, leading to species extinction and dangerous changes in the climate system.
- The human sustainability challenge has two parts: 1) Restoring the regenerative capacities of natural ecosystems. 2) Transforming the economy and built-environment based on regenerative design principles and replacement of fossil fuel-based energy systems with renewable energy systems.
- The foundation for sustainable principles and practices must be holistic, including triple bottom line accounting, diversity, importance of relationships, and integration of parts. Sustainability is inclusive of all dimensions of life and as such constitutes a cultural shift in world view and governing framework. Sustainability is comprehensive, encompassing all five domains of reality: material, economic, biologic, social, and spiritual.
- The transition to sustainability is necessary, possible and desirable. Green is important but not sufficient for achieving sustainability. Reducing resource use and pollution is green. Creating, integrating, and maintaining regenerative systems in relationship to nature is sustainable.
- At a pragmatic level, considering sustainability entails the answering these bounding questions: “of what, for whom, for how long, and at what cost?” So understanding our values is just as important as understanding nature. This leads to a synthesis definition informed by both ecological and social science: “Sustainability is maintaining, or fostering the development of the systemic contexts including both ecosystems and the built environment that produce the goods, services, and amenities that people need or value, at an acceptable cost for as long as they are needed or valued. “

Planning and Decision Making Principles

A good sustainable water plan:

- Begins with reviewing the state of the art. Best global practices include integrated resource management combined with 1) science and value-based assessment and stakeholder processes; 2) legal rights and protections for people and ecosystems; and 3) commitment to sustainability.
- Addresses all major environmental, economic, and social uncertainties.
- Is adaptive to emerging reality.
- Is flexible regarding appropriate configuration and scale of need.
- Accounts for both water and energy costs in the production and delivery of water and conveyance of wastewater.
- Adopts the uncertainty principle under conditions where relevant information is difficult to obtain or certainty about data is limited.
- Prioritizes current deficiencies (both capital and deferred maintenance) over new expansion to serve future needs.
- Allocates the infrastructure costs of new growth to new populations.
- Is responsive to all users of water in our region including ecosystem needs.
- Ensures a sustainable balance of all infrastructure needs by determining acceptable costs and choosing affordable solutions.
- Involves peer-review processes to ensure that Plan benefits from proven best practices.

Policy Recommendations

1. Water should be priced higher to encourage conservative use. The preferred business model should accomplish the goal of reducing per capita water use and be profitable for water providers.
2. Water subsidies should be granted for valued outcomes including low-income user access, community and backyard food gardens, and restoring eco-systems.
3. All alternative water supply techniques (including conservation) should be analyzed and compared using “apples to apples” metrics. For example, What are the total costs of importing new water supplies versus building local rainwater and stormwater

harvesting infrastructures and systems? We do not have or have not seen these analyses yet.

4. A range of alternatives have been presented for planning our future water supply but not so with wastewater and reclaimed systems. We have been shown an “all or nothing” masterplan for a massive centralized wastewater system projected to cost more than \$1billion, the largest single infrastructure project ever proposed in our history. Are there decentralized options for expanding the wastewater system? What is the rationale to scale this project to serve inflated estimates of new people in 2030 when population growth is now slowing? Can the EPA regulatory requirements be met by alternative, more affordable systems, not just the one proposed plan? Can rainwater be harvested, stored and used to flush the conveyance system when needed, thus removing a barrier to wide-scale implementation of grey water systems? Use of grey water reduces the capacity requirements for potable water currently used for outside irrigation. For the wastewater and reclaimed systems, we also need good “apples to apples” analyses to compare alternatives.

5. A sustainable water/wastewater system should be designed to meet the regional needs of the existing one million population. Any further public subsidies or infrastructure revenues paid for by current residents should be considered economic development subsidies along with all other economic development possibilities. Decisions regarding economic development subsidies should be based on best projected return on investment as indicated by comparative analyses of total cost/benefits. The costs of any other expansions of public infrastructure and services should be born by the new populations.

6. We really need to face the music regarding growth. In the context of the emerging sustainability crises, there is very little probability that the growth patterns of the past twenty years will repeat. Redevelopment should become more important than new development. Outward sprawl will diminish and new development should increasingly be more compact, resource-efficient, mixed-use, pedestrian-scale, planned communities served by electric transit.

Observations

The context for planning a sustainable water/wastewater system for metro Tucson’s future is rapidly changing as a consequence both of the economic meltdown and the recent election of a new Administration and Congress. On the one hand, economic growth is significantly slowing almost everywhere and on the other, a new policy priority is emerging which calls for massive investments in infrastructure projects to put people back to work. The question remains what projects would best accomplish the goals of building sustainable public infrastructures and still be affordable under emerging fiscal constraints.

So what is the sustainable path forward?

Is it about somehow getting back to “normal”? Is it getting our population growth-driven economy “back on track”? Is it merely working more efficiently and effectively as the regional business coalition suggests? But can we have a sustainable water plan if everything else is unsustainable?

First let's start by looking at what the City and the County already endorse in their respective sustainability plans -- the most often- adopted definition: “Sustainability is meeting the needs of the present without compromising the ability of future generations to meet their own needs.” What is important about this definition is that we have to consider the needs of the future. What is also productive is that considering this definition leads people to the logical conclusion that almost everything we do is fundamentally unsustainable because we are depleting non-renewable resources at irreplaceable rates everyday. While this definition may be effective in raising awareness about unsustainability, it provides no guidance or tools to move forward.

Sustainability means “living within your means”. It involves recognizing that there are no “unlimited” resources and that simply because we have the ability to extract natural resources does not mean that it is prudent or wise to do so. Mass consumerism, planned obsolescence and being a disposable society are not compatible with sustainability. In order to become a sustainable society, we need to consume less and share more. And we have to learn how to work together toward a common vision or we risk encouraging others to take whatever they can from the common and create non-sustainable conditions for all of us.

With regard to water, sustainability requires us to prioritize our uses, making potable, affordable water for essential human uses a “right” and making water available for conservation a requirement. We need to create policies that consider the regional impacts of water use without ignoring or sacrificing the localized impacts (such as springs drying up or surface waters disappearing). I do not believe that we have a sustainable community in our current state. Technologically intricate and hugely expensive solutions for providing “adequate water” will not make us sustainable if we continue to use more water than is replenished. In the long run, conservation does little more than postpone the inevitable demise of our desert culture if it is coupled with unbridled growth and consumption.

SUSTAINABILITY

By Marcelino Flores

A sustainable water population starts with a conscious effort to balance effective and efficient use of water resources in an equitable manner. Such an effort begins with a commonly accepted direction established by stakeholders that balances short-term visible outcomes and the development of long term policies that protect individual rights. A truly balanced approach also recognizes the needs and concerns of unrepresented stakeholders such as future residents and the environment.

This should result in the development of policy that enables both demand-side and supply-side strategies that continue and improve the quality of life for residents. Factors affecting the rate of growth and where it occurs, such as population trends and environmental issues, are important considerations as well.

The success of any effort toward sustainability will be determined by visible projects, pragmatic policies, and innovative partnerships established to optimize efficiency, effectiveness, and equity.

A sustainable water population statement should be scalable both in area and time-scale. Some preliminary areas of commonality also include:

- Acknowledge that there are limited resources;
- Recognize and calculate the environmental need for water;
- Discover analytic optimization tools, visioning, and scenario exercises that consider rate of consumption, number of consumers, etc.;
- Design a flexible values-based process;
- Present economic, quality-of-life, and other analytically based criteria for consideration;
- Monitor, correct, and redirect to ensure efficient, effective, and equitable use of resources.

Let us do what we can with what we have. Knowing that what we have is consumed.

TINA'S SUSTAINABILITY STATEMENT

With apologies to author Michael Pollan (“The Omnivore’s Dilemma”) and to Bonnie Poulos’ statement, I’ve co-opted Pollan’s seven-word dictum (“eat food, not too much, mostly plants”) and a favorite bumper sticker (“consume less, share more”) to come up my sustainability statement:

Use water, not too much, share it with others and the environment.

What I like about this little dictum is that it acknowledges that we all have a stake in achieving Tucson’s and the region’s sustainable water future. It acknowledges that using water is a basic right, but only to a certain point. It acknowledges that the environment and others beside ourselves also have a right to use water. Importantly, it acknowledges that there is a point beyond which we, individually and communally, should not go when using water.

Of course, there are elements not included in this little sentence that are important to consider as well. The idea of flexibility or adaptation in managing our supplies. The idea of unpredictable or unknowable changes in climate that have local and regional effects. The idea of cost and legal considerations in our policies, priorities, and uses. The excellent report prepared by Margot Garcia and Dale Keyes summarizing the public’s input on defining sustainability provides a lot of meaty ideas, principles, observations, and even some recommendations that are worth chewing on (sorry to continue to the ‘food’ theme!). In its totality, this report gives one a good sense that while there’s no one pat definition of sustainability that will work for everyone, there is general consensus that there are boundaries to what should and shouldn’t be part of the region’s sustainable water future.

And while it may only be in hindsight that future generations will determine if our water policies and practices are truly sustainable, having one simple sentence guideline to remind me how I need to think about achieving balance in our community’s water needs, supplies, and uses is a good start.