

## TRANSCRIPT OF OCTOBER 29, 2008

### List of Presenters:

1. Carol West
2. Dorothy O'Brien representing the Town of Marana
3. Randy Serallio representing the Center for Biological Diversity
4. Trevor Hare representing Sky Island Alliance
5. Jennifer Neely representing the Sierra Club Rincon Group
6. Christine Cotton representing Malcom- Pirnie
7. Alice Roe
8. Amy McCoy representing the Sonoran Institute
9. William Crosby
10. Donna Branch- Gilby representing Milgro Co- Housing
11. Nancy Freeman representing Stormwater Awareness League
12. Michael McNulty representing Arizona Builders' Alliance, the Alliance of Construction Trades, the Marana Chamber of Commerce, the Metropolitan Pima Alliance, the Northern Pima County Chamber of Commerce, Safe and Sensible Water Committee, the Southern Arizona Homebuilders, the Southern Arizona Leadership Council, the Tucson Association of Realtors, the Tucson Metropolitan Chamber of Commerce, and the Tucson Utility Contractors' Association.
13. Beryl Baker
14. Charles Cole
15. Tracy Williams representing Neighborhood Infill Coalition
16. Leslie Leberti representing the City of Tucson
17. Tedra Fox representing Pima County

CHAIRMAN JIM BARRY: All right. We have a quorum, and I will call the meeting of October 29<sup>th</sup> to order. Everybody, can we get started, please?

Do we have Minutes from the last meeting?

UNIDENTIFIED FEMALE: We do. They're just not physically here, but they (inaudible).

CHAIRMAN JIM BARRY: Well, did - we - we emailed the Minutes out. Did anybody look at the Minutes? Did people -

MEMBER JOHN CARLSON: I'll move they're accepted.

UNIDENTIFIED MEMBER: Second.

CHAIRMAN JIM BARRY: Second. Any comments on it?

(No response.)

CHAIRMAN JIM BARRY: Anybody opposed?

(No response.)

CHAIRMAN JIM BARRY: Done. Does anybody have any - on the Committee have any announcements?

MEMBER MARCELINO FLORES: Here.

CHAIRMAN JIM BARRY: Marcelino?

MEMBER MARCELINO FLORES: Mr. Chair, I just wanted to make mention of a meeting that's occurring on Monday, the Groundwater Users' Advisory Council's going to meeting at the - the Active Management Area. Oh, I don't have the address here. 400 West Congress, 9:30 a.m. Among the Agenda is information about the Operating Plan for the Water Banking Authority, and

International Policy Advisory Group that's going to be updating on issues on M&I for the Tucson AMA. So, I'll - I'll send - forward more information by email so that can be distributed if - if it has not already been replicated.

Another discussion, symposium that's occurring in November, November 18<sup>th</sup> to the 20<sup>th</sup>, is titled, "Coming Together, Coordination of Science and Restoration Activities for the Colorado River Ecosystem," and that's - that's a symposium that's occurring in Scottsdale the 18<sup>th</sup> through the 20<sup>th</sup>. And, again, I'll - I'll forward the information if it's - again, probably - probably reproducing information that's - Staff may have, but I just wanted to - to make mention of that.

CHAIRMAN JIM BARRY: Okay. Thank you, Marcelino. Anybody else?

(No response.)

CHAIRMAN JIM BARRY: Let me do a couple things. Remind you this is the - you all are going to feel badly about this, but this is the last of our weekly meetings. Our next meeting is Saturday, November 15<sup>th</sup>, over at the Doubletree starting at 9:00. As of tonight, including tonight, we will have met 20 times since April 9<sup>th</sup>, so that's quite impressive, and I want to congratulate the audience first for listening to us, the Committee and the Staff and everybody that presented.

This is a transcript of the meetings, 564 pages, not including last week and tonight. We've produced an awful lot of information, And, when we get into the report writing, we've got some responsibilities to try to make sense of that for everybody. But, we've done a lot of work, Staff has done a lot of work, the Committee has - has been very helpful to us, and - and we appreciate that.

So, we are moving on then to - is there anything else I'm supposed to announce? You have anything? No. Oh -

MEMBER JOHN CARLSON: What are the Doubletree hours again?

CHAIRMAN JIM BARRY: 4:15 in the morning until midnight. Okay. I lied.

MEMBER JOHN CARLSON: Filipino time?

CHAIRMAN JIM BARRY: 9:00 until 3:00.

MEMBER JOHN CARLSON: Okay.

CHAIRMAN JIM BARRY: All right. Let me say something - and Melaney's right - people who don't speak, or don't get a chance to speak, can still submit written comments on sustainability. We will keep - we haven't cleared this with Dale and Margot, but we - we will keep the deadline for written statements open until November 7<sup>th</sup>. And the Committee - we've asked the Committee, all to submit statements, but one - one way

that we might want to do this is - is - is, rather than submitting now, listen to what people are saying and read the written stuff and we could give ourselves until that November 15<sup>th</sup> meeting, and we'll set aside time November 15<sup>th</sup> to discuss sustainability, and maybe the Committee can - can have until then to submit their comments, or to revise comments that they've already submitted. So, for - for everybody until November 7<sup>th</sup>, we'll keep that period open for getting written comments, and we - we may want to give ourselves until that meeting on the 15<sup>th</sup> to be able to make Committee comments. John?

MEMBER JOHN CARLSON: You - are we trying to draft a definition of sustainability, or is it to be so broad - coming from the Committee, or are we to have two or three of 'em, or - or what are we trying to do with this? You ask us for our thoughts and we put 'em out, so what happens to 'em?

CHAIRMAN JIM BARRY: Well, I - I would think that we will have a report from Dale and Margot on what we heard from the - from the community -

MEMBER JOHN CARLSON: Okay. And that -

CHAIRMAN JIM BARRY: - and we will -

MEMBER JOHN CARLSON: - that's in a summary type of thing?

CHAIRMAN JIM BARRY: Right. And we will have from us our - our comments, and we will have from the City and the County some presentations of what they're doing, and I think the best we can do in Phase I is try to synthesize all of that and notice the commonalities and notice any differences that there might be, and look into Phase II for the Committee to start trying to set its own parameters on what sustainability might mean.

MEMBER JOHN CARLSON: What - and what's the definition of sustainability? We're not going to try to hone in on that too much right now?

CHAIRMAN JIM BARRY: I don't think that we, as a Committee, in the time and the resources we have available can do it.

MEMBER JOHN CARLSON: I'm not to argue, I'm with you. I just want to know -

CHAIRMAN JIM BARRY: Yeah.

MEMBER JOHN CARLSON: - what we're - we're not headed. Okay. Good.

CHAIRMAN JIM BARRY: Okay.

MEMBER JOHN CARLSON: I'll sleep late that morning.

CHAIRMAN JIM BARRY: I'll remember to call you. All right. Given that little soliloquy and conversations, anybody want to ask anything about sustainability?

(No response.)

CHAIRMAN JIM BARRY: All right. I - I made these comments the last time, but we have new people in the audience, and let me remind people, by the way, I've looked through some of these transcripts and there are places in there where it says "inaudible," and that's because people didn't speak into a microphone. So, if the Committee is talking, make sure you got a mic in front of you and all of the comments that - that are made, make sure you're saying 'em into the microphone so that we can record 'em.

From June 11<sup>th</sup> until the 15<sup>th</sup>, the Committee received presentations from Staff and outside experts on a variety of topics and, last Wednesday and tonight, what the Committee is doing is inviting presentations from the public on an issue that's really central to the - what the Board and the Mayor and Council wanted this Committee to do and the study to do, and that is: What is the sustainable water future for us? For Tucson, for all of Pima County, for the Tucson Active Management Area.

Sustainability, in terms of sequence, is the last topic that we're looking at, but it is first - it's certainly not the least important. And probably, as we get into Phase II, we will start looking at sustainability as a first principle by which we look at - at the - the information and the topics to come to us; it will be a - central to the common facts and the context that we want to - that we want to be able to present.

We want to hear from the community on how you define and conceive of sustainability. We have issued an open-ended invitation to present your views of sustainability in whatever structure and words are most appropriate to you. These presentations will help the Committee as we transition into Phase II. We expect to hear a diversity of viewpoints and to help with the process.

To enhance the community's ability - the Committee's ability - the Committee's abil- - I'm sorry - the Committee's ability to hear what you're saying, we've asked to people to help us, and we have Margot Garcia and Dale Keyes, who you will see writing down in the flip charts comments as you - as you present 'em to - keeping a record. And we have asked them to - to then take all of the verbal comments we get - last Wednesday and tonight, and all of the written comments that we get, and - and synthesize it into some sort of - of meaningful report that they will make to the Committee on what the community thinks about sustainability and, hopefully, identifying where there are common elements, as well as where there are differences. And those will be important then to how we proceed with - with our understanding. Now, both Dale and Margot have extensive experience with this kind of work and - and we're lucky that

they're both retired and living in Tucson at the moment and have the freedom to help us out at this time.

Just a couple of ground rules. We sent out the present- - several invitations, and a number of people have signed up. We have asked that you keep your comments to a maximum of five minutes; and, with the Committee's approval, I will try to enforce that. Now, we have one exception that I've agreed to tonight, Southern Arizona Leadership Conference and ten other organizations said they wanted to individually make presentations, but they made a proposal that I couldn't turn down. They said, "Let us combine the 11 into one presentation, which will be presented by Michael McNulty, but give us 15 minutes." So, rather than having 11 presentations of 55 minutes, I agreed to let them have maybe 15 minutes to summarize the - the comments on the 11 people; that's the only offer I ever got that way. If any other groups had - had done it, that would've been great and we've would've - we would've done that also. But, short of that, we ask you to keep to five minutes.

And we have a list of people, but let me ask: Is there anybody in the audience who wants to speak who has not given us your name already? Okay. One, two. We - we are going to go with the people who have signed up already, because they responded to the invitation, and if we can get to you in - in - in two hours, great; if not, when we're getting to - towards the end, if the Committee wants to go longer than 8:00 o'clock, then maybe we can extend it.

If we have time, we've set aside time for the City and the County to talk, give us a short presentation on what they're doing about sustainability. If we don't have time, they won't make those presentations. Tracy Williams has asked to speak last and - and we will - we will do that.

So, with no further ado, let me start by calling Rob.

MEMBER ROB KULAKOFSKY: In case someone doesn't have a chance to finish what they have to say, or don't have a chance to get up and speak to us, I want you to know that we will accept written comments -

CHAIRMAN JIM BARRY: Oh, absolutely.

MEMBER ROB KULAKOFSKY: - and even if you are coming up to speak before us, we really appreciate written comments, because then we can sit down and look through them thoroughly instead of trying to get notes down, so I just want to mention that.

CHAIRMAN JIM BARRY: Thank you. Good point. Okay.

I want to start to Carol West, former Council member.

**Presenter # 1**  
**Carol West**

CAROL WEST: I'll save Dale some time, I - I will give you a copy of my testimony. I want to thank you for allowing us to speak this evening and also thank you to this Task Force because you've been working hard over the last many months. I'm here representing myself this evening as a consumer of water in the Tucson Water and Pima County Wastewater Service Area.

When I was preparing for this, I remember two quotes from people in our past: Senator Ben Wade, Chair of the U.S. Senate Committee on Territories in 1866 said, "Arizona is like hell; it lacks water and good society." The other better known expression came reportedly from Ben Franklin, "When the well runs dry, we know the worth of water," and that is probably where we are today.

The other better - excuse me - sustainability is an important issue. I question whether we can really scientifically tell how much groundwater we have; that is one of the reasons I think we need to have stronger conservation and water harvesting programs. At the same time, I think we need to be made aware that with less water usage, utilities sell less water and that does affect their bottom lines. I know that that isn't something this Committee is dealing with but, nonetheless, it is a reality.

We must import or purchase the right to use our CAP water and other supplies that are not being used, and it's equally important that we ensure that no CAP allocations in our AMA are sold to others outside this AMA. The State has required water utilities to develop Drought Plans. When do those go into effect? It depends upon the water supplies that a utility has and the sources of those supplies.

In the late 1990s, the Bureau of Reclamation received funding for the Regional Effluent Planning Study. How much effluent could be taken from the Santa Cruz for irrigation and other uses while still maintaining the riparian area along the river? I think that that 's still a valid question today, although I'm not sure that the study was ever completed due to funding. Effluent is a growing supply of water in our region. Important decisions must be made about its use in the next decade.

Some would like to control our water use by limiting growth. State laws will work against that, and the present Legislature is not going to change that anytime soon; witness their refusal to deal with wildcat subdivisions as an example. A major issue for us is the massive sprawl in this region; that

is happening because of lack of planning and foresight; it would be much better to grow up rather than out. This would help not only with more frugal water use, but on transportation issues as well. The Tucson Mayor and Council voted unanimously to take all of the City 's annual CAP allocation of 144,000 acre-feet by 2011; it is vitally important that all of that water be recharged and stored for the future. Tucson Water is presently using 62% of its annual allocation.

We often fail to recognize that this region has CAP allocations totaling about 260,000 acre-feet of water; some of this is not in use because of the lack of infrastructure; progress on this is urgent. It is expected that the Secretary of Interior could declare a shortage on the river in the next couple of years. Why is this important? What impact will it have on our region? First of all, we are paying for water we are not using and allowing others in the State - and, yes, throughout the west - to use it. Arizona has junior rights on the Colorado River. The region - and, most particularly, Tucson's cut - if there is a declared shortage on the river, will be based on what we are now taking and not the full allocation in the region. Instead of bickering over regional issues, we must begin to consider all water resources in the region.

Where is water located in our region? Who uses it? How can it become more accessible for needed uses? What about water quality? Water is a regional issue and not just one for Pima County and Tucson. I think that supply issues will continue to dominate the region. Planning for the future is essential; that involves working with the entire region. Thank you very much.

CHAIRMAN JIM BARRY: Thank you, Carol. Appreciate that. Now . . .

(Applause.)

CHAIRMAN JIM BARRY: You're the first speaker that's gotten applause I must say. We'll see what happens with the rest.

CAROL WEST: That's a little scary.

CHAIRMAN JIM BARRY: Yeah. Okay. Now, I - I could very well butcher the name, but Dr. Graciella Snyder-Madonies (ph.). Was I even close? Is she here? Huh? Well, I butchered the name and she's so mad at me she's not going to speak. We'll - we'll see if she comes in.

Dorothy O'Brien?

DOROTHY O'BRIEN: Yes.

CHAIRMAN JIM BARRY Dorothy is representing the Town of Marana.

**Presenter #2**  
**Dorothy O'Brien**  
**representing the Town of**  
**Marana**

DOROTHY O'BRIEN: Good evening. I'm Dorothy O'Brien. I'm the Assistant Utilities Director for the Town of Marana, and thank you for allowing the public to speak and to hear regional ideas that may not have been brought to the forefront.

As the lady before me so eloquently put, "effluent is the water of our future," and that is no more true for any region than it is for the Town of Marana. Within the next several weeks and months, the community will be hearing about the Town of Marana moving forward with the Pima area governments to look at our sustainability plan, which is using all of the wastewater which is in - within the Town of Marana by becoming a Designated Management Agency, which means that we will have the opportunity to design wastewater treatment plants, build them, and treat wastewater, as well as putting the effluent to the most beneficial use that we can think of, which is recharging it in most cases. What we're looking for is to be able to provide 360 (inaudible) services to our residents, and that includes potable water services, wastewater treatment, and effluent.

Sustainable resources really are key to the entire region; it means cooperative planning of councils, governments, the neighboring communities, to make sure that all of our water resources are put to the best effective use possible. And we really do look forward to working with this group as they move forward to the following phases, and we hope that the group has opened up a little bit more to other individuals, like this woman mentioned, not just Pima County and Tucson, but all of the other areas. I would highly recommend looking at the members of the Southern Arizona Water Users' Association; it's an organization that has been in place a long time. Those members get together on a monthly basis, the members from the Water Departments do, to talk about regional water issues, other directors and others of those Water departments, and I would highly recommend selecting some individuals from that group to move forward to assist in future planning processes. Thank you.

CHAIRMAN JIM BARRY: Thank you, Dorothy.

Randy Serallio (ph.)? Did I pronounce that right, Randy?

RANDY SERALLIO: That was perfect.

CHAIRMAN JIM BARRY: Perfect, yeah? All right.

**Presenter # 3**  
**Randy Serallio representing**  
**the Center for Biological**  
**Diversity**

RANDY SERALLIO: Which is rare with my name. Thanks for the opportunity to come. Again, I can provide a written copy as well.

The Center for Biological Diversity is a nationwide nonprofit with nearly 200,000 members and online activists scattered throughout the United States and the world, but our headquarters is right here in Tucson. We work through science, law, and creative media to secure future for all species, great or small, hovering on the brink of extinction.

We share a great concern with some of the other groups that have presented to you from a conservation perspective ensuring that the solutions are community pursues in securing our water future are truly sustainable. Too often, lip service is paid to the concept of sustainability, even while we make choices in policies that belie a reasonable definition of that term; or, worse, hide unsustainable consequences in faraway places, or defer them to future generations. In that respect, we commend this effort to define true sustainability for Tucson and Pima County's water future.

Unfortunately, to some members of our community, sustainability equates to guaranteed supplies sufficient to maintain unlimited growth. This leads to a myopic focus on large-scale augmentation of supply and neglect of local and regional responsibility for consumption, rather than a hard look at the excessiveness or inefficiency of our current water use, or reasonable limit to the population our water supplies can realistically support in the desert southwest. We are instead perpetually focused on grand and hugely-expensive schemes that would allow us to avoid responsibility, such as diversion, canals, water mining, cloud-seeding, desalination, and so on.

I want to take a couple minutes to address desalination, in particular, in this context. While on the surface it might seem like a nifty way to tap into a vast new water supply, it comes at great cost, both economic and environmental. Depending on location and construction, a desalination plant can do serious and permanent damage to marine life and surrounding habitat in the source waters. The process generates huge waste disposal problems in the form of massive amounts of brine and concentrated chemical additives, and it requires a tremendous amount of energy, which carries an entirely different set of environmental consequences.

Even a project as seemingly innocuous as the Yuma Desalination Plant has been fraught with problems, offering relatively small amounts of water at exorbitant cost, and with

unacceptable environmental consequences. Originally proposed to desalinate agricultural runoff to help satisfy Colorado River allocations to Mexico, this extremely controversial and expensive product was shut down after only nine months of operation and has been dormant for 15 years.

In those intervening years, water that was allowed to return to the Colorado River Delta has nourished and restored a small portion of the ecological health and bio-diversity that once existed there in the form of the Cienega de Santa Clara. But, water managers and state officials eager to apply every available drop of the Colorado to the profit of humanity, consider that water to be lost and want to reclaim it. The truth is, that the 40,000 acres of habitat created by that lost water are virtually all that remains of 2 million acres of lush wetlands that existed before water was diverted from the river in the first place. To organizations such as the center that opposed this project, and certainly to the myriad species of the Cienega that rely on that water for survival - several of which are endangered - it is, in fact, water that was lost, but has been found. However, now that drought and continued unsustainable consumption have changed the context, pressure is building to restart that plant, despite its miserable track record and numerous legal hurdles; it seems that water managers are willing to throw good money after bad in the narrow quest to augment supply.

With the threat that shortages are possible, unless the plant resumes production, we're being told that we must sacrifice what little is left of one of the great jewels of the natural heritage of the southwest in exchange for a relatively small amount of water; that may buy a little time, but certainly will not solve the problem. At the same time we continue to ignore cheaper, more sensible and less damaging -

CHAIRMAN JIM BARRY: Randy, one more minute, please.

RANDY SERALLIO: Yeah, one minute?

CHAIRMAN JIM BARRY: Please.

RANDY SERALLIO: That's right about where I'm at.

CHAIRMAN JIM BARRY: All right. Good.

RANDY SERALLIO: Thanks. Not the least of which is admitting and addressing the folly of large-scale agriculture in the desert.

In essence, schemes such as desalination allows us to export environmental consequences to precious places far away, out of sight and out of mind. We believe that sustainable solutions to our water problems lie not in technological boondoggles, but common sense and responsibility. We think it is imperative that a Committee, such as this, focus on local and regional approaches to achieving a truly sustainable balance

between necessary consumption, realistic supply, and the needs of a healthy environment, in the hopes that we can avoid water wars and crisis in the future, and that our children will inherit a world in which the wild is still alive. Thanks.

CHAIRMAN JIM BARRY: Randy, thank you very much.

(Applause.)

CHAIRMAN JIM BARRY: Trevor Hare (ph.)?

<p style="text-align: center;"><b>Presenter # 4</b> <b>Trevor Hare representing Sky</b> <b>Island Alliance</b></p>
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TREVOR HARE: Thank you, Committee. I am a - I'm here tonight representing Sky Island Alliance. I'm a conservation biologist who runs the Landscape Restoration Program. Sky Island Alliance is a grassroots organization dedicated to protection and restoration of our rich natural heritage in the Sky Island region of the southwestern United States and northwestern New Mexico. We work with volunteers, scientists, landowners, public officials, and government agencies to establish protected areas and restore healthy landscape, and promote the public appreciation of this region's unique biological diversity.

I want to talk about the sustainability for the nonhuman inhabitants of Pima County and the importance of instream flows, subsurface waters, riparian areas and then, at the end, the impact of water delivery and infrastructure. (Coughing.) Excuse me.

Approximately 90% of the wildlife in the arid southwestern United States is dependent on aquatic and riparian resources to fulfill some part of their life history. And, while a majority of aquatic systems in Pima County have been lost, a few remain, such as the San Pedro River and Cienega Creek and are, therefore, extremely important to protect.

Riparian ecosystems supported by shallow groundwater have also been largely lost or degraded due to water diversions, aquifer draw-down, and urbanization, but can still be found across the County in places such as Sabino Canyon, Davidson Canyon, Rincon Creek, and Soppery Wash.

Our riparian areas also play host to an amazing abundance of rare and endangered species, such as the Chiricahua Leopard Frog, the Mexican Garter Snake, Black Hawks and Gray Hawks, the Huachuca Water Umbel and the Canella Hills Lady Tresses and, of course, our high-adapted desert fish.

Besides the obvious benefits of providing water, shade, cover and breeding habitat for animals, another important aspect of these aquatic and riparian ecosystems are the connectivity they provide across our landscape and across many

barriers, such as I-10, I-19, and smaller barriers in town. This is for the daily and seasonable movements and dispersal of animals and plants across the landscape. For example, a mountain lion needs more than 200 square miles in its home range and our - many of our Sky Island mountain ranges and protected areas are less than 50 square miles, and so lions must travel between these ranges across lowlands to find mates and prey and to disperse into unoccupied habitat, and washes and riparian areas we were talking about provide the shelter and safe transit needed to achieve this.

So, our recommendations to this Committee include that we must protect our remaining aquatic and riparian ecosystems through the establish (sic) of no-pumping zones and buffers around existing aquatic and riparian habitats. We - we must also have a dedicated effluent pool to jump-start restoration efforts and to maintain the existing diversity of these systems in the Tucson Basin. Finally, we must implement land use provisions and reform state law to ensure that future population growth, and the associated water needs, do not exceed available supplies, nor impact existing and restorable water-dependent ecosystems.

We must also - as Randy just talked about - we must also resist the urge to import unsustainable environmentally detrimental supplies of water from outside the Tucson Basin. The infrastructure and methods proposed so far to make more water outside - outside water available to us will have large, unreversible (sic) impacts to landscapes and wildlife.

And, in closing, I'd like to quote an old friend of all of us: "Growth for the sake of growth is the ideology of a cancer cell. We can grow, but we can only grow under the environmental constraints this desert gives us." Thank you.

CHAIRMAN JIM BARRY: All right, Trevor. Thank you.  
(Applause.)

CHAIRMAN JIM BARRY: Jennifer Neely.

**Presenter # 5  
Jennifer Neely  
representing Sierra  
Club Rincon Group**

JENNIFER NEELY: Thank you. My name is Jenny Neely, and I'm here representing the Sierra Club Rincon Group. We have about 4,000 members here in the Tucson region. I want to thank you for the opportunity to comment on water sustainability. Water use is one of the most pressing issues facing our community.

Tucson's water supply may be more stable than most other western communities; however, our main water supply has come at an enormous price. To continue down a similar path moves this community away from achieving any semblance of sustainability. We are limited in the amount of water that can be served to the Tucson region. Our water resources are finite and unreliable. In light of this harsh reality, it's just not prudent to actively facilitate new growth. Instead, land use determinations should be based on the amount of water currently available without causing further damage to the natural environment, and also allowing for the restoration of riparian systems that have already been affected by currently unsustainable practices.

Many proponents of growth, including the Central Arizona Water Conservation District, have a number of plans that they say will provide our desert region with as much water as we need, but only at the expense of the natural environment. These plans include: desalination, groundwater mining and canal systems, linking us to other far distant rivers. These plans are simply unsustainable and utilizing water from far-away sources like this would directly contribute to the environmental devastation in other areas. How in the world is shifting environmental damage to somewhere else qualify as a sustainable way to guarantee water supplies for new growth?

It is important to understand, finally, the difference between Safe-Yield and sustainability when talking about sustainable groundwater supplies. Throughout this process, Tucson Water and others have referred to sustainable groundwater pumping as "pumping out the same amount of water that can naturally be recharged," but this is wrong; that definition more accurately represents Safe Yield pumping, because it does not take into account the water needs of groundwater-dependent riparian systems, or other negative effects caused by excessive groundwater pumping.

Under Safe-Yield rules, without allocating water for riparian systems, the remaining groundwater-dependent systems would eventually dry up and die, like 95% of them have in the southwestern United States. And previously lost riparian areas would never likely - are never likely to be restored.

If Tucson Water and Pima County wish to truly achieve sustainable ground use - groundwater use in the Tucson AMA, some amount of water beyond simple Safe-Yield quantities must be included in the Water Budget for the maintenance of existing, and the restoration of lost, groundwater-dependent riparian systems. We cannot rely on the Colorado River to supply a constantly increasing demand for water. The river was over-allocated to begin with. We are in the midst of a serious

drought, and the unknown effects of climate change are just starting to unfold. We cannot justify continuing our recent level of growth based on this unreliable source, nor can we claim sustainability if we continue to - to drastically impact environmental resources to facilitate growth above the carrying capacity of our region.

We are capable of constructing projects of an enormous scale, but just because we can do it, doesn't mean we should. We continue to damage the environment to facilitate growth in the middle of the desert, growth that is ultimately unsustainable. It is time to go down another path.

The Sierra Club will be submitting written comments to the Committee prior to your next meeting. Thank you.

CHAIRMAN JIM BARRY: Thank you, Jennifer.  
(Applause.)

<p style="text-align: center;"><b>Presenter # 6</b> <b>Christine Cotton representing</b> <b>Malcolm- Pirnie</b></p>
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CHAIRMAN JIM BARRY: Christine Cotton (ph.)?

CHRISTINE COTTON: Thank you for allowing me to speak tonight. My name is Christine Cotton. I work at Malcolm Purney, it's an environmental engineering consulting firm. And, over the last 12 years of my career, I've worked with water utilities around the country.

And sustainability is sort of a hot topic, not just in the community, but also in the environmental industry, which is where I'm - I - I do my profession. And some of our - triple-bottom-line is a method that you could use for sustainability evaluations. There's lots of methods that are out there. And triple-bottom-line is a method that you could consider as you evaluate your path forward. Triple-bottom-line is looking at other consequences than - than just money. As we look at sustainability, we must think about things beyond the capital perspective. We look at the society. The impacts of decisions on society, and also the impacts of decision on the environment. And it's a way to look at these items in one - with equal footing. And it's a method that's being used a lot in private industry - I believe Wal-Mart uses this, surprising enough - and also it's been used around the country by a lot of other water utilities. For example, Seattle Public Utilities uses the triple-bottom-line method to evaluate any capital project over \$250,000.

So, what they do is they have a project manager do the triple-bottom-line evaluation of environmental, the economics,

and also the societal - potential societal impacts. They bring it to a committee, and then they discuss it and then, potentially, either go forward if it - if the triple-bottom-line makes sense, or they go back and decide they do not want to fund this project and move forward. That's one gamut of the triple-bottom-line use. There are other utilities that use it to just evaluate a water quality decision, one specific thing looking at different technologies over another.

So - and I bring this to the Committee today for you to consider as you look at sustainability in your reports and - and your evaluation that triple-bottom-line may be a way for you to evaluate sustainability in a way that is transparent to the community. Thank you.

CHAIRMAN JIM BARRY: Thank you, Christine.  
(Applause.)

<p><b>Presenter # 7</b> <b>Alice Roe</b></p>
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CHAIRMAN JIM BARRY: Alice - Alice Rowe (ph.)?

ALICE ROWE: Thank you. I am representing, apparently, my phone number when you look at the list over there, but I am a citizen of Tucson, so I - to me, sustainability means that I'm living within my means. In investment terms, this means that I am spending the income rather than spending down the principal. For our community, sustainability should be much the same. We are not robbing from the future of the community to maintain and expand the present. At a most basic level, our principal, as a community, is our water supplies that we are drawing down below replenishment.

What is the community? Tucson is as diverse as the people who have come to call this Sunbelt city their home. Old timer, pioneer family, newcomer - relative newcomer. Why are we all here? A place that is so unlike much of the rest of the U.S., with its own border heritage, sunshine outdoor lifestyle.

I came in 1975 to put down roots, raise my family to be a part of this community, to make this community my own. I live in a neighborhood that was built out pretty much by 1960. My neighborhood is anchored by the Arizona Inn. Mrs. Greenway built the Inn where it is because she wanted to be on City Water, so she built inside the then City limits. As a neighborhood, we have enjoyed the support of City infrastructure, water, sewer, and streets. What we see of our streets is they're crumbling under budget problems. We cannot see the water and sewer systems except when they do not work.

Without a well-maintained system of water delivery, and the reverse wastewater delivery to the treatment plant, wherever that may be, we, as a community, will falter.

My neighborhood is characterized by mature vegetation. Our 70-year-old pine trees and other large trees provide a special sense of place, besides allowing us a number of urban-adapted hawks and owls. Part of the sense of place for older Tucson neighborhoods is the trees, the bushes and, yes, even our little postage-stamp lawns hidden in the privacy of our backyards. Trees and vegetation offset some of our urban heat island and may even help us, as a community, to peck away at the causes of climate change. This vegetation, though, some of it may have survived through dry times, usually does need some irrigation. We pay for the water to maintain our yards and trees, or - now we're trying to arrange for water harvesting to support the greenery we want to enjoy around that outdoor room in our yards.

Sustainability, in a greater sense, means that we must look at where we live, how we live, and the choices and tradeoffs we can or wish to live with. In the quest to provide for the people who will come, we should not forget that many who came earlier came to a city that was not built out as a subdivision of matching dwellings. We need to take some care that the older inner city will not be destroyed.

We've heard about how our sewer infrastructure will need more maintenance if we do not flush enough, wash enough, or divert too much of our individual home's gray water to our plants. I do not want to see us abandon the Tucson of our grandparents' generation characterized by the sunshine club of the 1920s' promoters. Yes, they made sure all the promotion showed palm trees to symbolize warmth. Those business leaders of yore subscribed, I'm sure, to the philosophy that what was good for General Motors was good for the nation, but on a local level.

I'm not sure that this should be our current way of operating, even though land speculation and development have been our Tucson heritage for over 100 years.

In the past week or so, I've been asking others what they think about sustainability. Here's where we, as a community, suffer from the churn of transiency and snowbird -

CHAIRMAN JIM BARRY: Alice, one minute, please. Thank you.

ALICE ROWE: I'll wrap it up.

CHAIRMAN JIM BARRY: Okay.

ALICE ROWE: I've heard from several that they do not expect to worry about the future beyond a few years or so. They will either have or either leave or no longer be; that this city

should be a good place for their children and grandchildren. No, their children don't live here, and they don't expect to - and they expect to move to wherever those families are. These are the folks whose actions say: We should mine the water until it's all gone, just like the extraction industries in the past.

So, I urge that we include a sense of place in our sustainability discussions. The sense of place of the old center of the City and the sense of place of all our natural areas, and this sense of place depends upon the maintenance of our water and sewer infrastructure. Thank you.

CHAIRMAN JIM BARRY: Thank you, Alice.  
(Applause.)

<p style="text-align: center;"><b>Presenter # 8</b> <b>Amy McCoy representing the</b> <b>Sonoran Institute</b></p>
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CHAIRMAN JIM BARRY: Amy McCoy? Hi, Amy. Amy is the newest member of the Citizens' Water Advisory Committee, as well as representing the Sonoran Institute. Go ahead.

AMY MCCOY: Thank you. Again, my name is Amy McCoy, and I am an ecologist at the Sonoran Institute, and I want to thank you as well for the opportunity and invitation to speak tonight about Sonoran Institute's perspective on sustainability.

Sonoran Institute is a conservation organization based in Tucson, Arizona. We have offices throughout the western United States, and we strive for healthy landscapes, vibrant economies, and sustainable communities. We believe that - that sustainable conservation decisions are made collectively and collaboratively within communities and, in support of such collaborative and collective decisions, I highlight four goals to consider when addressing water sustainability.

First, to integrate water and land use planning at a regional scale. For sustainability to become operational, there must be policy shifts toward innovation and towards integration of our land use ordinances, tax codes to support incentives, and water management structures.

Number two, to balance the needs of human and wildlife. To build on Trevor and Jenny's comments about riparian areas, I'd just like to emphasize that riparian areas provide numerous services to local populations and act as foundational infrastructure, really natural infrastructure, if you will, for our communities. Riparian trees and roots slow flood flows; they increase infiltration into groundwater tables; and they also act and assist in filtering pollutants from water as it

infiltrates into groundwater tables. These services would be costly and difficult to mimic with technology, but are provided free to us with only the power of the sun. I believe that these riparian ecosystems and natural infrastructures should be factored into our sustainable water management equation.

Number three, to define and clarify purposes of different water. For example, CAP, groundwater, effluent, and rainwater. I'd just like to, again, commend the City of Tucson recently for the Water Harvesting Ordinance and the water harvesting - harvesting process that occurred. Forty percent of our municipal and commercial water uses go to landscaping. By utilizing rain water, a, thus, untapped resource, we reduce our reliance on groundwater and provide more nimble and flexible options for citizens. We believe that both the final ordinances of that, and the process itself, are tools for sustainable.

And the fourth comment is to ensure that conserved water is - conserved groundwater, in particular, remains in the ground, and is set aside for recharge and for, possibly, unanticipated future need, but also to restore our ecosystems.

So, with this in mind, I thank you again for this opportunity and look forward to working with you in the future.

CHAIRMAN JIM BARRY: Thank you, Amy.

(Applause.)

<p><b><i>Presenter # 10</i></b> <b>William Crosby</b></p>
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CHAIRMAN JIM BARRY: William Crosby.

WILLIAM CROSBY: My name is William Crosby. I live in Tanque Verde. My work is environmental and cultural conservation.

MEMBER JOHN CARLSON: Couldn't hear that, please.

WILLIAM CROSBY: Hello?

MEMBER JOHN CARLSON: That last comment, couldn't hear it. (Inaudible).

WILLIAM CROSBY: My name is William Crosby. I live in Tanque Verde. My work is environmental and cultural conservation.

Sustainable - sustainability means living within our means, by not overusing our natural resources, which we preserve for future generations. For me, at this time, sustainability means being able to at least maintain life as we know it in the Tucson Basin; it means being able to maintain the purpose and requirements of the Sonoran Desert Conservation Plan, designed in a large collective group, agreed upon by consensus, and

implemented to project - to protect the designated areas and resources as we know them now into the future.

Sustainability is particularly critical at this time. Tucson is at the end of the line of our most capable supply of water: The CAP. We no longer think of the Central Wellfield capacity as a primary resource, because unmanaged growth overused this resource at least 20 years ago. The business of growth has plundered the landscape.

The challenging and uncertain resources of the CAP are now more than a backup. For years we have become accustomed to thinking of our water supply coming from distance sources, breeding a complacency of endless growth that hungers for more, yet unrealistic and questionable resources. It is critical to know the water use requirements of all the water providers and private wells in the Tucson Basin, so that this can be guaranteed for the maintenance of our needs in a transparent and responsible manner. All the stakeholders must be represented.

For 20 years we have experienced extremes in drought and precipitation. For example, in the normal year, the Tanque Verde Creek at Wentworth Road has two winter and three summer floods. In 2007, there was not a single flood. In 2008, the monsoon rains were abnormally high at 12.7 inches; granted, this is from personal measurement and observation. However, the severe fluctuation of rainfall cannot be ignored. Recharge to the aquifers has diminished exponentially so that we now look at rainfall as a supplement to the CAP supplement.

Reclaimed water serves large turf projects. Water harvesting is needed - a needed and obvious tool now heralded as a requirement in new housing and business development. Perhaps, in the face of the great enigma facing humanity, climate change, we can consider reform of Arizona water law linking growth to sustainable water supplies.

Historically, organized societies and civilizations survived due - due to the wisdom and the realization of their vital resources and, when their planning failed, their civil foundations died.

This Committee and this effort have the potential of ensuring the future of Tucson, to nurture and preserve the extraordinary beauty of this place. Thank you.

CHAIRMAN JIM BARRY: Thank you, William.

(Applause.)

**Presenter # 10  
Donna Branch -Gilby  
representing Milagro  
Co-Housing**

CHAIRMAN JIM BARRY: Donna Branch-Gilby, please.

DONNA BRANCH-GILBY: Good evening, and thank you for this opportunity. My name is Donna Branch-Gilby. I'm a co-developer of Milagro Co-Housing and I'm representing the 28 families that live in that development in the Tucson Mountains.

What does a sustainable water future mean for me and for us at Milagro? It means that our water use is balanced with our water supply, and that our water supply is replaceable and sustainable; that's a water supply that doesn't borrow from the future by dropping the water table below the riverbed; it doesn't borrow from our other ecosystems by transporting water from other aquifers; it does capture all the water that we can capture, rainwater; it reuses water and it puts all qualities of water to their appropriate use. Capture, conserve, and use wisely.

I know we can do this, because we're doing it at Milagro. We have increased our water supply through rainwater harvesting, reuse of gray water, and reuse of effluent for certain purposes, not by moving the water from other aquifers or that require high-energy costs. What we have done is we have captured every drop of rain water in a cistern or through basins, swales and berms. At Milagro, our goal is to slow down the water and help it soak into the ground. We mulch our basins and form wells around the many trees which help cool us. We reuse the gray water by dumping our dish pans on the plants at the kitchen door. We have reused all of our plumbed water, gray and black water, by sending it to our own subsurface wetlands or microbes on the hedges, clean it enough to use in a subsurface irrigation system.

This irrigation system yields for us 1,700 gallons a day, which waters the trees and shade trees along our community pathway. Roof water is captured in cisterns installed by half the households. We have approximately 15,000 gallons of storage. I, myself, am still using cistern water that was collected in our - in our last two rains.

We need to reduce our water use to a sustainable or replaceable level, and there are many ways that government, governmental entities, community organizations, and individuals can do that. At Milagro, we set a target for ourselves of using no more than 50 gallons per person per day. In 1905, we were a long way away. We were at 130 gallons per person per day. Earlier this year, we had learned how to use our resources and we were at 75 gallons per person per day. This includes City water and some water from our own well.

As I discussed this issue with my neighbors, we came up with a few ideas that we would highly recommend to this

Committee. One is the County has a Drought Plan that they would implement; it's very reasonable; it's put - puts restrictions on watering on use of misters and allows for use -

CHAIRMAN JIM BARRY: One minute, please, okay? One minute.

DONNA BRANCH GILBY: Okay. Thank you. That is, I think, appropriate given the environment that we're in. The impact of climate change is unknown, but we know it's - it's not going to make it easier for us here. So, please, let's implement that Drought Plan from the County right now, fully implement it.

Also, let's have an extensive public education system about the need to capture, reuse, and use wisely all of our water resources, and then to see some research being done. What would be public acceptance and technical feasibility of other water conservation measures, like composting toilets? There may be a segment of population that would be very happy to have composting toilets. Let's - let's see what we can do.

We - in Brisbane, Australia, that city functions on 53 gallons per person per day. We have a long - we have some room to learn how to do that. Let's - let's learn how to do it before Mother Nature gives us our final exam. Thank you.

CHAIRMAN JIM BARRY: Thank you.

(Applause.)

**Presenter # 11**  
**Nancy Freeman representing the**  
**Groundwater Awareness League**

CHAIRMAN JIM BARRY: Nancy Freeman?

NANCY FREEMAN: I'm representing Groundwater Awareness League, Nancy Freeman, Executive Director; it's an educational, nonprofit, bringing grandmothering to Arizona.

Sustainability is living with our local resources; it means thinking of others; it means thinking of the future; it means thinking of the environment; in fact, it means thinking. I will speak of sustainability only as it regards water, because our Arizona legislators set up a system that makes sustainability impossible in municipalities.

When they passed the 1980 Groundwater Act, they grandfathered a 2.5 million acre-foot deficit per year in groundwater pumping in Central Arizona. They told the cotton growers, the alfalfa growers, the mining companies, "You just keep on doing what you're doing. We can get federal funds to import Colorado River Water to the cities." No problem that it has to be paid for by America taxpayers and repaid by Arizona taxpayers, many who will never receive any benefit. As a matter

of fact, it will be detrimental to those living on the river to see it disappear. Just think, Yuma used to be a seaport.

An Arizona Supreme Court Judge, Noel Fidel, has commented on the situation in the context of a water litigation in 1999, "The Arizona legislator has erected statutory frameworks for regulating surface water and groundwater based on southwest cotton. Arizona's agricultural, industrial, mining, and urban interests have accommodated themselves to those frameworks. Southwest cotton has been part of the constant backdrop for vast investments, the founding and growth of towns and cities in the lives of our people." So, the billion-dollar CAP system was meant for municipal use under the guise of agricultural use, but it was widely known that the agricultural sector would not use it.

In the 28 years since 1980, that 2.5 million acre-foot deficit means 70 million acre-feet of water, enough to water the present population and even agriculture use of the Tucson AMA, using 300 acre-feet annually for 233 years. Currently, nonagricultural use in all AMAs in just over some 785,000 acre-feet annually. So that 70 million acre-feet would have provided water for all Arizona in industry for 89 years.

Then, after giving away the groundwater - the Groundwater Code does mention that State water supply is a public resource - the legislators told the cities that you have to have an Assured Water Supply. So, the model was set and mandated, "import water," a renewable supply from somewhere else to replenish your water use. So -

CHAIRMAN JIM BARRY: Nancy, one minute, please. I'm sorry.

NANCY FREEMAN: So, to build the sustainable model on such criteria is simply impossible. Then our enlightened legislators, under the pressure from developers, created the Groundwater Replenishment District and put it under CAP authority to make it look legit, because the truth is there were no CAP allocations left for Groundwater Replenishment District to use, so now builders could build in south Pima County and replenish in north Pima County with an unknown supply of water. However, there would be excess CAP water for 20 years, never mind that the 100-year water supply certificates that the State water agency issues, they do not include the Replenishment District.

Now, who will pay the price? The new water users who come under Groundwater Replenishment rules? No, all the water users in the water provider district will pay. In other words, all Tucson Water Company customers will pay for the highest-priced water and - and will effectively be subsidizing new growth, currently 20,000 units.

Taxpayers and water users have to be aware of how government agencies love big projects. The federal project in Yuma costs over a billion dollars, when the task could've been done - accomplished by buying up the agricultural operations for a few million, that were dumping salty water into the Colorado, causing the need for the desalinization plant.

So, the first step of living within our means, within the limitations imposed on us by importing CAP would be to eliminate the Groundwater Replenishment District, which was created by and for the sake of new development. The second step would be to capture our storm water. Thank you.

CHAIRMAN JIM BARRY: Thank you, Nancy.  
(Applause.)

**Presenter # 12**  
**Michael McNulty representing**  
**Arizona Builders' Alliance, the Alliance of**  
**Construction Trades, the Marana Chamber of Commerce,**  
**the Metropolitan Pima Alliance, the Northern Pima**  
**County Chamber of Commerce, Safe and Sensible Water**  
**Committee, the Southern Arizona Homebuilders, the**  
**Southern Arizona Leadership Council, the Tucson**  
**Association of Realtors, the Tucson Metropolitan**  
**Chamber of Commerce, and the Tucson Utility**  
**Contractors' Association.**

CHAIRMAN JIM BARRY: Michael McNulty? Michael, I have a list of people you're representing. Do you have that list and you're going to read it so we know who it is?

MICHAEL McNULTY: Yes, sir, I do.

CHAIRMAN JIM BARRY: Okay. Thank you.

MICHAEL McNULTY: As a water bureaucratic from way back, it really warms my heart to see the number of people involved in water policy. I admire you for what you've done. It looks like you'll be at this for a while.

I'm going to be talking a lot about transparency, and so I'll start with transparency about myself. I am a lawyer with the law firm called Lewis & Roca, and it is one of many members of a business group called the "Southern Arizona Leadership Council." When - when the City and the County started to put this together, a lot of business groups sort of got together and said, "We think we should probably make sure that our thoughts are added to the discussion." And they formed a group called the "Tucson Regional Water Coalition," and that

coalition is here tonight. I am speaking on their behalf, although I'm not paid by anybody. I'm a volunteer like the rest of you.

So, the - the groups that have bought into this policy statement include - and if you want to stand up when you hear your group called, please do - the Arizona Builders' Alliance, the Alliance of Construction Trades, the Marana Chamber of Commerce, the Metropolitan Pima Alliance, the Northern Pima County Chamber of Commerce, Safe and Sensible Water Committee, the Southern Arizona Homebuilders, the Southern Arizona Leadership Council, the Tucson Association of Realtors, the Tucson Metropolitan Chamber of Commerce, and the Tucson Utility Contractors' Association.

The group has been meeting and working through water planning policies that were sort of going under the rubric Integrated Water Resources Management, which is fairly accepted, sort of scientific rational way of doing this, that's been adopted by the World Bank and the United Nations and the AWWA, American Waterworks Associations. I'll leave a couple of their papers with you in case you decide to put them on the web.

I have a paper I will distribute, but I think I'll wait till I'm done. I'm - I've - I've distilled it quite a little bit. The - the Mission Statement of this coalition goes as follows: "Seek to promote policies and actions to create long-range planning for sustainable water supply that will support the economic vitality, the current and future population, and maintain the quality of life of the Tucson region. To identify and maximize the supply of water resources available within the Tucson region, and to implement best practices for the efficient use, conservation, and management of water resources in the Tucson region."

I want to make the point that about 80% of what you've heard tonight are principles that are shared by this group and by everybody here. People who are in Tucson are here because they love the environment, they want to encourage responsible growth, and they don't want to run out of water.

Now, in our view, sustainability is inescapably a resource management and resource economics discussion where tradeoffs and alternatives must be first be understood and debated in quantifiable terms. And that's another theme I'll be pushing is this quantification of what the costs and benefits of various courses of action are.

We don't think that sustainability can be the exclusive domain of environmental protection. And I say that simply because there are a million people in this valley and they're not going anywhere. And, to the extent that they -

CHAIRMAN JIM BARRY: That's water right, Michael.

MICHAEL McNULTY: Water from France. I'm trying to help out. The success of local sustainability forums we think rests on the - moving the debate towards a common language and a set of assumptions. We - we need to recognize water as economic good with economic value to all competing users, and we think that this cost analysis should play a central role in our attempt to define sustainability.

One of the principles of this integrated water resource management is that it must be based on a participatory approach involving a balance of technical expertise, an expression of community values. I think that - that if you are able to avoid polarizing the community, avoid turning it into a growth/no growth debate, you are likely to make a huge amount of progress, but if it slips into that trap, I would worry.

We think that sound water resource management knows no jurisdictional boundaries. We think that water planning should be conducted at the basin scale, defined as the Tucson AMA, and involve all the users in the Tucson AMA; that's something I think the Groundwater Code really got right. You have to look at the watershed before you decide how you can solve problems.

Further, we support the shared use of community infrastructure through cost-effective wheeling agreements for delivery of effluent or surface water, or groundwater or imported groundwater, or stored renewable supplies to achieve greater integration, reliability, flexibility, and reliance upon renewable supplies throughout the region. We think that the - the vulcanization of utility infrastructure does not work for the common good.

We should collectively maximize the purchase and storage of additional surface water and our under-imported groundwater supplies, augmenting local groundwater supplies. The pointing being that: We all should bear the costs and enjoy the benefits of what we're suggesting is really a community endeavor. And all of this always within the context of state law, because there have been a number of speakers tonight that suggested things that cannot be done, though they're welcome to go to the Legislature and try to change them and we'd probably help.

Next, we think we should - excuse me - we think that we need a consistent signal to the public. We're - we - we've been trying to tell people that there is a scarcity of water, but then we look at what the average water bill, let's say, in the City of Tucson is, and if you go to the movies and you pay for your date, you've paid more money than the average water bill. The public is not getting the signal. Water is very cheap and it is - I don't think you're going to get the message through if water remains that cheap.

We think we need to find a way to facilitate the reallocation of water resources to the highest and best use that will yield - yield the greatest economic social and environmental benefit for the region, based on quantifiable terms. There is an unescapable relationship between water resources and regional economic development, and that cannot be ignored.

We - we - and I'm speaking this entire business community that sort of represents a quarter million workers - we should promote community-wide conservation goals and standards that maximize acre-feet saved per community dollar spent. Public officials look - try to come to grips with spending \$1,000 to import a supply or \$1,000 in reducing a supply. Should you retrofit all the old plumbing in Central Tucson? Well, that's expensive. Well, is it more expensive or less expensive than paying to import more water? We think probably conservation wins, but we don't think the hard math is being done.

We should evaluate proven conservation measures as an alternative to supply acquisition. For example, gray water reuse is really not being encouraged, we think at the governmental level, but we don't know if it's advisable because the economics have not been flushed out. We have concerns about evolving climatic conditions, just like everybody else, and we think that they should be addressed through risk assessments, just like all of the other unknowns that we have, and that can - in a form that can be updated as things change and have response triggers that can be implemented as conditions change.

And then, finally, we think that a sustainable water resource management plan for the region is incomplete without a budget and implementation strategy, both fiscal and physical. The region must move away from the plan-as-you-go and pay-as-you-go approach and develop flexible long-range plans in funding mechanisms to avoid future crises; that is a - pretty much a sharp distillation of the whole talk, the whole talk I will circulate, and I certainly appreciate your attention.

CHAIRMAN JIM BARRY: Thank you, Michael.

(Applause.)

CHAIRMAN JIM BARRY: We know who your coalition is, I guess.

All right. Beryl (ph.), did I see your hand up? You want to come up, Beryl? Is she here? I'll ask her to come - yeah.

<p><b>Presenter # 13</b> <b>Beryl Backer</b></p>
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BERYL BAKER: My name is Beryl Baker, and I'm a concerned citizen. For 20 years, I've worked on water issues as a volunteer. We pushed and pushed to get water issues taken seriously. Finally, you've put together a group to take a comprehensive look at needs of the community as it relates to water. You've been indoctrinated and presented with a rich array of the many sides to be considered in this matter of water. Due to the worldwide urgency in the matter of water, and mankind's increasing pressure to desertify (ph.) his habitat, the world. Please don't study this to death for another 20 years. Make learned haste to make strong recommendations that think in terms of 700s of years, not decades of man's stay here. Plan for the future as well for the silent voiceless animals and plants that man's soul would be the lesser for without their presence.

Thank you for the many hours and hard work, both behind and ahead of you, and you may rest the future of our home. May you consider well and wisely the ramifications of your decisions, but hurry. Time is running out for being able to make decisions which can be - can - can make a difference between life and death of us all. Thank you for your undertaking to address this important, imperative issue of water.

CHAIRMAN JIM BARRY: Thank you, Beryl.  
Charles Cole?

<p><b>Presenter # 14</b> <b>Charles Cole</b></p>
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CHARLES COLE: Thank you for allowing all this public input.

UNIDENTIFIED MALE: I'm sorry. I didn't quite . . .

CHARLES COLE: Charles Cole, West Sweet Water Drive. I'd like to define sustainability, or give it a try anyway. In the context - I'd like to try to define sustainability in the context of the three-and-a-half-billion-year history of life on earth. Now, don't let me frighten you. I'll give you the short story -

CHAIRMAN JIM BARRY: Colette, write -

CHARLES COLE: - of that history, and I think I can do this in - in no more than two minutes of your -

CHAIRMAN JIM BARRY: Okay.

CHARLES COLE: - time. To me, any system, whether it is a water delivery system, or something else, is sustainable if the following six criteria apply:

One, it functions essentially without significant consumption of nonrenewable resources; two, it is essentially pollution-free in all aspects of its operations and has no significant negative impacts on the environment; three, it is affordable by those who must pay for it without risk of bankrupting anybody or forcing anyone out of their home, including our less-fortunate citizens; four, it fulfills all of its intended purposes, including all quality control parameters; five, it works efficiently and cost-effectively for its intended lifetime, without significant unanticipated maintenance problems or cost overruns; and, six, it does not allow for temporary over-expansion of human population beyond the carrying capacity of the environment, only to be followed by a "Catastrophic Collapse" as has occurred with past civilizations as discussed by Jerrod Diamond in his book of that title.

In case this definition seems restrictive for our society, let me set the perspective with a few simple facts. Planet Earth has existed for more than 4.6 billion years. Life, in one form or another, has been evolving for more than 3-1/2 billion years. To set this timescale - to set this - excuse me - to a timescale to which we can relate, consider the 3-1/2 billion year history of life, as occurring within one 24-hour day, the first living cells appeared at a fraction of a second after midnight. The first terrestrial animals with a backbone appeared about 360 million years ago, or about 9:32 p.m. The clock has ticked away past noon and dinnertime, and people aren't here yet. These are simple biological and geological facts. The clock now - excuse me - on this timescale, a dinosaur, of one kind or another, existed for over an hour of life's history, between 10:28 and 11:31 p.m. Our species, human beings, have been here for only the last 12.4 seconds before midnight. And the industrial revolution, with all its consequences for the global environmental has raced through the last 1/200th of a second. If high-quality human life is going to be sustainable for the first hour after this noon midnight, we must get our act together, and this is your opportunity to influence the process. Thank you.

CHAIRMAN JIM BARRY: Thank you, Charles.

(Applause.)

CHAIRMAN JIM BARRY: Good. Thanks. Okay. Let me - is there anybody else in the audience that wants to talk? Did I hear a yes? No. All right. Now, let me ask a question: Tracy, do you want to speak now or do you want to wait until after the City and the County speak? You want to speak now. Okay. Tracy.

**Presenter # 15**  
**Tracy Williams representing**  
**Neighborhood Infill Coalition**

TRACY WILLIAMS: Oh, thanks. There's Melaney.

CHAIRMAN JIM BARRY: Uh-huh.

TRACY WILLIAMS: My name is Tracy Williams. I am a lifetime resident of Tucson, Arizona. I would like to thank all of you for how you have conducted yourselves during these past months. Your degree of professionalism and your commitment to ensuring a balanced, honest, and open discussion of this vital issue has gone a long way toward creating a level of trust among those of us whose jaded views have been fostered by years of exclusionary politics.

I would also like to thank the Staff and presenters who assembled a great deal of information and effective presentations while dealing with constrained schedules. It is my hope that all of you will continue this same open, balanced process, not only as you draft your report, but into Phase II as well.

Early in the start of this study, we saw a special interest group line up to demand a seat at the table. I know firsthand where that can lead. Time and again we have seen the development community obtain numerous seats at the table by dividing their industry into its multiple parts of builders, small builders, architects, planners, real estate investors, lawyers, et cetera. If we are lucky, neighbors and environmentalists receive one seat each. This unbalanced approach to critical problem-solving leads to the kind of distorted outcomes that help to create our current financial crisis. We cannot afford such a cavalier approach where water is concerned.

Water is a life-and-death issue. It cannot have the economic bottom line as its sole driving force, nor can it follow the dishonest path of Tucson's recent gray water ordinance which based its outcome on an incomplete picture of our wastewater's delivery system. Sustainability needs to include the quality of life elements of clean, healthy, unpolluted potable water.

The environment needs to be viewed as an equal partner, not only to facilitate this goal, but to become a beneficiary of it. I do not want to sacrifice the Tucson I love on the altar of the economic bottom line or trade the Sonoran Desert for one that more closely resembles the sub-Saharan Africa or compete with the Baghdad - compete with the - complete with the Baghdad model of water delivery. There are numerous less-destructive ways to approach growth that do not rely on the wholesale destruction of our desert and that are far better suited to help us achieve a more sustainable, equitable society. We need your help and commitment to ensure that the remainder of

this process does not follow the destructive, political paths of the past, but charts a new course towards a sustainable inclusive model for problem-solving. Thank you. Thank you.

(Applause.)

CHAIRMAN JIM BARRY: Thank you, Tracy. All right.

We have time now to let the City and the County talk and - and we're going to give them some time and, presumably, they will tell us not only what they're doing, but how and what they might've heard over the past two nights. So, we're start with Leslie Leberti (ph.) from the City.

<p style="text-align: center;"><b>Presenter #16</b> <b>Leslie Leberti</b> <b>representing the City of</b> <b>Tucson</b></p>
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LESLIE LEBERTI: Good evening. Thank you. I very much appreciate the invitation from the Committee to come talk about sustainability. I've been the Director of the Office of Sustainability - well Conservation Sustainable Development at the City for about two and a half years. And, when I was first asked to give a brief talk on the meaning of sustainability, the one thing that kept running through my mind was a statement made by a guy by the name of Peter O'Riordan back in the mid-'80s. And he said that, "Defining sustainability was an exploration into a tangled conceptual jungle where watchful eyes lurk at every bend." Standing here right now, I know exactly what he meant.

In order to not duplicate what we are presenting to you, Tedra and I kind of worked out - I'm going to address more of the conceptual level of the issue of sustainability, and then she's going to follow up with things that are a little bit more specific, based on her work at the County. I'm not going to try to give you a definition of sustainability. What I wanted to do was kind of explore some of the conceptual foundations, some of the assumptions and some of my own personal observations about how those things have influenced the way in which the term "sustainability" is used, all in the hopes that it'll - this'll assist you as you consider this topic in the context of - of water planning in this region.

The - the textbook definition of - of sustainability, the one that's most commonly used, the one we hear about is, of course, from the Brundtland Commission which, in 1987, said that sustainable development is development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.

What's not well-known is that report was actually quite an extensive report and went through a huge array of issues, and there were five key concepts that kind of underlied that definition, and they're as follows:

One, the needs of the future must not be sacrificed to the demands of the present; that humanity's economic future is linked to the integrity of natural systems, but protecting the environment is impossible unless we improve the economic prosperity of the earth's poorest people. The present world system is not sustainable because - because it is not meeting the needs of many, especially the poor. And, finally, we must act to preserve as many options as possible for future generations since they have the right to determine their own needs for themselves.

The problem with that definition is that it was really general, and what happened is there were a ton of attempts to try to narrow it to a more specific focus, so there's a whole range of interpretations of sustainability from, you know, a pure ecological to a pure economic, the triple-bottom-line, which we heard about earlier. In fact, in the first two years after the Brundtland report, there were about 140 different definitions that came out. And, currently, we have about 300 definitions of sustainability and sustainable development.

What's happened more recently is an attempt to get away from just a pat definition to the development of frameworks that more are focused on describing the conditions, the characteristics, guiding principles, and indicators of sustainability.

The most common of those frameworks is that triangular concept we heard about, sometimes it's called the "triple-bottom-line," but it's the three pillars of economy, environment and society; that one, because it's the most common, I wanted to talk about a little bit more, because often we don't really give any discussion to what those three elements mean.

Ecological sustainability really focuses on natural biological processes and the continued functioning and productivity of ecosystems; it acknowledges that humans are part of nature; that nature has limits; and that communities are responsible for protecting and building natural assets. Some of the concepts that are - are fundamental to this are biodiversity and carrying capacity.

Social sustainability is defined as the survival and happiness of the maximum number of people, or the provision of the minimum needs to even the poorest groups; it emphasizes justice, living conditions, health and the opportunity for full participation in all activities, benefits and decision-making of society.

Economic sustainability includes issues such as the creation of jobs and wealth, but it's tempered by the efficient use of environmental and social resources. Economic activity should serve the common good, be self-renewing, and build local assets and self-reliance. There's a lot of other frameworks, There's a four-legged stool. I think there's even a six-legged and eight-legged stool. There's the natural step. Herman Daley has a pyramid of sustainability concepts, ecological footprint on the sustainability hierarchy. These frameworks and the definitions have come about as different groups emphasize various aspects of sustainability over others. So, social justice would emphasize the maintenance of a high-quality of life for people, with an emphasis on equality.

An environmental perspective may say that all species should be protected for their own sake. A business perspective would look at it through a lens of the maximum - maximization of capital, leading to greater opportunities and higher quality of life. This isn't bad. But, what it highlights is how we view sustainability as - as influenced by our individual perceptions and values. That's why, in just a minute, I want to touch on why having a public dialogue in which the full spectrum of community values is considered as such an important aspect of - of this process.

The frameworks are - are important because they give us a basis for prioritizing our values. Sustainability is about tradeoffs. But, more importantly, we live in an evolving and a very dynamic system, things are constantly changing, and we can't try to sustain everything in every condition; otherwise, we're just freezing the moment, freezing the world at a particular moment in time, and that's not what we want to do. So, it does make sense, however, to try and sustain some things for practical or for moral reasons. Things like the life-support services of the ecosystem, economic productive power, and social capacity for the nurturing of humans and for problem-solving.

So, refining the notion of sustainability really involves identifying those things that are higher priorities, those things that need to be sustained; and, in the cases where they haven't been, how - identifying how to repair or restore those things.

I've given some thought, personally, to what I think could be a framework for sustainability, and I wanted to just briefly share that with you. Please keep in mind this is just my own personal opinion and, again, there is no way to really - no one way to frame sustainability.

I see sustainability as a three-tiered concept. The first and most basic tier can be referred to as "survival

sustainability." It captures the notion of ecosystem and human health, and includes the maintenance of ecological support systems, the social capacity to solve major problems, and the economic capacity to meet the subsistence needs of the population. My one caution here is that we rarely know what is too much to sustain until we've crossed that threshold. As much as we would like, there's not complete agreement on what is necessary for the survival of people or the ecosystem. As a result, the concept of the precautionary principle is a very strongly-held concept in ecological fields. This principle requires that we respect the inherent uncertainty of systems, understand the limitations of our knowledge, avoid taking poorly-understood risks, or making decisions that could lead to serious or irreversible damage, and developing systems that allow for adaptation to surprises.

With respect to water, while we, at this point in time, don't have any significant issues with access to safe drinking water, the past use of local water resources has resulted in the loss of a significant amount of riparian habitat. The full impact of that loss is not known, nor do we really have a concept of what constitutes a necessary level of riparian habitat to preserve ecosystem function. In my mind, this first tier asks the question of "How much is essential?" and leaves the question of "How much is appropriate in excess of that level?" to be balanced against the issues raised in the other two tiers.

The second of which is a tier that reflects the very important aspect of sustainability that has to do with the needs of future generations, and this tier involves the preservation of options and flexibility, with an emphasis on the most efficient use of resources. Because we don't know - and as the Brundtland report stated - we don't know what future generations are going to want, and we should give them the right to decide as they see fit, what it really comes down to is preserving options for them to make those decisions, and the best way to do that is through the most efficient use of resources.

With respect to water, efficiency would include both the use of all existing resources, whether it's CAP, groundwater, reclaimed, rainwater, storm water runoff, and also matching the source of the water to the particular use in a manner that reduces the resources demand - resource demands for things such as treatment and disposal.

In order to evaluate the relative efficiency of different options, however, it is necessary that a full life cycle cost and benefit is considered. This further underscores the importance of taking a long-term view.

The third tier has to do with an equally ambiguous term, "quality of life," and this deals with value-based allocation of resources through our existing governance and economic systems. This is where sustainability truly becomes a gray area. So, just briefly, the tiers are, you know, health, survival, not just of our - ourselves, but of the system that supports us, making efficient use of resources, and then everything else really ultimately falls into an issue of quality of life, and how we choose, through our government and through our economic systems, to allocate resources to meet those.

So, it is especially in this area we're having a common vision of where we want to be as a community is essential. Sustainability really becomes a local concept; it fits - has to fit in with our environmental context, with the values and the needs of the community. And, in order to really effectively address sustainability through policies, we have to know where we're - we're going, where we want to end up in the long run.

So, with respect to water, this vision might include concepts of increased local food production, the use of water to supply large-scale solar/thermal energy generation locally, or water for other industrial uses that promote a green economy and enhance local job opportunities. These are just, you know, a few concepts to think about. But, what's most important is the pursuit of this broader vision should be constrained by the first two tiers: Survival of - of us and our system, and the preservation of options for the future.

So, as I was pulling my thoughts together for this, there were a couple of things that - that really were driven home about what sustainability means, or the consideration of sustainability. The first of those is that we recognize that our ability to see the needs of the future 's limited, and any attempt to define sustainability should remain as open and flexible as possible.

We should ask ourselves whether the policy decisions we're promoting are, in essence, making decisions for that future generation, and making decisions they'll have to live by, as opposed to preserving options so they can determine their own needs and values for themselves. This precaution also allows current generations to adapt to uncertainty and rapid and unexpected change, such as the financial crisis that we're all living through right now. I think that we often are inclined to tie our hands in order to preserve the things that we value but, in doing so, are we limiting the essential flexibility and capability for adaptation in the future?

My second observation is that - and this one's, I think, pretty obvious to everyone - sustainability involves

tradeoffs in all areas: economic, social, and environmental. It is impossible to have it all. And an extreme interpretation in any one of the areas, whether it's social, economic, or environmental, likely means that one or both of the other two areas are being under-served. So, we should look broadly to consider the multiple consequences of policy actions.

Three, sustainability is not about preserving the status quo. Without change, we stagnate and become unable to adapt to the changing natural economic and social environment.

Four, sustainability cannot be accomplished overnight. The need for change cannot overwhelm the ability of our natural, social, and economic systems to adapt to imposed change. In addition, the pursuit of sustainability is not just about achieving a desired outcome, but it's also a process. So, it's not just about having a vision for where we want to be in the future, but a set of principles that guide us in how we get there.

Accepting progress as a transition from where we are now to where we want to be in the future means that we have to have a vision of where we want to be; that the development of those collective goals and the process of moving forward towards them must be inclusive. We need to set short, medium, and long-term goals, take small steps, and review our success and use that information to adapt either the vision, the process, or both.

Five, no single approach to sustainable development or framework is consistently useful, given the variety of the environmental conditions, societies and economic and institutional structures. What is important is that there is a vision; it is developed through an inclusive process, all viewpoints are respected, and we don't forget our obligation of both preserving the natural life-support system, but also preserving options for future generations.

And my final observation is, at the same time, remember the local - the global context. It's easy to forget that the consequences of local decisions reach far beyond just our region to state and national and international levels. It's also easy in dealing with the day-to-day to forget the concept of sustainable development and sustainability came out of a struggle for peace, freedom, better living conditions, and a healthy environment. Similarly, we can't forget that defining sustainability is essential, a social and political decision.

So, I will end with what I think is one of the best definitions of sustainability that I've run across. It says that, "Sustainable development is positive change which does not undermine the environmental or social systems upon which we depend; it requires a coordinated approach to planning and

policymaking that involves public participation; its success depends on widespread understanding of the critical relationship between people and their environment and the will to make necessary change." Thank you.

CHAIRMAN JIM BARRY: Thank you, Leslie.  
(Applause.)

<p style="text-align: center;"><b>Presenter # 17</b> <b>Tedra Fox representing Pima</b> <b>County</b></p>
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CHAIRMAN JIM BARRY: Now from the County, Tedra Fox.

TEDRA FOX: Thank you very much for the opportunity to be here before the Committee. And I was going to present slides but, in lieu of that, I've brought some handouts and, hopefully, I have enough now for all the Committee members, and I apologize to the participants and the audience, but maybe we can make them available, or I'd be happy to send anybody a copy.

It's been a real pleasure to be able to participate and sit in on the last two meetings because we've heard so many thoughtful and constructive approaches to us a sustainable water future for Pima County, and so I've just really appreciated all of the wonderful public dialogue there's been, and the fact that there's been so much interest in this issue.

And what I'd like to do is share with you tonight, share with the Committee members, a little bit about the County's approach to sustainability and, specifically, talk about two - two tools that we've used to help establish a framework for our sustainability efforts, our County operational sustainability efforts. And the first of those tools is the concept of spheres of sustainability; and the second one is the use of guiding principles, which you've heard other speakers talk about as well. And so, in that regard, my talk will be a little bit more process-oriented in approach and, perhaps, some of the ideas may have applicability for the Committee or, at least, they could be jumping-off points for consideration, even when you talk about the next phases of your - of your work in your Mission Statement.

The - the first slide - I apologize for having to do this, and I apologize, too, because then some of the things, just because I don't want to lose anything for the audience - I'm going to end up reading a little bit more than I would. But, just to begin with, in May of 2007, the Board of Supervisors adopted a Resolution that included a far-reaching set of sustainability initiatives, and those initiatives addressed a variety of topics. Everything, as you can see on

the slide, from green building and renewable energy, to waste reduction, to very importantly - and why we're here today tonight - water conservation and management. And what the Resolution recognizes is the environment, the economy, and the social dimensions of our community are inextricably linked, the triple-bottom-line, like we've heard a lot of people mention.

And sustainability, to me - this is now my personal opinion - is really about making decisions that are going to elevate all three of those. And I'm going to sound a little heretical probably compared to Leslie, but I think it - I think sustainability is about trying to elevate and enhance all three, and not necessarily about balances, because purported balancing acts are, to some extent, how we got to where we're at because, in balancing, typically, something is being given and something is being taken away. So, I think the concept is that we do try and elevate all three of those things at once; it may not be every aspect of it, but we try our best to. And, of course, the most fundamental building block of sustainability is people, and the ability of people to meet their basic needs and, also, to aspire to their full potential; that has to be the very essence of sustainability and everything builds upon that.

As I mentioned, the Board provided us with a very far-reaching Resolution, and so one of our first challenges was to determine the best way to effectively implement that so that we could meet its ambitious goals, and so we started thinking about different frameworks. And the Steering Committee that was assembled to take this task on saw that the Resolution intrinsically gave rise to three distinct spheres of sustainability, and that's what's on the next slide. And the first of those spheres is the County operational sphere, and that's the sphere where the County looks inward at itself and says, "What can we do? How can we improve our practices to make them more sustainable throughout our County operations?" And we thought it was very important that the County do that first, identify our own best practices, before moving on to the second phase of our planning, which is the community-wide sustainability planning that we want to initiate in the beginning of next year, hopefully, with a lot of public and private partners.

Then the second sphere of our sustainability planning is really the community scale where we ask the question, "What programs and services can we provide at the community scale to enhance sustainable living community-wide?" And then, finally, we've got the regional scale, the largest scale, where we look at, "How can we coordinate and collaborate with public and private entities to work on issues of regional importance, like water, like land use, like transportation, and like renewable

energy?" And so we found that a very helpful way for organizing what is a very large all-encompassing topic, as we've all learned sustainability is.

So, the next slide shows spheres of water sustainability, because I think it might be helpful, possibly, to think about sustainable water planning also in terms of different scales in terms of policy development and actually coming up with very specific recommendations. And so - and anytime I think you take - you have a very multi-dimensional topic like sustainable water futures - I think it helps to break it down into its component pieces. So, this slide shows three spheres. The first is the home business sphere, and topics that could be addressed under that are things like green building, landscaping, efficient use of appliances, small behavior modification items, like taking shorter showers, obviously, you know, turning off the faucet when you're brushing your teeth, rainwater harvesting, gray water reuse, and there are a lot of overlap between these - the different spheres.

The next one is the neighborhood community design level where we would look at some bigger issues, like permeable paving materials, green infrastructure for flood control in order to facilitate more groundwater recharge, how we're going to landscape common areas in roadways and median areas, community pools, perhaps, promoting those over individual pools, but still giving people the option, looking at community gardening opportunities, because we know the importation of food requires a tremendous amount of energy and, whenever you have a tremendous amount of energy being used, you have a lot of water being used, mixed-use development to create more walkable communities. There are examples of neighborhood community design, policy initiatives that could be created to achieve a sustainable water future. And then, of course, the regional issues which we've heard a lot of people here tonight very articulately explain, you know, population growth, smart growth, sustainable development, how we're going to address groundwater pumping and recharge. I'm just mentioning these as topics, and I'm not proscribing a direction for any of these. Certainly looking at the cost of infrastructure and energy for wastewater and water operations, groundwater-dependent ecosystems, the health of the Colorado River ecosystem as well, public transit and, finally, water rights and collaboration. So, those would all be important topics to try and address, to come up with some policy directive under regional issues. And, again, I recognize there's a lot of overlap.

So, at the County, as I mentioned, we began our planning efforts with - at the County operational level, and that's the next slide, and we created a Sustainable Action Plan

for County operations, which underwent public review and now is in final form, it was adopted by the Board in August, and it's available online.

And what we did is we assembled multi-disciplinary teams representing 22 different County departments, because we believe - like this process believes - the more perspectives, the more people you have involved, the more ideas and creativity, the better product that's going to come out of the process. So, we brought these multi-disciplinary teams together to work on different topics in that Board Resolution. And, of course, one of the very important topics was water conservation and management. And so we first began with an understanding of the Board of Supervisors' directives regarding that.

One of their first goals was that the County cut water use in all of its facilities by 15% by 2015; that we double the number of parks using reclaimed water by 2018, which would bring it up to a total of 18 parks; and that we maximize our County water rights assets to sustain and protect our natural environment. So, those were the three goals - again, this is at the County operational level, not addressing community-wide planning yet.

We then began conducting inventories of our existing success stories. What are we already doing right? What are our practices that are already contributing to sustainability? And - and where could we go further and where are the gaps in those practices?

The next task that we did is we developed - for each of those topic areas, including water conservation - and that's the next slide - are guiding principles, and we found the guiding principles very helpful in taking us from our point of origin, which were the - the large-board goals and measurable targets, to our destination, which was coming up with very specific action items that specific departments would be responsible for implementing and held accountable to, and it - the principles, essentially, became our roadmap; they guided us there. And anytime we brain stormed and we thought of an idea or an activity, we could measure it against the principles. Does it achieve all of these? Is it helping us further? And, in the future, if there's a new program or an idea that comes up, it gives us a way to evaluate it.

And so we found the concept of the guiding principles very helpful for kick-starting our effort and we developed 32 specific recommendations for enhancing water conservation and management at the County, and it's actually a quarter of our Action Plan. We have 119 action items, eight topic areas, and a quarter of them are devoted to water conservation; that's what

an important issue it is, and we realize it touches so many different areas.

And we also came up with - as Leslie mentioned - all sustainability plans now have success indicators, so we came up with six measurable successor indicators so we could determine the progress that we're making on an annual basis and report that to the public, as well as to the Board of Supervisors.

The next slide for the (inaudible) is - is to suggest that, perhaps, you could also have a principle-driven water future, or a sustainable water planning process as well. And I included a quote from Ralph Waldo Emerson regarding the use of principles, which I thought was very interesting. I'll go ahead and read it, since we can't project it. He said, "As methods, there may be a million and then some, but principles are few. The man who grasps principles can successfully select his own methods. The man who tries methods, ignoring principles, is sure to have trouble."

So, what I was really struck with when I - especially at the last meeting, because I was able to hear the - all of the public comment, were the number of very strong principle statements that could form the foundation of an implementation strategy for water sustainability. And so what I tried to do on the next slide is capture those, and these are just a handful of the things that I heard from the community as they spoke, and there - you know, my paraphrasing, of course, to some extent - but, I'll go ahead and read those because I think that they are an example of what could be a very strong foundation, whether the Committee accepts these, it's just - it's the concept of driving us towards a preferred future and giving us direction for future action.

So, the first of those things that I heard was that: Conservation should always be treated as a first priority in water management, because it is often the easiest and least expensive step.

Second was: Recognize, protect, and manage water resource assets as a public good. We heard a speaker explain in detail about water managed by private entities versus public entities, and there's just some competing interests, obviously, involved there.

Third, link development policies with appropriate levels of groundwater extraction.

Four, maintain the health and biodiversity of riparian ecosystems, including the Colorado River.

Five, the development and operation of regional water systems should satisfy carbon reduction goals; and

Six, engage the resources and talents of all the region's residents in the development of a sustainable water plan.

That's just a sampling, of course, there were so many excellent ideas, but just as - how - how you can, essentially, take those principles and think of them as the hub of a wheel - and maybe a better analogy in this case, I guess, would be like the headwaters - the headwaters of a watershed and then from those headwaters could flow out of those principles very specific actions and initiatives and recommendations. So, that is just one idea for, you know, possibly framing a sustainability plan that I would just offer to the Committee for consideration.

And I think it's wonderful that so many people have such full and inclusive definitions of sustainability. And I was going to read one that - that was actually authored by school-age children when they were preparing a green map of lower Manhattan and it's: "Sustainability is living, working, eating and playing in ways that will not jeopardize the health of the planet or the quality of life for all cultures, species, and generations to come."

And, just like this definition, and Leslie mentioned, quality of life as well in her definitions, our Pima County Board of Supervisors have a definition of sustainability that appeared in the Resolution that was adopted in 2007, and it also emphasizes quality of life and that definition is: "Improving the quality of life of current generations without compromising the resources needed for future generations." So, that is how it's being defined at - at Pima County, and I thank you very much for this opportunity to provide a presentation.

CHAIRMAN JIM BARRY: Thank you, Tedra.

(Applause.)

CHAIRMAN JIM BARRY: Call to the Audience?

(No response.)

CHAIRMAN JIM BARRY: I'll entertain a motion for adjournment.

UNIDENTIFIED MEMBER: (Inaudible).

CHAIRMAN JIM BARRY: No objection?

(No response.)

CHAIRMAN JIM BARRY: We made our 8:00 o'clock.

(Conclusion of meeting.)

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**CERTIFICATE**

I hereby certify that, to the best of my ability, the foregoing is a true and accurate transcription of the audio recording of (Sustainability Discussion) of the City/County Water & Wastewater Study Oversight Committee Meeting held on October 29, 2008.

Transcription completed: November 6, 2008.

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DANIELLE L. KRASSOW-TISDALE