Transcript of April 23, 2009
City/ County Water and Wastewater Oversight Committee

CHAIRMAN JIM BARRY: I'm going to do what we can and I am not going to look at Chris Avery while I'm doing this. We will not do Call to Order. We will not do approval of the March Meeting Summary. We'll do Call to the Audience. If we get a quorum, we'll do those things.

Anybody in the audience who wants to talk now?

(No response.)

CHAIRMAN JIM BARRY: Excellent. I move for adjournment. We cannot do the requested change to Executive Summary. I'm sorry.

Let's talk about Phase 2 process, 'cause I think we need to - we need to deal with some of those things. Is that agreeable to the Committee?

VINCE VASQUEZ: Can we -

UNIDENTIFIED MALE SPEAKER: Sure.

VINCE VASQUEZ: - we at least hear what the recommended thing is. We don't have to take action on it, but just understand what the - change is?

UNIDENTIFIED MALE SPEAKER: No, let's make sure -

CHAIRMAN JIM BARRY: No.

VINCE VASQUEZ: No?

CHAIRMAN JIM BARRY: No.

VINCE VASQUEZ: Okay.

UNIDENTIFIED MALE SPEAKER: Because we're going to hear it again when we do it.

CHAIRMAN JIM BARRY: Huh?

NICOLE EWING-GAVIN: (Inaudible; speaking quietly.)

UNIDENTIFIED MALE SPEAKER: Yeah, the change was -

CHAIRMAN JIM BARRY: The - the change was - was emailed to people, but -

UNIDENTIFIED FEMALE SPEAKER: Right.

CHAIRMAN JIM BARRY: - it's just as soon as that we not have any kind of conversation about something that we - we wanted to take action on, okay?

There - there - it seems to me that we need to talk a little bit again about Phase 2 and what we hope to get accomplished in Phase 2. It was always my understanding that, in terms of process, Phase 2 was going to be a reverse of what Phase 1 was. Phase 1 was of necessity, a very intense Staff-driven process. We heard presentations. We did not do that much discussion.

Phase 2, we're supposed to have the materials from Staff, or whoever is presenting, a couple weeks in advance - and there is the assumption that we'll all read that stuff and have notes and that - and that what's supposed to happen in these kinds of meetings if that the premium is on Committee discussion.

And - and I think that when we sent out the first draft of the - of the Agenda, it looked like a typical Agenda from Phase 1, where it looked like it was going to be Staff presentations and that we might have some time for question and answers; that's not what we should be doing. I mean, I think we need to understand that these meetings are going to work only if we're - if we're talking.

I - I do think that it - we should make some decisions about how we want to let the Staff and the audience interact. We might want to open it up more. But, are we all agreed that that's what we're going to do? That we're going and look and review these materials beforehand and that we're going to come here prepared to talk, discuss with - with each other? Mark?

MARK STRATTON: Yeah, Jim, I - I completely concur with that and - and I guess I look at it from the standpoint that, you know, having this material - and I thought the reports that were written are the right size to really be able to get into it. But I think you' re right, we need to do our homework before we get to these meetings and be ready to discuss what those documents are, and have the authors of those documents here to be able to answer questions we may have, allow some public dialogue, as well as input - probably at a certain point of the dialogue so that we aren 't always listening

to the public and not having our own dialogue - but I think it does allow for better interaction where the outcome of whatever is done is based upon consensus of the - of the Committee.

CHAIRMAN JIM BARRY: I agree. Does anybody else. . . Marcelino?

MARCELINO FLORES: I think somewhere in the scope, or the scope we had iden- - we had called for a couple of other deliverables, and that was to try and identify tools that the City and the County could utilize, and also areas where the goals and values align. And I - I don't know if we were explicit, but also try and find where - or explain reasons for why goals and the values may not align, so I think that - there was a little bit more within the scope of work that we had for Phase 2 in terms of deliverables, what we're - products we're expected to provide.

CHAIRMAN JIM BARRY: You're right. I - I was envisioning that we had to talk about process and then we had to talk about substance -

MARCELINO FLORES: Okay.

CHAIRMAN JIM BARRY: - I think you're bringing up substance.

But, I just wanted - we're agreed that - that what we're - what - Phase 2 will work, these meetings will work if the premium is on our interaction among ourselves, with the Staff and with the - with the public if we're going to structure it that way. Any - Bob, what do you think?

BOB COOK: All of the above.

CHAIRMAN JIM BARRY: Yeah. I think that it's worthwhile thinking that we're going to have a meeting like this and we're going to talk about some Staff papers or - or Val Little's paper, and that's not the end of what we're concerned about. I think that's the beginning of a process.

We may very well give some suggestions on rewriting. I think we ought to consider all of these as subjects still open. We ought to invite written comment or - or verbal comment from the public. And that our final product is going to be sometime in September, and we're going to revisit what we do tonight, what we do in May and what we do in June and July, and come up with the final report. So, these are - these are documents in process; that this isn't our only cut at drought management or - or reclaimed water or whatnot; that - that we - we can hear what all of us have to say, the Committee, or what the audience has to say, the public has to say, what Staff has to say, and we may

want to submit - and I would encourage all of us and the public to submit comments, and - and we'll keep looking at those and refine those - those documents.

So . . . let's - let's be agreed that this is not going to be heavy on presentations from Staff; this is going to be very short on presentations from Staff; it's going to put a lot of premium on Staff to present good products to us two weeks in advance or earlier, and it's going to put a premium on all of us who have read and thought through that stuff and come in - Mark?

MARK STRATTON: I guess I just want to clarify. Based upon the reports that are being prepared, is it our charge to then produce a set of recommendations based upon those reports that then will go the Supervisors and Council?

CHAIRMAN JIM BARRY: Okay. That - that's getting us more into substance. So, let's talk about - about substance, and - and agree. Here's my understanding of what Phase 2 is about: We are looking for agreement between the City and the County on - on a series of subject. We're not solely interested in agreement among the Committee members as we are the level of agreement between the City and the County, and the level within the City and the County at which that agreement should take place has gone higher than it did in Phase 1. I think we are now talking about agreement between the Mayor and Council and the Board of Supervisors; between the City Manager and the County Man- - County Administrative - no disrespect intended - not so much Tucson Water or Pima County Reclamation; they're important players, but it's more important what the Mayor and Council and the Board of Supervisors and the management is going to do; that's number one.

Number two, it seems to me that what we want to come out of here are action-oriented items; not a report on - on reclaimed water, but what ought we do about reclaimed water; not a report on population, but what are we going to do about urban form. Okay. So, we want action-oriented.

If Staff comes in and gives us an action Agenda that we agree with, then let's - if we don't agree with it, let's push 'em. And if we can't get an agreement between Staff and us, then we'll tell the Mayor and Council, Board of Supervisors, what we think Staff is not doing, okay?

I think it's important in this phase that we think outside the box. Are we being taped? Ah, phooey.

UNIDENTIFIED MALE SPEAKER: That camera's right on you.

CHAIRMAN JIM BARRY: I don't want to pee in the wind, but I do want to think outside the box. I think we want to look to the future.

We all agree - we all agree that Tucson Water, Pima County Regional Wastewater Reclamation Department are extremely professional, well-run departments, but let's look to the future. There's always something new to do. Let's not rest on our laurels. Let's look to the future. So let's look outside the box and not just say, "We can keep doing what we've been doing in the past." And if we get in a tussle with - with the Staff, that's all right. Vince?

VINCE VASQUEZ: How do you propose or see us resolving disputes between ourselves or if the Committee's split? Is it . . .

CHAIRMAN JIM BARRY: We report that. We'd simply report it.

VINCE VASQUEZ: To - to record votes on various things, or we just record that there's not consensus?

CHAIRMAN JIM BARRY: That's - that's something that we should decide. My druthers is we record, we don 't vote. But if - if the Committee wants to vote and - just so if it's important that it's six-to-four, to say that, or whether it's important to say there was a difference on - on how important growth is as opposed to controlling growth, we'll see how that plays out. But, I don't think we need to try to force agreement on ourselves. Okay.

And the last thing that it seems to me to be important substantively is that I'm starting to look at all of these things and I don't see how we can think about any of 'em except in a - in a larger geographic context than what we've been doing so far. I mean, for instance, I'll raise this question with drought: I understand that Tucson Water wants to think about regional drought, and I understand that the County wants to think about local drought, but what in the world - where - we're in a drought. Who's "we?" I mean, what - what is the "we" that we're talking about? Is it the Sonoran Desert? Is it the Climate District that CLIMAS talks about in Southern Arizona? Is it the watershed? I mean, I think we need - we are going to be forced to look in a larger geographic context in every one of the subjects that we come up with. We have a quorum.

(Applause).

BONNIE POULOS: Sorry, I -

CHAIRMAN JIM BARRY: And so . . .

BONNIE POULOS: - (inaudible). Sorry I'm late. I apologize.

CHAIRMAN JIM BARRY: You can - you can be anybody you want.

BONNIE POULOS: Anyone I want. Thanks.

CHAIRMAN JIM BARRY: All right. We have a quorum.

BOB COOK: We have different spacing on this side.

JAMES WATSON: We have plenty of room.

CHAIRMAN JIM BARRY: We're talking about - about Phase 2, Bonnie, and we kind of agreed, I mean, that in terms of process Phase 2 is supposed to be interaction between us; it's not supposed to be presentation from Staff, but that makes the premium that Staff gets us good products and there's a premium that we read it beforehand and we come ready to discuss.

And I think that we're in agreement that discussion we may have tonight about drought doesn't end the discussion for Phase 2 about drought; it's just a beginning; that subject remains open until we complete it sometime in September, or whenever we get around to doing it.

And, in terms of - of substance, I think - I was talking - and I'll just summarize it real quickly and then I'll let other people disagree with me - we're - we're looking for agreement between the City and the County, not between us, and we're looking at it at the level of Mayor and Council and Board of Supervisors, not at Staff.

We want action-oriented items. We don't want to have a report that says, "This would be nice." We want to suggest things that the Mayor and Council and the Board ought to adopt, fund, approve, adopt an ordinance and whatnot. We want to think outside the box. I won't put my proviso on that about doing something in the wind, and we need to always - all - every one of these subjects is going to make us look at a larger geographic context. Okay. That's as far as we've gotten in the discussion. So, what do you think?

BONNIE POULOS: You put me on the spot now.

CHAIRMAN JIM BARRY: Well, you're late.

BONNIE POULOS: I told her I was going to be late. I do think that for this Phase 2 to be effective we really do have to come up with some strategic items that Mayor and Council and the Board of Supervisors could consider for a plan of action on the various things, and then I think this is probably their job, but also indicators of whether or not we're successful as a community in meeting those goals might come out of these discussions as well.

CHAIRMAN JIM BARRY: Bob?

BOB COOK: You know, I think it's - it's very interesting the, you know, where we are now compared to where we were when we started this process a year ago. It . . .

CHAIRMAN JIM BARRY: It is a year ago now. That's right.

BOB COOK: It's been a year since we started this, and I think we're all much more informed about, you know, the changes that are going on that affect this particular set of infrastructures, as well as the - the larger questions of moving forward in the region. And so I think that we have a few more things to consider now, and I think that this summer will be a good time to - to reflect on - on those things. And I agree with Bonnie about - about framing some of the strategic issues.

When - when Chris gave the presentation on the - the Drought Management Plan that the - that the users of the Colorado River developed, each of the jurisdictions or, you know - I was very interested in just that methodology, and I think that that's something we - we might want to do in other areas because it's a type of contingency planning, and I think that in - in an uncertain period I think we need to have multiple ideas about what to do given how conditions actually evolve.

And so, you know, coming up with one solution doesn't seem to make a lot of sense in a - in a complex, rapidly changing environment. So, I think we should think about this drought management issue as also a methodology for thinking about planning itself; how we - how we approach the uncertainties going forward.

CHAIRMAN JIM BARRY: Anybody else have a plan?

(No response.)

CHAIRMAN JIM BARRY: Let me bring up another item, ‘cause we’re - we’re still hearing that there is unhappiness about the public process. Mayor and Council and the Board of Supervisors designated us as the "public" for this joint stuff. We ’ve done what we can to do outreach, but there are people who are still unhappy.

Now, it’s my recommendation that we keep extending the invitation for people to submit comment, but that we don’ t change the table. What does the Committee think? Mark?

MARK STRATTON: I - I think that you’re right. I mean, this is a City/County Committee and, when you look at the total package of what is envisioned to be accomplished, there’s Phase 3 and 4 that follows this, that does bring in the other entities. And I think that from the City/County standpoint, it’s our charge to tell them what we think needs to be, and if that includes reaching for collaboration with other jurisdictions or other entities, then it’s upon them to ensure that that then does get does if they - if they agree.

CHAIRMAN JIM BARRY: Marcelino?

MARCELINO FLORES: Well, we spoke of how we need to expand to a larger geographic context and what are we talking about? The watershed? The CLIMAS District? And I - and, in that regard, I think you begin to see that there are other stakeholders that need to be brought to the table, but I don’t even believe it’s limited there. I think there’s a real strong role for like the State Water Department to have some sort of input into what we’re - we’re discussing at some point or something, because they’re responsible for a great amount of information, and I don’t know if they can provide assistance or not.

So DWR, you know, that’s - that’s an organization that I think needs to be aware of our efforts, our activities, and we’re not in isolation from them. I was thinking of also another group, but it’s not coming to mind right now. But, I - I don’t know if that necessarily means the table needs to be changed, but even - even with the scope - 3, 4 and 5 including the other jurisdictions, we’re still not looking to - to those technical agencies that could provide assistance as well.

CHAIRMAN JIM BARRY: Vince?

VINCE VASQUEZ: It - it is and has been, you know, my concern that not bringing to- not bringing people into the process that really want to be in, and probably should be, sooner than later, it threatens the - the viability of this plan, and so to the degree that we can bring them in or accommodate them in some way, or - or even practice some restraint so that real big decisions aren't made before they're invited to the table.

I think that's one of the biggest concerns is that, you know, the table's going to be set, you know, the meal's going to be served, and - and then they'll get brought after, you know, half - half of it's pretty much completed, and so that might involve some restraint in what our policy recommendations are at this point because we're not considering a full host of options, or the full host of opinions that - that are valid and really, if we don't include them at the table, then it is somewhat of an incomplete statement on a regional plan and so that's . . .

CHAIRMAN JIM BARRY: Bonnie?

BONNIE POULOS: I have a big problem with the Pima Association of Governments because the City of Tucson and - and rural Pima County make up a single vote each on a committee that influences a lot of what happens in this community. And I view this committee a lot in the same way. I don't think that having the City and County at this table for Phases 1 or 2 does anything to diminish the viability of this Committee.

I feel that since Tucson Water and Pima County Wastewater have put in 75 - or cover 75 to 95% of the service area, they've put in pretty much 100% of the infrastructure, I believe that this discussion has to happen now with us and we have to reach agreement as the two major entities before we can really start a broad-base discussion.

And I think that this Committee has looked at things regionally. I think the table has always been willing to hear from the public and incorporate their ideas into this Committee, and I feel like at this point I agree with the City Council and the Board of Supervisors that this should be the make-up of this Committee.

CHAIRMAN JIM BARRY: Marcelino?

MARCELINO FLORES: But then the question is vague, "How are we representative of the region?" We're each, you know, appointed from our - our respective Water and Wastewater Advisory Committees. We're -

BONNIE POULOS: I think . . .

MARCELINO FLORES: - not necessarily representatives of the region, and how do we begin to represent the region?

BONNIE POULOS: That comes after Phase 2, when I think we've examined the inventory; decided on what's available and what we think might be available in the future; where we, as the major players, see the community going in the future; and then sit down and have the discussion of how are we really going to deal with the important issues in the future?

And, I'm sorry, but I don't see why we have to keep coming back and beating this point when really we were charged with trying to hear from as much of the public as we can, and that this was the make-up of the Committee that we're charged with. And I think this is a fruitless conversation to keep discussing whether or not we should change the Committee.

If we think that we're going to fail in having a regional dialogue, then what we need to do in Phase 2 is look at it as regionally as possible in the kinds of white papers that we come out with; that's what we're charged with doing and I think that we can do that, and that the time for bringing the other users and providers to the table is spelled out very specifically in what we were charged to do, and that's in the next phase.

CHAIRMAN JIM BARRY: It seems to me that the Mayor and Council and the Board of Supervisors in establishing this Committee recognized that they weren't creating a regional dialogue; they did that on purpose. They envisioned us looking at them first, and then there being a regional dialogue. I don't think that - that we should try to change our focus.

I mean, it seems to me that if there is such a pent-up desire for a regional dialogue, why in the world are they worrying about us? I mean, for God's sake, we're just a group - a small group of people who are doing a small task. If they want to have a real regional dialogue, call it, convene it. We're not - we have always known that we were not going to morph into the regional dialogue.

We - I know Bonnie doesn't like this - but we're going to go out of existence as soon as we can get Phase 2 done. We ought to just get Phase 2 done as quickly as possible and get out of the way, what we have. With that being said, I do think that we need to - to be cognizant. We need to be solicitous of as much input as we can get from whoever is willing to give it.

We - we made a number offers for input in Phase 1, but we didn't get a whole lot of response from it. We will send out another letter, over Marcelino and my signature, to everybody on that list saying, "Here's what - Phase 2. Here's our schedule. We invite your input." If they do, that's terrific. Well . . . we're going to dock your pay. No sandwich. And - and we ought to see what we can get.

I mean, we had an offer on the table for Phase 2 to do all - kind of a truncated, focused stakeholder conversation, where we would invite them to formally submit; that fell apart. I mean, we tried to do it. We're not going to change the table. We're not going to present ourselves as the regional decision-makers, and we ought to get on with it, but we ought to be aware that we ought to try to get more - if there's people who want to submit, we ought to make sure that they know that we welcome those - Vince?

VINCE VASQUEZ: I guess I want a little clarification because the - what the - the conversation it sounded like that Bonnie proposed where we have our regional hat on sounded different than the conversation you propose where we have our Mayor and Council and Board of Supervisors' hat on, and so I just want a little bit of clarification.

Are we - are we to look at this regionally and to make decisions in that context, or are we to make decisions per these two jurisdictions, elected bodies, general policy frameworks?

CHAIRMAN JIM BARRY: Can I answer that -

BONNIE POULOS: Sure.

CHAIRMAN JIM BARRY: - from my perspective?

BONNIE POULOS: Go right ahead.

CHAIRMAN JIM BARRY: Our focus is the City of Tucson and Pima County, but what I was trying to say is that in every one of these discussions, we can't ignore the larger regional

context. And by "regional" I mean Tucson Active Management Area; I mean Sonoran Desert; I mean the Colorado River Basin; I mean the Southwest. There are a large number of other regional contexts. We ought to be aware of that and we ought to contemplate, but we can't solve regional problems.

We are going to make recommendations on things that we think the City and the County ought to do, but we can't ignore those other regions. And we may make recommendations like they ought to be talking with all of the other jurisdictions, or they ought to be talking - they ought to - there ought to be a regional dialogue on the ADD process or - or what - there's a whole number of things that we could say in terms of recommendations of action items, but we're not going to solve those. We're not going to say where that water ought to come from.

But we do - so our focus is on the City and the County, though it is on - I think in Phase 2 on more than just Tucson Water and Wastewater, because when we get into the whole discussion of - of growth, we're talking about the Development Services' Planning Department, or when we're talking about reclaimed, we could be talking about parks as - as - as a client of reclaimed water, you know. So that's how I look at it. Bonnie?

BONNIE POULOS: Vince, I think that we have been trying to look at this from a regional standpoint, and - and I think it's pretty obvious. I mean, the City and the County, the rural County population, makes up the vast percentage of people in this region and, because we are representative of those groups, I think all of us have chosen to look at this regionally.

My problem is with the political and financial tug-of-war that I see happening with the smaller providers in some of the other jurisdictions - and I'll bring up Oro Valley as a good example - of taking Pima County to court to, essentially, take over a wastewater treatment system -

UNIDENTIFIED MALE SPEAKER: Marana.

CHAIRMAN JIM BARRY: Marana.

BONNIE POULOS: - Marana - sorry - taking over -

CHAIRMAN JIM BARRY: They all look alike.

BONNIE POULOS: - a wastewater system that we all paid to put in place, and I don't want to go there in this dialogue and I don't want to deal with those kinds of issues at this table, but I

think that if we can look beyond those political jurisdictions and those kinds of issues of whether or not we want some kind of regional authority, that's something that will be decided down the road.

And what we need to look at is what we've been charged with, and that is the two major service providers and what we have available and where we see the future going in rural Pima County and Tucson and how it applies to the region. I don't think we're ignoring the regional issue, and I don't think we have since we started.

CHAIRMAN JIM BARRY: One more comment and then we're going -

VINCE VASQUEZ: All right. And I - 'cause I do agree it's a fruitless conversation, 'cause if I remember I put a motion out there at this and it didn't get seconded; right?

CHAIRMAN JIM BARRY: That's right.

VINCE VASQUEZ: But -

CHAIRMAN JIM BARRY: I may have killed it before it could have gotten -

VINCE VASQUEZ: I prob- -

CHAIRMAN JIM BARRY: - a second, but . . .

VINCE VASQUEZ: - probably. But, I guess, you know, going back to the original discussion which happened early on in Phase 1 if I remember is - when - when - the people petitioning this Committee suggested that it be opened up to a greater - to a greater - a greater representative population, whatever, it - it was basically said, "Hey, Phase 1 is going to be an inventory. We're counting pipes. We're counting resources. We're not going to be making any big decisions in - in - you know, in this phase. We will reconsider it because it is something we should pause at before we enter a values discussions, and now we are entering a values discussion and we are going to be making policy recommendations that will have - either directly or indirectly - be affecting impacted - impacting parties that are not represented here, and we should at least pause at that for a moment and - and, I guess, practice some form of restraint when we come up to places in our - in our policy discussions where there are clear impacts that go beyond the City and the County.

CHAIRMAN JIM BARRY: Okay. I'm going to call it off there.

BONNIE POULOS: That's - that's . . .

CHAIRMAN JIM BARRY: That's it. I mean, we can beat this horse to death again. I think we'll probably continue to - to run up against it.

Let's go to Item 4, Requested Change to Executive Summary. Eric? I'm sorry. Michael?

MELANEY SEACAT: I do have a handout on the change.

CHAIRMAN JIM BARRY: Michael?

MICHAEL GRITZUK: Hi, I'm not Eric Wieduwilt. I'm standing in for him. My name is Mike Gritzuk. I 'm the Director of the Wastewater Reclamation Department.

We would like to suggest a change in your Executive Summary in Scope Item A, and I think you have that page in front of you now. And if you go down to the - the fourth dot point, "Pima County Wastewater will need to make significant investments in its treatment facilities to meet new wastewater quality standards," the change that we suggest you make is remove the word "new" from new standards because the standards that we are attempting to meet in the ROMP Program have been around for a while, and - and - a number of years, so these are not "new" standards or new requirements.

So, in that - that section you have "new" in the title and we suggest that it be removed from the title. And then you also have it in the fourth line down - the third line down, which starts, "This is primary the result of the - of the need to meet" - and there you have the word "new" in there again - remove that so that it would read, "meet more stringent wastewater quality regulations," and I think that would be a more accurate representation.

JOHN CARLSON: Why don't we get rid of "more," too; that indicates something new.

MICHAEL GRITZUK: Well, it is more stringent.

JOHN CARLSON: Than what?

MICHAEL GRITZUK: Than what we're currently treating to, the level of treatment . . .

JOHN CARLSON: Not more stringent than law.

CHAIRMAN JIM BARRY: Mike, go ahead, please.

JOHN CARLSON: I'll wait for him.

MICHAEL GRITZUK: Do we want to discuss that item?

JOHN CARLSON: I'll wait.

CHAIRMAN JIM BARRY: No.

MICHAEL GRITZUK: Okay. All right. The - the next correction is to remove the sentence that you have in red that reads, "The wastewater system in central Tucson is at or near capacity," and our biggest concern is the word is "at" capacity, which is not correct. So, we're suggesting that the substitute sentence be as you see there in blue, "The wastewater system in the central Tucson area is projected to approach capacity in the future."

Now, let me give you the reason why we're suggesting that change. The three treatment facilities that are at issue here is the Roger Road Facility, the Ina Road Facility, and the Randolph Park Facility, and when you compare capacity to the designed capac- - actual flows to the designed capacity, this is the way it - it sizes up:

The Roger Road Facility is currently at a 41 MGD capacity, 41-million-gallons-per-day capacity, and the flow going to Roger Road currently is 32 million gallons per day.

The Ina Road Facility is currently at 37-1/2 million gallons per day of capacity. The flow going to the facility currently is 29 million gallons per day.

And then the third facility at Randolph Park, the capacity is 3 million gallons per day, and the flow going to that plant is 2.6 million gallons per day. I need to explain that Randolph Park is a scalping plant; it's within the service area of Roger Road and we kind of steady flow the flow to that plant at about 2-1/2, 2.6 million gallons per day. We can vary that flow from zero to three.

So, when you add up the capacity, the capacity is 81.5 million gallons per day of the three plants. Current flow to the three plants is 63.6 million gallons per day. The difference there between current flow and total capacity is about 18 million gallons a day of reserve capacity, and that's more than 20% of reserve capacity compared to the total capacity.

So, that's the reason why we'd like to see the change in that wording. It would be dangerous if you had the wording there "is at" capacity and some regulatory agency read that and they'd be knocking on our door.

CHAIRMAN JIM BARRY: Now, let me ask a question, Mike. That language - this is specifically from the Executive Summary, but -

MICHAEL GRITZUK: Yes.

CHAIRMAN JIM BARRY: - this language appears in Chapter 3, Chapter 3, and it also appears in whatever is the chapter that is the separate themes - Committee themes - but there is a separate section that takes the - the section of the Executive Summary, that's the themes things and has that separate. So, there's three places that you need to change this -

MICHAEL GRITZUK: So . . .

CHAIRMAN JIM BARRY: - am I wrong?

NICOLE EWING-GAVIN: (Inaudible; not speaking into a microphone.)

CHAIRMAN JIM BARRY: Oh, it's not going to be a separate chapter? Okay. So, there's two places it has to. . . okay.

MICHAEL GRITZUK: All right. We - I've seen the wording in Chapter 3 and we've made those changes to correspond to what I just said. Now was there a third location?

CHAIRMAN JIM BARRY: No.

MICHAEL GRITZUK: No. Okay. So we're okay?

JOHN CARLSON: Can we get some perspective, say, in the future?

BONNIE POULOS: That's what I was - yeah. Mr. Chair, I was going to -

JOHN CARLSON: (Inaudible; not speaking into a microphone.)

MICHAEL GRITZUK: Okay. The - in our ROMP Program, we're designing everything to the year 2030, all right? And the capacity, the 81.5 million gallons that I just mentioned in the ROMP Program would grow to 85 million gallons per day. So, again, we're designing everything to 2030. By the year 2030, we'll reach 85 million gallons per day. Right now, we' re at 63.6 million gallons per day.

CHAIRMAN JIM BARRY: Bonnie?

BONNIE POULOS: Well, I - to - to dovetail with that, I was thinking that I know you took the word (sic) "at or near capacity," but the future can be anything from now to 2030 to 3030, and I was wondering if putting the word (sic) "near future" because that kind of gives it an imperative, but doesn't state that we're at capacity, but makes it obvious that there's an imperative to make the proposed changes that were done.

So it's just a suggestion; I mean, I won't vote against it if it's not there, but I think to simply say that we're going to reach capacity in the future is kind of a nonsensical kind of statement, 'cause that's going to happen if we keep growing. So, I think kind of stating it that it's going to happen at some point between now and 2030, or in the near future, I think makes it more obvious that there is a need to do these improvements.

CHAIRMAN JIM BARRY: Bob?

BOB COOK: I think that - yeah, I was going to ask the same question that John did. At 20% excess capacity is that what you're saying?

MICHAEL GRITZUK: A little over 20% today.

BOB COOK: A little over 20%, and I'd be curious what the - what the projections would be at - at a half percent population growth and a one percent annual population growth, rather than the two or three that you're - you're using. At - at 20% excess capacity, it won't be the near future when we hit capacity; it'll actually be much further at current population growth.

MICHAEL GRITZUK: It'll be approaching 2030.

BOB COOK: So, I think the big issue here is not the challenge of meeting the regulatory requirements, but - but justifying the - any increase in capacity because 20% excess capacity tells me that we have comfortable excess capacity right now and that I think, you know, the - the population issue is the issue.

VINCE VASQUEZ: Aren't - aren't there - the 85% capacity rule, is that -

MICHAEL GRITZUK: I was just about to mention that. At 85%, we have to notify the regulatory agency on our planning effort to increase capacity. So we're not at 85%, but we've

already notified THE regulatory agencies in the - in the reporting that we've done to them in the ROMP Program.

CHAIRMAN JIM BARRY: Rob?

ROB KULAKOFSKY: Yeah, I - I disagree. I think that we really - that the regulatory end of this is much more important than the capacity end of it, and that's why Roger Road and Ina aren't going to be hugely enlarged or the new facility at Roger Road.

And then maybe what we can do is reword this so that we can say "near future" without completion of ROMP and that way, you know, we'll reach capacity in the near future if we don't complete ROMP, because ROMP will give us a little bit extra capacity and we'll be within current regulations, so I'm throwing that out as a suggestion.

CHAIRMAN JIM BARRY: I'm going to make a motion. Is that a motion? How -

ROB KULAKOFSKY: Sure, I'll take that as a motion.

CHAIRMAN JIM BARRY: It's a - it's a motion for that sentence to read what? How?

ROB KULAKOFSKY: The wastewater system in central Tucson is projected to approach capacity in the near future without completion of ROMP. Would that make sense to the department?

CHAIRMAN JIM BARRY: Is there a second -

BOB COOK: Well . . .

CHAIRMAN JIM BARRY: - with that language?

BOB COOK: I think it's misleading.

BONNIE POULOS: I'll second it for the point of discussion.

CHAIRMAN JIM BARRY: Okay. So, we have -

BOB COOK: I think it's misleading, you know, "near future" sounds like a couple years; it's not true.

ROB KULAKOFSKY: Well, ROMP has project - has - has -

BOB COOK: No, no, no, no -

ROB KULAKOFSKY: - a time frame, so . . .

BOB COOK: - the existing capacity will not be reached in - in the near future. We have over 20% excess capacity now. How are we ever going to reach capacity without ROMP in the near - near future?

CHAIRMAN JIM BARRY: Bonnie? Rob? Bonnie?

BONNIE POULOS: No -

CHAIRMAN JIM BARRY: No?

BONNIE POULOS: - I just seconded it for -

CHAIRMAN JIM BARRY: Oh, I thought you wanted to talk. Rob, go ahead.

ROB KULAKOFSKY: Well, you know, what is "near future?" Ten years? I kinda think of near future as being ten, 20, 15 years.

JOHN CARLSON: Put it in there. In the next ten to 20 years, something like that.

CHAIRMAN JIM BARRY: Is that a substitute motion?

VINCE VASQUEZ: Mr. Chairman?

ROB KULAKOFSKY: Yeah, that - that's fine. What does the - what does the department feel is - would be appropriate here so that we don't come back again with another change?

VINCE VASQUEZ: Well, the department feels that the language - the current language - and my substitute motion would be to accept the current language.

ROB KULAKOFSKY: Yeah.

CHAIRMAN JIM BARRY: Is there a second?

BOB COOK: Second.

CHAIRMAN JIM BARRY: Discussion on the substitute motion?

JOHN CARLSON: In the future?

CHAIRMAN JIM BARRY: The motion on the table is to accept the - the recommend- - the - the new language as require - as requested by Mr. Gritzuk.

BOB COOK: Well, the main point here is - is meeting the regulatory requirements, not to get into an argument about capacity and to - and to focus on it.

CHAIRMAN JIM BARRY: Well, I think that there's a point that - that we understand that ROMP is regulatory-driven. We also understand that there are needs for investments that are coming in the not-too-distant future that are going to be capacity-driven also.

But, we have a motion on the table to - to accept the language as proposed. Bob, I think you seconded that?

BOB COOK: I did.

CHAIRMAN JIM BARRY: Yes.

JOHN CARLSON: You mean that's -

CHAIRMAN JIM BARRY: Discussion?

JOHN CARLSON: - Vince's motion?

CHAIRMAN JIM BARRY: Vince's motion -

JOHN CARLSON: The motion is -

CHAIRMAN JIM BARRY: - is to accept -

JOHN CARLSON: - as is here?

CHAIRMAN JIM BARRY: - this language as is.

JOHN CARLSON: Oh, I'm totally against it because in the future is just amorphous -

CHAIRMAN JIM BARRY: Okay.

JOHN CARLSON: - it doesn't come anywhere close to being intelligent.

CHAIRMAN JIM BARRY: I'm going to call for the vote. All those in favor say "aye."

(Affirmative responses.)

CHAIRMAN JIM BARRY: Raise your hand. One, two, three, four, five, six, seven; it's done. You want to - you want to vote "no," John?

JOHN CARLSON: No.

CHAIRMAN JIM BARRY: All right. Now, I - I just want to express my displeasure that we had to deal with this; that language has been in this report since December. I don't want to see this happen again, okay? Mike, it's not your fault, but I don't want - we're not going - we're not going

to do this again. We - we voted on this in March; we revisited it; it would've been an easy fix in December, January, February or March; it didn't have to go this way, but it's done. Mike, you got your language. Thank you.

MR. GRITZUK: Thank you very much.

CHAIRMAN JIM BARRY: Okay. Now . . . City/County Consolidated Drought Report. Now, let me - huh?

UNIDENTIFIED FEMALE SPEAKER: (Inaudible; not speaking into a microphone.)

CHAIRMAN JIM BARRY: Oh . . . got to call to order already. I did that.

Approval of the March 19th meeting summary. Do I hear a motion?

TINA LEE: I'll move.

CHAIRMAN JIM BARRY: Do I hear a second?

UNIDENTIFIED MALE SPEAKER: Second.

CHAIRMAN JIM BARRY: Do I hear any objection?

(No response.)

CHAIRMAN JIM BARRY: Done. Okay. City/County Consolidated Draft White Paper. Let me make a suggestion now that we have lead Staff and we let lead Staff make a short, short, one, two, three, four, five presentation and then we open it up for discussion, okay? Nicole.

NICOLE FYFFE: (Inaudible; not speaking into a microphone.)

CHAIRMAN JIM BARRY: Holy criminy (ph.). They're going to have more people up there - oh, okay.

NICOLE FYFFE: (Inaudible; not speaking into a microphone.)

CHAIRMAN JIM BARRY: Okay. Does everybody know everybody at the lead table? Nicole Fyffe from the County Manager's Officer - County Administrator's Office; Kathy Chavez from Wastewater; and Sandy Eller from Tucson Water. Go ahead.

NICOLE FYFFE: All right. Let me just start by saying that we took a similar approach to this Drought Management paper as we have to some of the other technical papers that we're putting together, so a similar approach to what you'll hear from Nicole Ewing-Gavin on the reclaimed paper.

First of all, we looked back to the original scope that the City and County Managers put together for this water and wastewater study for direction on - on what should be included in the paper; and then we also looked to comments that we had received from the Committee during Phase 1 on what should be included in the paper.

We then assembled a team of Staff with expertise in the area and, in particular, the lead Staff on this paper was Kathy Chavez and Karen LaMartino (ph.) with Tucson Water.

We then wrote a first draft of the paper and Kathy Jacobs from the Arizona Water Institute provided a review of the paper and some comments to us. We finalized the paper, sent it up to the City and County Managers and they forwarded it to the Committee and, hopefully, you've had a chance to read it for now. And so I'm just going to provide a brief summary of it and then, like your Chair said, we'd like to have a good discussion about it and Kathy and Sandy are here for questions.

So, the first - the question that was in the scope of the water/wastewater study was a goal of developing a Consolidated Drought Management Plan. Both the City and the County have Drought Management Plans.

We also looked again to what the Committee wanted to see out of this paper, and it seemed like one of the major themes was to address the uncertainties of climate change and global warming more in our - in our Drought Management Plans.

So, with that in mind, I'll start with the first - first portion of that, which was developing the Consolidated Drought Management Plan. Early on we decided not to go that way; and to understand why, it helps to understand a little bit about the State Drought Planning Process first of all.

So, the State of Arizona has a Drought Plan and Drought Planning Process, and one important part of that is - was the creation of these Local Drought Impact Groups, and they were created at the County level, and Kathy actually coordinates the Pima County Local Drought Impact Group, and they were coordinated to provide local information that's relevant on a statewide basis when creating the State plan, but also to, you know, coordinate public awareness and to coordinate the individual Drought Management Plans that occur within the County.

And just - Kathy was telling me yesterday she went up to a meeting at the Governor's Office level yesterday or the day before and they called our group the "Super Group" that was down here, so they really were encouraged by what they've seen and heard from our Local Drought Impact Group.

And this group - basically, Pima County's involved, Tucson Water's involved, other water providers, the Arizona Department of Water Resources, and so they meet every two months and it's a good place that these groups can get together and talk about the drought preparedness that's going on and how to better coordinate.

As part of the Drought Planning Process there was also a requirement first that - that water providers do create drought preparedness plans, and so Tucson - Tucson Water's plan is to meet this requirement, as well as to be prepared, anyway, but to meet the State requirement. Pima County is not a water provider, so Pima County did not have to meet the State requirement to - to - or produce one of these plans, but we do have a plan, too.

But what's particularly important is as part of the guidelines that the State put in place for these - these plans, it said the plan should be specific to the water provider's system and water supply availability. Well, Tucson Water, as you 've learned through this process, is extremely unique in this region in that they're the only water provider that's delivering CAP water. And so when Tucson Water has to look at drought planning, they not only have to look at the conditions and what's going on here locally, but they also have to look at what's going on in the Rockies and the snow melt and the issues up there.

So, before these local Drought Impact Groups were formed, Water CASA and its members looked at whether they should consolidate these different Drought Plans and, because of this issue of having to really have some distinctness in the plans, because of Tucson Water' s distinct situation, they didn't recommend that the - that the plans actually be into - you know, put into a singular - singular plan. And, instead, they encouraged that the different plans have similarities and coordinate as much as possible.

And so as one of the final attachments to the paper that you received, there was a table that was put together that showed the various drought stages and what the responses were, and you'll see a lot of similarities in there because of that effort. So that led to our first group of recommendations - and there's only two sets - so this isn't going to go too long. So, the first set of recommendations was: Do not consolidate the Drought Management Plan but do, through the Local Drought - Drought Impact Group, develop a consistent local definition of nonessential water uses; develop consistent messages to the community; coordinate education efforts; and identify and resolve inconsistencies in the drought-related ordinances.

The second group of recommendations had to do with our comments that we heard from the Committee about including more robust planning process for global warming and climate change in the Drought Management Plans.

So, from - from Phase 1 of the study we had heard from experts that in order to deal with some of the uncertainties related to how global warming and climate change may affect drought planning in the future, that we really need to take an adaptive management and an adaptive planning type approach and put strategies in place that don't depend on having all of our eggs in one basket, so a multi-prong-type strategy. So, in that case, that helped, you know, us to develop our second set of recommendations, basically, which was - I'll just read through these: Employ adaptive - adaptive planning approach by exploring current and future vulner- - vulnerabilities under a range of scenarios with climate experts.

And the climate experts - let me just say that there's a City of Tucson Climate Committee that's just about to get underway next week, I believe, and we included a list of the 26 members and we're really, you know, encouraged that this group is starting for a variety of reasons, but also so they can hopefully inform drought planning and other aspects, and the County's not actually on the committee but will be involved and, hopefully, be able to adopt similar things that the Committee recommends. So that's one area that we can look to for experts.

Another area, obviously, we have the U of A and ASU drought planning experts locally. There's ongoing studies that we need to be aware of. And so the second recommendation was:

Scenario planning to assess the changing - to assess changing planning environments; periodic review of Drought Response Plans; integrate climate change impacts over time; evaluate and consider the social and financial impacts; and employ conservative approaches and a multi-pronged preparedness strategy.

The multi-pronged strategy - and I think Bob Cook was getting to this in an earlier comment that you made - for example, we heard from the Committee too, you know, diversify your water resources; don't just put all your eggs in one basket so that if there are - we do have an uncertain future, there's more opportunities in that - in the future. So, diversifying the water resources is also making sure that the infrastructure is in place should we need those resources in the future.

So that's all I have. Was that short enough, Mr. Barry?

CHAIRMAN JIM BARRY: Fifteen seconds too long. Yes, Bob?

BOB COOK: I have a question. When Chris Avery gave the presentation last year on the - on the - the jurisdictional Drought Management Plans, he emphasized the contingency planning aspect, which is that at different degrees of severity of shortages on the river, different strategies would kick in and that actually draft ordinances would've been pre-prepared for consideration by elected bodies to quickly adapt to - to those conditions.

We heard last week that the - Lake Meed is within 30 feet of declaration of shortage on the Colorado. So, you know, this is not, you know, speculation into the future. We're actually very close to - to that first level - that first level of contingency. So, I'm just wondering could you talk about that aspect, the various levels of contingency?

SANDY ELDER: Yeah, I'm not really aware of the individual action items that have been followed up on - on that.

CHAIRMAN JIM BARRY: Let me clarify something. You're talking about the shortage sharing agreement, the tier one, tier through . . . okay.

BOB COOK: Yeah, it triggers the various levels of drought.

CHAIRMAN JIM BARRY: Right, right. I just want to make sure that that's what we're talking about, the shortage sharing -

BOB COOK: Yeah, that's what -

CHAIRMAN JIM BARRY: - agreement.

BOB COOK: - Chris presented -

CHAIRMAN JIM BARRY: Right.

BOB COOK: - you know -

CHAIRMAN JIM BARRY: Yeah. Okay.

SANDY ELDER: This is . . .

BOB COOK: - and - and I'm just wondering: Is this the same thing?

SANDY ELDER: No, this is -

BOB COOK: Oh, okay.

SANDY ELDER: That's - that's the - that's kind of the State responding on the river and we have a response - this is our response to the State's response. The - the - what we're talking about here is how Tucson Water responds to all those other actions, declarations.

CHAIRMAN JIM BARRY: Let me interrupt a second, 'cause this is something I want to get clear in my mind, so it would've been a question. It seems to me that in the report you're saying that you're looking at drought in two geographic contexts; one is local drought conditions -

SANDY ELDER: Right.

CHAIRMAN JIM BARRY: - which is what Nicole was talking about. And you're talking about shortage on the Colorado River or -

SANDY ELDER: Right.

CHAIRMAN JIM BARRY: - a regional -

SANDY ELDER: Right.

CHAIRMAN JIM BARRY: Okay. You're asking about regional drought now -

SANDY ELDER: That's correct.

CHAIRMAN JIM BARRY: - not local.

BOB COOK: Yeah, one - one type of drought drives supply; the other drives demand, so it's - it's logical that you would include both.

My question had to do with this - this - this notion of contingency within the plan so that when certain levels of shortages appear, there is a response that has already been planned for that. So, when Chris gave that presentation, I assumed that it was at the level of each of the major water users; not just the State level, but Tucson Water would've gone through that process.

SANDY ELDER: Those are our four - the four stages we have -

BOB COOK: Uh-huh.

SANDY ELDER: - are - are, you know, dependent on those State changes -

BOB COOK: Yeah.

SANDY ELDER: - but I'm not sure that the action that you're referring to - like when there's a tier one, tier two, that triggers us, but it also triggers many other things as well.

BOB COOK: Okay. So, is the Drought Management Plan that you're considering - this consolidated one for the City and County -

CHAIRMAN JIM BARRY: Non-consolidated.

SANDY ELDER: No, it's not - there's a Tucson Water Drought Manage- - there's a Tucson Water Drought Management Plan -

BOB COOK: Right.

SANDY ELDER: - that's for the Tucson Water Service Area.

BOB COOK: Okay. And that's what we're talking about right now?

SANDY ELDER: Yes.

CHAIRMAN JIM BARRY: We can if you want to.

BOB COOK: Is that - is that articulated with the - the State . . .

SANDY ELDER: One of the first indicators is the State's declaration; that's one of the first sta- - you know, the first stage is driven by where the State is.

BOB COOK: Uh-huh.

BONNIE POULOS: Can I jump in?

BOB COOK: Yes.

CHAIRMAN JIM BARRY: Bonnie?

BONNIE POULOS: Maybe I'm not hearing your question correctly but, in the event that the State declares a shortage in, say, tier one or tier two, Tucson Water has a plan in place for changes that they will make or policies that will be in effect when that is declared.

BOB COOK: Right.

BONNIE POULOS: And so my understanding was that this Drought Management Plan is our local response to a drought being declared at whatever level by the State.

CHAIRMAN JIM BARRY: Well, no, let me interrupt a second, though, 'cause I got to get this straight. The Secretary of the Interior declares -

BONNIE POULOS: Right.

CHAIRMAN JIM BARRY: - shortages on the Colorado River? Yes or No? Does the State do - does the Governor declare -

BOB COOK: No.

BONNIE POULOS: Bureau.

BOB COOK: No.

CHAIRMAN JIM BARRY: Huh?

SANDY ELDER: Bureau.

CHAIRMAN JIM BARRY: Bureau of Reclamation. Okay. And you can have - can you have a tier-one shortage on the Colorado River and no Phase 1 drought in Tucson, or do they go hand in hand? Aren't they - they're two separate things? I mean, the Governor could declare a drought and then you have to have Phase 1, Phase 2, Phase 3 -

SANDY ELDER: Right.

VINCE VASQUEZ: But the tier-one shortage is - like I think Sandy was pointing out - is one of the first - when - in the event a tier-one shortage is declared, it's one of the local drought indicators. So, it's one of several, but it's one of the - of the indicators; is that accurate?

SANDY ELDER: That's correct.

VINCE VASQUEZ: So - so that - then that would then trigger whatever the - the - the appropriate local response would be -

SANDY ELDER: Right.

VINCE VASQUEZ: - which might be, you know, eliminating watering outdoors or -

SANDY ELDER: Right.

VINCE VASQUEZ: - or some kind of efficiency ordinance or, you know, these kinds of things, but those are all spelled out as are the shortage - the tiered shortage levels are also spelled out in the Drought Plan; that - that tier one coincides - is an indicator for a State - or a phrase . . .

SANDY ELDER: Stage 1.

VINCE VASQUEZ: And tier two is a . . .

SANDY ELDER: Then we start triggering on the local indicators after that.

VINCE VASQUEZ: Okay.

JOHN CARLSON: But Jim's question of area drought in the Colorado River is separate than local?

CHAIRMAN JIM BARRY: But that's what I'm asking; is that right?

SANDY ELDER: Where the linkage comes is with - our - when they hit their trigger, tier one -

CHAIRMAN JIM BARRY: Who's "they?" Who's "they?" When who hits -

SANDY ELDER: The Bureau.

CHAIRMAN JIM BARRY: The Bureau. Okay.

SANDY ELDER: Then we start our -

CHAIRMAN JIM BARRY: Right.

SANDY ELDER: - plan after that; that's when -

CHAIRMAN JIM BARRY: Right.

SANDY ELDER: - we go through - start going through our stages.

CHAIRMAN JIM BARRY: Okay. But does the Governor declare a drought based upon what the Bureau of Reclamation declares?

KATHY CHAVEZ: Yeah. Let me add a little bit to this. The City of Tucson, obviously, takes CAP, so what happens on the Colorado River is of great interest to -

CHAIRMAN JIM BARRY: Understood.

KATHY CHAVEZ: - Tucson Water. So, if the Bureau of Reclamation decides to declare a shortage on the Colorado River, then there will be less water given to the State of Arizona, and then all the water providers that take CAP have to adjust their water systems accordingly. So - so, Tucson Water's very interested in what happens on a regional level to the Colorado River watershed -

CHAIRMAN JIM BARRY: Agreed.

UNIDENTIFIED FEMALE SPEAKER: - because a lot of that water comes from the Colorado River.

Some of the water providers are not taking Colorado River water, so they're more concerned about local impacts, local - local drought because, if there's local drought, that means maybe people use more water and they have to pump more groundwater and they have to deepen their well, so there's those kind of impacts.

So, in terms of drought declarations, think of this in terms of two separate actions: One is that the Bureau of Reclamation can say that there's - that the regional picture for the Colorado River is such that they have decided that people are not going to get all the water that they're allocated, so that's the one way of looking at it.

Separate from that, the Governor of Arizona issued a drought declaration in - originally in 2003 under an Executive Order saying the State is in a drought situation, and the State drought programming effort takes a look at - takes a look at regional issues because a lot of the State of Arizona counts on the Colorado River, but they also look at some of the statewide precipitation and temperature issues because that affects Arizona as well; it affects the farmers when they have to pump more groundwater; it affects wildlife when there's not a lot of rain and the animals come down from the desert looking for water; it affects water providers who are entirely dependent on groundwater, so it affects may sectors of the State.

So, the State of Arizona, the Governor has - has declared a drought for Arizona in 2007 - 2003, originally, and then reissued it in 2007, and then this group that met on Tuesday is going to recommend that the Governor reissue that for this year because precipitation is still - is still below

average in - in most of the State, because temperatures still continue to be high, because we're not seeing indications that the drought is over. So, I - I hope that adds some clarity.

CHAIRMAN JIM BARRY: Marcelino?

MARCELINO FLORES: So the State is declaring - the State is declaring a drought. Is that in the absence of the Bureau not declaring a shortage or - or not -

KATHY CHAVEZ: The - the State -

MARCELINO FLORES: - not saying - not recognizing it?

KATHY CHAVEZ: The State has declared a drought because - because what they're seeing in terms of temperature in the State and precipitation is that we have drought conditions in the State of Arizona.

VINCE VASQUEZ: I want to make I guess - when we're talking about the overlap of the interest of the City of Tucson and - and Pima County on this particular issue, there's this distinction made between, well, Tucson Water's more dependent on CAP, and I - and there's even a statement to that effect that it's the only provider that takes CAP in the paper, which is inaccurate, Metro Water for one takes CAP, all of the - all of the assured water supply subdivisions that are enrolled in the CAGRD in the region that are entirely in Pima County are dependent on that as a - as a water supply. So, I think we have to recognize that as the fundamental lifeline water supply for the entire region, regardless of whether or not Pima County has a utility that delivers - delivers it.

KATHY CHAVEZ: And Pima County's Drought Response Plan includes a provision that if there is a shortage declared on the Colorado River that we can (end of audio recording 1 of 3) -

VINCE VASQUEZ: - that's a huge - that's a huge thing that I think we should -

KATHY CHAVEZ: Okay.

VINCE VASQUEZ: - recognize.

MARK STRATTON: It's all part of the designation of assured water supply -

KATHY CHAVEZ: Uh-huh.

MARK STRATTON: - because you're counting on that (inaudible) even though you're not using it directly; it's paper water for the majority of entities such as Metro Water. But -

KATHY CHAVEZ: And I don't disagree with that; that's why the County's Drought Response Plan makes that -

MARK STRATTON: But it's the same as - as what Tucson Water would have. If CAP for M&I providers was cut back, all of us would have the same issue in that the water that we're storing would be used up in our credit bank and all of us would be going back to groundwater.

I - I - I guess I do have another question, though. I still feel that there's potential confusion in the community when you have Pima County that has its Drought Plan that is not reliant on domestic water providers but, yet, then Tucson Water has theirs which is kind of providing for domestic supplies to the residences. Isn't there perceived confusion that if the County declares that, but Tucson Water and - or the City doesn't declare one, they're going to say, "Well, what's going on? Why is the County declaring a drought condition, we have to meet all these standards, but yet my water provider hasn't done it?" And - and I guess I want some feedback from - from all of you of how you see that interaction and maybe what potential recommendation to avoid that confusion to the community.

CHAIRMAN JIM BARRY: Let me just interrupt. Could that happen; that the County could declare a drought -

KATHY CHAVEZ: It could.

CHAIRMAN JIM BARRY: - and the City -

KATHY CHAVEZ: Uh-huh.

CHAIRMAN JIM BARRY: - and the City of Tucson does not declare a drought?

KATHY CHAVEZ: Yes, and - and, alternately, you could have Metro declaring a drought stage two and Tucson Water declaring a drought stage one, and Pima County declaring . . .

MARK STRATTON: Well, and, actually, our stage two is your stage one.

KATHY CHAVEZ: Right, right. You know, I think a lot of that kind of discussion has already occurred at the - at the LDIGs, at the Local Drought Impact Groups. And, you know, one of the key things that we do is go around and say, you know, "Where is every- - where is everyone in terms of stages? Are you thinking of increasing, decreasing, staying the same?" So, I think that's the value of discussing this with the - with the water providers on a regular basis.

MARK SRATTON: But going back to the question, though. The County's purpose in having a Drought Plan is different from Tucson Water's purpose of having a Drought Plan. I - I guess my real issue is: How is the community perceiving a declaration of a drought from two different entities with two different purposes?

SANDY ELDER: One thing we have to think about is, you know, physically where is the water coming from? You know, for - if Tucson Water was solely dependent on groundwater, you know, our Drought Plan would be built on water - some sort of water level indicators. There is a drought and we had declining water levels, declining capacities in our wells, we'd all be in sync. We wouldn't have this conflict.

The challenge is Tucson Water gets a large portion of its supply now off the Colorado River water. If the Colorado River is not in a drought, but the local community is in a drought, so you have maybe declining water level indicators in some portions of the aquifer and, yet, the supply, the wet water supply from the CAP canal is unaffected, that sets up this conflict that you're talking about, Mark -

MARK STRATTON: Right.

SANDY ELDER: - and the question is: How, as a community, are we going to deal with that conflict?

MARK STRATTON: Yeah.

SANDY ELDER: Because, you know, for customers inside the Tucson Water Service Area if there's no diminishment in the CAP supply to them, then, you know, how is that related to - and if, in fact, the water levels in the Tucson Water Service Area are stable, not, you know, falling dramatically, how do you relate that to other portions that are maybe - where there is more of an impact?

MARK STRATTON: But - and - and I don't want to be perceived that I'm against - I - I think the consolidation concept is really a positive step, and whenever we can speak in this community in one voice on an issue, come together and say, "It's time to declare we're at -

SANDY ELDER: Right.

MARK STRATTON: - stage whatever," and have - have the County, have Tucson Water, and if - if we can get all the other water providers also to step in and say, "Yes, we're all in agreement," that I think is the ultimate goal of what would be best for the community.

SANDY ELDER: I - I think that's where the recommendations are trying to go with the Local Impact Group that you lead is to hash these things out we're coming through and . . .

MARK STRATTON: But the opening statement that the differences are such that consolidation of the two isn't there, but there's nothing that says that collaborative work - working together is beneficial to the community.

CHAIRMAN JIM BARRY: I agree that you never start with a negative.

MARK STRATTON: Yeah.

CHAIRMAN JIM BARRY: Bonnie?

BONNIE POULOS: Well, I think that - that Mark has brought up a good point. And, perhaps, one of the recommendations that I don't see on page 12 here is that if one of the local areas declares a stage of drought, that there should be some kind of trigger for all of the water providers to come together and look at the situation as a whole in order to come up with a single message to the community because - I mean, my - my - this comfort level comes from we can have paper water and we can have CAP, but you may be over-pumping in an area that's environmentally sensitive that will never recover, and on paper it looks like everybody's happy and we have plenty of water for the region. And if there is a local community in that area and, all of a sudden, they have no access to well water, they're going to be very concerned about that and declare a stage of drought. Well, that doesn't mean that's something that we can ignore, and I think these recommendations need to have that at the top of the list, is that if one area feels that they have reached a stage of drought, then the other entities should be required to all somehow address how that impacts the region as a whole.

Because, for example, if - if for some reason our CAP allocation was diminished and we no longer replenished some of the wells that we're recharging into, how is that going to affect the groundwater levels for other providers? We may not be experiencing a drought because we still have

the CAP allocation we need for delivery, but we're no longer storing it, and so those kinds of situations are going to affect someone else.

And so I think there needs to be a recommendation that there is some way, when there is a drought declared by any of the major water providers in the AMA, that it triggers something where these groups will get together and decide how does this impact all of us? And what kind of message to the community so that not just in Vail are they conserving, but in Sahuarita and in Marana and Oro Valley so that, as a whole, we're not going to get ourselves segregated because some of us have CAP water and others have no water in their wells anymore.

CHAIRMAN JIM BARRY: Marcelino?

MARCELINO FLORES: One of the things is I'm glad that this is kind of the opening discussion and we're not necessarily going to close the door on drought management, per se, especially since in the guidelines it offers first, you know, that there's a conservation plan component to - to the drought management, so it seems to be an important component, but the other part is the supply plan.

And I think in this Committee we've had a discussion on water for the environment, but in - in the supply plan you'll identify who you're delivering to, and there doesn't seem to be a place for identifying resources for the environment necessarily, but I think that would be one of the first steps. If you're going to allocate water for the environment, then wouldn't it be in the supply plan, or is it in part of the effluent plan? Where does that fit in?

And one of the other questions that I'd had - I always forget. I always have these half thoughts now especially . . . the - yeah, the service area comes into question again as far as the supply plan and I think - I would come back to another thought on - on - later on, so - oh, the indicators.

In the indicators, the local indicators, you know, there's - there's aquifer storage, reclaimed water, production capacities, GPCD, but what about biological criteria? Again, that's another way to say recognize water for the environment. Well, you can use biological indicators. You can look at vegetation in certain areas and tell how stressed they are; that's an indicator that could be utilized and, you know, developed if - if necessary. So, the LDIG, I don't know if they've explored that - that opportunity for other indicators of drought.

SANDY ELDER: I just want to explain why it's not part of one of the Tucson Water indicators is these - we tried to use indicators that we have the data stream for and that we're familiar with and that impact the water supply for the customers that we serve, so that was a very explicit link between the people that get water service from us -

MARCELINO FLORES: Right.

SANDY ELDER: - and the production facilities that supply that water service.

MARCELINO FLORES: Well, I mean, one of the things is - is like - the reason I bring up biological criteria is because this is a way - one try, found out - that there was an effect, pollution to the water downstream; it wasn't - you know, each of these smaller dischargers into the river had no - no problem; they were all within their limits; they were meeting their TMDLs, but there was a biological criteria that the tribe imposed showing that the fish were dying. I mean, nobody was - nobody was to blame, but -

SANDY ELDER: Right.

MARCELINO FLORES: - the associated, you know, smaller polluters had actually had - there's no way that they could 've found that out unless they established the biological criteria; that's why I think it's an important kind of catch-all, if you will. You can say that, yes, we have enough water, but if I go outside and I see that the tree is stressed, dying, and this is drought-tolerant plant, something's going on, so, you know, in that regard it's -

SANDY ELDER: But, again, if we have - the tree is dying, but we have sufficient supply to put into the pipe that serves the home, you know, that's - we were trying to just - dealing with the domain that, you know -

MARCELINO FLORES: That's - that's what I'm suggesting, your supply plan does not recognize -

SANDY ELDER: Okay.

MARCELINO FLORES: - the need for the environment.

CHAIRMAN JIM BARRY: I hear Marcelino saying you got that far, now you got to another step.

Mark, did you have something that you wanted to say?

MARK STRATTON: No.

JOHN CARLSON: How about on this side of the room?

CHAIRMAN JIM BARRY: No.

MARK STRATTON: You guys were late, so . . .

CHAIRMAN JIM BARRY: Yeah, that's - hey, you can come into the conversation 15 minutes after. John, did you want something? Go ahead.

JOHN CARLSON: You said I had to wait 15 minutes.

CHAIRMAN JIM BARRY: I just - I just overruled myself.

JOHN CARLSON: Well, you know, I'm looking at this and - and - as we all are - and it's stimulating a lot of thought. But, you know, the other thing that causes a problem is there's too damn many people, and - and we approach it - it'll be after my time when we start - but what I hear here is all these various agencies and - and areas and everything else, you get back to - again, I'm not sure I'm for it - but we might have to approach it to be sane about it and consistent about it and prudent about it, is a combined utility district/sewer/water that puts everybody under the same set of rules at the same time. End of speech on it. I'm not trying to get a vote on it.

CHAIRMAN JIM BARRY: Good. Mark?

MARK STRATTON: Back to your recommendation. One of the things I do agree with is - is identify the inconsistencies in the various ordinances.

Kathy, you've been working on this for a while. Where do you see the biggest conflict on existing ordinances between what the City has and what the County has? And - and do you have maybe a recommendation of where consolidation or coordination of those ordinances could be improved?

KATHY CHAVEZ: You know, I think we should look at 'em a little bit more closely. We actually went back and amended our Drought Response Plan in '07 to make it more consistent. For example, I think we had water - watering days on Tuesdays and Thursdays, and someone else had watering days on Mondays and Wednesdays, and we said we don't want to do that. So, you know, we

just backed away from that. So, we've already to look and see, you know, to the - to the best that they can be consistent.

I think maybe one issue remains - remains, this question of shortages on the Colorado River and how - how does the community as a whole deal with that? Because I know that the State requires that water providers develop a Drought Response Plan that's unique to their systems, and their systems have different capabilities. Smaller systems have different redundancies than bigger systems.

I also know that, for example, Ajo came out and talked to us because they were concerned that we not apply drought measures consistently to everyone, because they feel that what happens on the Colorado River doesn't impact them. Similarly, the folks from Mount Lemmon came down and talked to us very, very early on and felt the say way; they have - they have different issues, different drought issues and water supply issues, and Colorado River shortages there don't impact them. So, they were concerned that we not put this "one size fits all" approach on everybody.

VINCE VASQUEZ: That is - that is by definition (inaudible; not speaking into a microphone) -

CHAIRMAN JIM BARRY: Give him the microphone, so he

. . .

VINCE VASQUEZ: If I remember correctly, that is by definition outside of where our area concern is which is supposed to be the overlapping service areas of Pima County Wastewater and Tucson Water.

And I just have to hammer home the point that I believe wholeheartedly that this region's indicator, it should be completely linked to the conditions on the Colorado River as - as a main indicator of drought, and whether you serve CAP directly, whether you serve it indirectly, whether you're enrolled in the GRD, any number of ways, this - this area's water situation is - is very, very linked to what happens on the river in terms of ongoing compliance of every provider per State law, so - and without that you can't enroll new subdivisions, you can't - I mean, you can't do a whole host of

other things without that continuous supply of Colorado River water coming into this - into this AMA, this region.

CHAIRMAN JIM BARRY: Rob, go ahead.

ROB KULAKOFSKY: Well, I think what - what you're missing, though, is that, yes, Colorado River is our main supply, but the demand feature of major drought locally will increase the use of water, whether it's from an aquifer or the Colorado River. So, we are looking at the two aspects and I think we need to keep that in mind.

VINCE VASQUEZ: You know, and I agree, I think we - I agree, I think the local - the local component to it in terms of how that drives demand, I think Tucson Water's Drought Response Plan identi- - identifies those local concerns.

I just - I don't want us to get like bifurcated on this issue of certain areas of the region aren' t dependent on the Colorado River, and some - and others are because the region, as a whole, pretty - is very dependent on it, whether it's legally, whether it's physically, however you want to say it, we are dependent on it and so . . .

CHAIRMAN JIM BARRY: One of the things that came clear to me - and I - I just have to admit to my ignorance - and - and it's just been exacerbated by this conversation, I no longer have clear in my mind what we mean by "drought." Do we have an agreed definition of "drought?" Is it shortage on the Colorado River? Is it the lack of precipitation? Is it high temperatures? What in the world are we talking about? Does the City and the County have an agreed definition of "drought" that we could present?

I would bet you that the majority of people in this community are like me, what drought? I mean, I don't - I live in a desert. I understand that. What drought? You know, what are we talking about? I don't think that the community has a firm understanding of - that - that the Governor has declared a drought in the State. So what? What does it mean to me? I already know that I live in the desert. What's - what's this drought business?

So, one it seems to me - one of the things that would be enormously helpful is to get some in-depth discussion of what the heck we mean by drought here, and what does it affect. I mean, it

doesn't affect Mount Lemmon, but it does affect Twenty-Second and Alvernon? Can there be a drought at my house and not a drought at Vince's house? I mean, what are we talking about? What is the geographical scope of the drought that we should be concerned about? What are the triggers? What's the relationship between the Colorado River and the - and the - the biology that requires non-Colorado River water? Can there be everybody in the Tucson Water Service Area is doing great, but we're killing - the plants are dying all over, the animals, the bugs are dying all over? I mean, what are we talking about?

JOHN CARLSON: Well, Jim, don't you think when you describe it, you can say this year it's a local area drought -

CHAIRMAN JIM BARRY: Maybe, John.

JOHN CARLSON: - four years ago it was a southwest drought?

CHAIRMAN JIM BARRY: It could - that could very well be. I just don't know the answer -

JOHN CARLSON: I - I understand the confusion -

CHAIRMAN JIM BARRY: - to that.

JOHN CARLSON: - but I would think when we talk drought we got to say where are we talking about?

CHAIRMAN JIM BARRY: I agree. I agree.

JOHN CARLSON: Draw a line around it.

MARK STRATTON: Yeah, Tina wants to know is there a wet drought or a paper drought?

(Laughter.)

MARCELINO FLORES: Yeah, and - and even if you have the drought, you know, what - I see GPCD is something that's being looked at, but what are some of the distinctions among the region, you know, who has a lawn versus who has, you know, landscaping, who's rainwater harvesting and, you know, it's also - the definition becomes further confused because there's different expectations of water use as well.

MARK STRATTON: I guess - and this kinda leads into what I think Val will probably be talking about later, but as we - as the community continued to increase our conservation efforts - "water efficiency" is what I would prefer to call it - where we minimize what our outdoor water demand is with potable water, as opposed to water harvesting or gray water or reclaimed water, some renewable supply that can deal with our outdoor use and focus on indoor water use.

At some point in time, a drought, if it does happen, is not really going to be able to be influenced by what the majority of people are doing, because if they're using an alternative supply for their outdoor irrigation, that's where most of the drought restrictions on the ordinances take place. Your indoor water use is probably not going to change at all.

So, I think at a certain point of time, as a community, we're moving more towards being drought resistant from a use standpoint because we're minimizing what our true demand is going to be; that's that utopian type of society I want to eventually get to where sustainability is all in there and . . .

CHAIRMAN JIM BARRY: Bonnie?

VINCE VASQUEZ: I'll second it.

BONNIE POULOS: Question for one of you. Are there mathematical models out there that people use to determine drought conditions, and is that one of the recommendations that should be put forward is that we develop a formula, a mathematical formula that each water provider would be required to assess periodically so that there could be these different factors that are all addressed in terms of a final number or a goal that either we achieved or we didn't achieve?

KATHY CHAVEZ: This kinda goes to - to Jim's question of what is "drought?" Is there a definition of "drought?" And I can tell you that the - there's many definition. I mean, generally speaking - well, I can tell you there's many definitions. Academics spend a lot of time defining this, and they can get very, very complex.

For example, there's the Palmer Drought Severity Index that takes into account soil moisture and ambient air temperature and humidity and, you know, how well plants respond. There's others that are even more complex, and I know that the U of A has come and talked to our LDIG to

present other indices, and even combination of indices that can be used to define drought. So, it's an area that gets very, very complex.

And what we decided to do with the Pima County Drought Response Plan is to use the State Drought Monitoring Report because we felt it's not as complex. We thought it'd be really difficult to explain to the public what the Palmer Severity Index is and why it relates to - you know, to soil moisture. And we decided to use that because it - because it takes into account temperature and precipitation, stream flow, mountain flows, vegetation and reservoir capacity. So it kinda seemed to take everything and then put it in kind of easy-to-read math, you know, that kinda shows areas that are - you know, how the areas are, if they're in, you know, not drought or moderate, severe, serious droughts, so - so those different levels.

So, there is a lot of - a lot of information and a lot of research even going on, and - and we can get into some very, very complex models about - about how to define drought, and we could do that. We wanted to stick to something that we thought the public could relate to best, and that's why we went with the State Drought Monitoring Report.

BONNIE POULOS: Well, in one level I see that that's a good thing, but on another level, simply because it' s complex doesn't mean that water providers themselves shouldn't be using those kinds of tools in order to frame the message that's going out to the public.

KATHY CHAVEZ: And they have the flexibility to do that in their - in their Drought Response Plans if they want to.

SANDY ELDER: I'd like to say that - I'd like to say, Bonnie, that's why we have our local indicators. When these were developed internally, the aquifer storage, our production capabilities and then the actual water use, those are - we actually went to try to find mathematical - things that, you know, we - we have a data stream on that we can then work off of, and these are very tangible numbers that, you know, we have long-term averages on and stuff, and when we shift off those averages we know something's going on; hence, we're using it as an indicator to drive our stages.

BONNIE POULOS: And I see that, but I also think that Marcelino's point about those indicators are lacking and something very basic needs to be looked at, because we're not just talking

about Tucson, the urban environment, but Tucson, the AMA, and - and those other things, so I think that makes sense and it's good to hear, but I think that there needs to be more indicators that may not be as easy to obtain but are necessary.

CHAIRMAN JIM BARRY: Marcelino?

MARCELINO FLORES: Can you comment, please, on some of the resources that are required to do those - those modeling and maybe expand on what some of the ideas were for the scenario planning? I'm sure that these require resources in terms of information, machinery, and are there any issues or concerns about the funding of such resources?

KATHY CHAVEZ: Well, our vision is that we would work with - for example, with some of the folks at the U of A or ASU, but scenario planning could involve, for example, what kind of supply and demand do we have or would we have if we had a ten-year drought, or a 20-year drought, or a 30-year drought, so look at those kind of numbers and then - and then ask the questions: Do we have enough infrastructure? Do we have the ability to supply water? Do we have enough storage? 'Cause right now we're banking - banking - Tucson Water's banking some of their water as some of the other water providers. Is that storage enough if we had a drought of a certain severity? Would we - would we have to tap into that banked water and how long would that last? So, those are some of the scenario kinda things we had in mind.

MARCELINO FLORES: Okay. But, can you touch on what the resources they would require? How long it would take? What kind of input would you receive in terms of would you just be limited to drought considerations? Would you consider growth, no growth, exponential growth? You know, what - what were some of the inputs and - and what are some of the - the time and resource considerations?

KATHY CHAVEZ: I think those are some of the things that we have to pursue as we define this a little bit - a little bit more, you know, the kinda things that you - that you've raised, population projects and, you know, per-capita changes. So those are all things that I think we need to think through a little bit more.

CHAIRMAN JIM BARRY: Mark and then me.

MARK STRATTON: I guess I would just like to make a comment that I'm - I'm familiar with what some other areas of the State are doing with respect to drought impacts and so forth, and I would like to commend Pima County for initiating the Local Drought Impact Group, because I think this community is so much farther ahead than - than the rest of the State when it does come to being prepared for drought, and I don't think that should be left unsaid because they have done a really good job. And I think the continued collaboration that is going on is something that this community is really benefitting from, because I think as a community we are probably the most prepared in the entire State to deal with the drought impacts.

That - that being said, though, I do want to point out that there's still a long road ahead, there's still a lot of issues that will need to continue to be updated on a continual basis as conditions change, information becomes much better and more advantageous as we're coming into more climate change issues; that information is becoming more prevalent. And I think our forecasting, whether it be short-term, mid-term or long-term on potential drought scenarios will become more available to - to the Local Drought Impact Group that then we can then build upon and further enhance our capabilities.

CHAIRMAN JIM BARRY: Okay, Bonnie, then I'm going to be last and we're going to move on. Sorry, Bob.

BONNIE POULOS: I just wanted to make a comment.

BOB COOK: That's the second time you've cut me off.

CHAIRMAN JIM BARRY: I know.

BONNIE POULOS: Bob, do you want - Bob, you go ahead. I've said enough.

BOB COOK: I'd just like to make a comment that - that drought management is also a prime opportunity and a point of insertion for increasing awareness in the community on overall water supply, water demand issues. If you look at per-capita water consumption in the Tucson area, where are we? About 120 gallons per person per day, somewhere around there?

SANDY ELDER: A little higher.

BOB COOK: A little higher than that? Okay. Australia's 40 gallons per - per-capita per day.

MARK STRATTON: You got to compare apples to apples.

BOB COOK: Okay. One of the speakers at the PAG expo in Sedona is - is at 25. Charles here is at zero. We have a long way to go as Jim says, as Mark says the - in terms of moving the community forward in terms of adapting to what's a very likely future.

I mean, one of the things about drought management is helping the community prepare for - at the - at all levels to develop the appropriate behavioral responses, investment responses, infrastructure responses; these things aren't ephemeral; these aren't issues that, you know, one - one year we have a drought and we respond to it and the next year we're back to normal. We're in a long-term pattern here and, given the millions of people who are - who are totally dependent on the Colorado River right now, and what's really going on, on that river, and how it's being documented, I think that - that this Drought Management Plan is a - is a - has high leverage in terms of - of helping the community be aware of - of - of how important this water issue is, and the different ways we have of responding in terms of - of - of our - of our level of consumption and looking at ways in which we're going to augment supply.

CHAIRMAN JIM BARRY: Okay. I should've done this earlier. Does - is anybody in the audience that' s not a Staff member? Anything to say? Margot?

MARGOT GARCIA: Margot Garcia, citizen. I'd just like to make a couple of quick points following up what's been said. First of all, an average is an average, okay? So if you're 50% of the data above the average, 50% below the average. If we're below the average, we're not in a drought; right? We're - we're - that's the way averages work.

So, some of the statements that have been made about - because we're below average in our rainfall, therefore, we're in a drought are - do not deal correctly with statistical statement of what an average is. If you're talking about averages of rain and we're below, you know, 25 - 75% below, if we have averages here and we're above 25% below and we're above on those extremes, then we can talk about drought. But just to say because the rainfall is below average does not make it a drought.

And I just wanted to reinforce over here Mark's statement about people that are using low amounts of water and how much you're going to add to that, to just tell you the story of my parents

who live in California who've always been extremely, extremely careful in their water use since droughts from way back. My mother at 91 is still taking buckets of water from her shower water that's warming up to water her plants outside, okay? They've been asked to conserve by 15%. How do you get 15% more conservation out of someone who's already using so little water?

So, I think we have to be very careful when we start asking people to save a certain percentage above their existing use; that may be a starting point, but there are people who already are using extremely small amounts of water, and 15% more of that is, essentially, almost impossible. I mean, she now takes the extra tea water out of the tea kettle and pours it into a container beside the sink; all vegetable water goes into there to water her plants; that's how she's trying to get her extra 15%. Most of us have a long ways to go to get to that point.

JOHN CARLSON: We're talking on average again.

CHAIRMAN JIM BARRY: Anybody else? Yes, sir.

CHRIS BROOKS: Yeah, hi. My name's Chris Brooks. I just wanted to offer a suggestion of some terminology on defining drought that - you're kinda struggling with the issues because the local and the regional drought.

One way that I've heard it defined is to call it either a "hydrological drought" or a "meteorological drought." I think the meteorological drought takes into account a lot of the local effects from decreased rainfall. The hydrological drought takes into account more of the regional effects that result in decreased stream flows and decreased availability of water supplies.

CHAIRMAN JIM BARRY: Yeah, I ran across that. I would - I had a note to bring that up and then I decided I would trip all over myself trying it. But, that's right, I saw that distinction and that seemed important also, Chris. Thanks.

Anybody else? Yes, sir.

BILL CROSBY: Bill Crosby. During the Governor's Drought Task Force meetings, what, a couple years ago, it became quite apparent - and they mentioned several times - that they had no idea what the needs of the rural water users were. Most of their discussions, as our discussions, have

been about the AMA, the Tucson AMA. How can we include either the private well owners, or other water providers within this discussion? Because that is really left out at this point.

CHAIRMAN JIM BARRY: I agree. I think we need to identify that it's left out, but I don't know that it's going to be brought in, but you're right. You're absolutely right.

So let's wrap this up. I just want to make a couple points. It seems to me that - that we've asked you to accentuate the positive first, so let's talk about what we're doing together before we talk about why Tucson Water's going to take its football somewhere else.

And I think a lot of - there is a concern about how we define drought so that people understand it, and I just wanted to make a suggestion, 'cause it - just as I listen to this and as I was reading about it, I started thinking, what, we live in an arid environment and drought is a normal occurrence. We tend to, when we talk about drought management, treat it as an anomaly and there 's triggers and we have to do things, but it's natural that we have droughts in an arid region and we ought to start thinking about a new paradigm of rather than responding to an anomaly, that we start - ought to start thinking about how we have drought-resistant communities, which is a point that Mark made and I thought we ought to start - we ought think about that.

So, with that -

JOHN CARLSON: No problem with that.

CHAIRMAN JIM BARRY: Thank you, John. I do feel better than you agree with me, actually.

UNIDENTIFIED MALE SPEAKER: No problem with that.

CHAIRMAN JIM BARRY: Do you want to take a quick break?

MARK STRATTON: Please.

CHAIRMAN JIM BARRY: No?

MARK STRATTON: Yes, I do.

CHAIRMAN JIM BARRY: Yes. I'm sorry, Melaney, we're taking a quick break.

MELANEY SEACAT: Yes.

CHAIRMAN JIM BARRY: Okay. Five minutes and I'm - I'm going to hold you to that.

* * * * *

(Break taken at this time.)

CHAIRMAN JIM BARRY: Okay. Let's get started again, please. We're going to do reclaimed now; yes? Okay. Nicole, five minutes.

NICOLE EWING-GAVIN: Good evening. My name's Nicole Ewing-Gavin. I'm with the City Manager's Office and I had the pleasure of working on the reclaim paper along with Kathy Chavez from the County, Sandy Elder from Tucson Water, Melody Lauer (ph.) from Tucson Water, and then Karen Dotson (ph.) was also very heavily involved from Tucson Water; she's not here tonight.

So, very quickly, the scope of work asked us - said that the City and County should work together to increase the use of reclaimed or recycled water on turf irrigation to substitute for groundwater use, so that was sort of the scope question that we were working with here.

And I think when we first started working on the paper we thought that really what we'd be focusing on was identifying specific customers that we could add to the reclaim system. And, as we got into it, I think that we realized we needed to be looking at the reclaim system in a broader context, and so you'll see that our recommendations talk about that.

You know, we recognize that the expansion for reclaimed is not unlimited and so we need to sort of define what that is and work within certain parameters. Reclaimed comes from wastewater or effluent and there are other purposes for that water that should be maintained, and so reclaimed is working within this broader context.

It's also expensive to build reclaimed infrastructure and it uses energy to transmit, you know, to - to pipe water and so we need to think about resource efficiency when we're looking at reclaimed expansion decisions.

So, the first recommendation looks at setting a target; it talks about 10% for the City and 25% for the County, and those are percent of City and County effluent entitlement, so increasing the amount of effluent we're - we're putting into the reclaimed system. And those numbers come from

some planning efforts that were done for the 2050 plan by Tucson Water and for the County's sustainability plan.

And then the first recommendation also talks about criteria that could be used to select new customers, and so from here, after we get Committee input and Council and Board direction, we would envision going forward, working collab- - collaboratively with the County and City to prioritize these customers.

And then the second and third recommendations relate to how to overcome barriers, financial and regulatory. And then the final two recommendations relate to, again, seeing reclaimed water within this broader context of multiple uses for effluent, and also maximizing our water resource portfolio as a community, recognizing reclaimed is one option, but we need to look at other options and which is the most resource-efficient for our particular site.

With that . . .

CHAIRMAN JIM BARRY: Okay.

NICOLE EWING-GAVIN: - Jim?

CHAIRMAN JIM BARRY: Let me ask one of my dumb questions. What's the difference between effluent and reclaimed water? Huh?

NICOLE EWING-GAVIN: Who wants to answer?

CHAIRMAN JIM BARRY: Effluent is what comes out of your pipe, and reclaimed is what the City does with it after you . . .

MELODY LAURE: There are varying levels of - effluent, yes, is the general term for the discharge from a wastewater treatment plant. It can be several - number of different levels. Wastewater treatment plants are permitted to treat to certain levels and ADEQ defines those as a C, a B and A, depending on whether the wastewater - or the treatment includes nitrification, de-nitrification or filtration types of process; it' s just the grade of - of the effluent. And reclaim systems take our permitted two levels to those levels for uses; there's various uses for those levels - for those treatment levels.

So, if you have C, which is a low-grade water, you have very few uses that you can use the reclaimed water on; whereas, if you have a Class A or A+ water, you - you have a lot of uses that you can - you can use it for irrigation and ponds and a lot more places where you can use it than - than the lower-grade water.

CHAIRMAN JIM BARRY: So, excepting B, C and A quality effluent, is effluent simply what comes out of the pipe? And reclaimed is when you take some - when Tucson Water takes some of it and reuses it?

SANDY ELDER: It's not just taking it; it's actually treating it to a higher - taking it to a higher level of quality.

MARCELINO FLORES: And - and in the beginning of the overview, there's yet another word that's introduced, and that's "wastewater," so, I mean, you've provided an overview of effluent resources, but you use the term "wastewater." Is there a distinction again in wastewater, effluent, reclaimed?

MELODY LAUER: Wastewater is just a general term for untreated sewage, and then effluent goes through the treatment process and then effluent is the product of the wastewater treatment plant to whatever treatment level that is required by the State.

VINCE VASQUEZ: (Inaudible; not speaking into a microphone.) And reclaimed, I mean, you can still - even reclaimed is effluent; it's just - it's given the better name because we like it better; it's - that's - I mean, essentially, if you read any kind of technical document about a wastewater plant, they're going to say what quality of effluent that it produces, not that it's reclaimed water necessarily, just . . .

CHAIRMAN JIM BARRY: But you use the term "effluent" and "reclaimed" throughout this document.

SANDY ELDER: We . . .

CHAIRMAN JIM BARRY: Don't shake your head, Sandy. I read the document.

SANDY ELDER: We do use the terms throughout the document and we are specific in the use of those terms, and when we ’re using the term "effluent," it’s - you’re right, it’s coming out of the treatment plants, the wastewater treatment plants.

When we’re using the term "reclaimed," it’s actually been brought to a higher quality and pushed back out through a distribution system and delivered to customers just like a potable system is; it’s a parallel system to the potable, just a lot fewer miles of pipe.

CHAIRMAN JIM BARRY: So - and Pima County has a reclaimed water system in that same definition then?

MELODY LAUER: No, the - the treatment - Pima County at - say, at the Roger Road Wastewater Treatment Plant where most of the effluent comes from that goes in - is further treated and becomes reclaimed, they treat to - they’re right now permitted for a Class B water. The reclaimed system is permitted at Class A. So, we have to take that water, further treat it to make it a Class A to use in the reuse system.

CHAIRMAN JIM BARRY: As long as you’re going to use both terms, I’d really like to see ‘em defined up front so that I can follow it through the . . .

NICOLE EWING-GAVIN: We’ll do that. And just to clarify, so Tucson Water operates a reclaim water system that utilizes the effluent of multiple parties, so County effluent, City effluent and then Oro Valley as well; right?

CHAIRMAN JIM BARRY: Okay.

BOB COOK: I got a question.

CHAIRMAN JIM BARRY: Bob?

BOB COOK: What type of water do you use to - to convey sewage when it’s stuck? I mean, what’s - what’s - what’s the class of water that’s used -

CHAIRMAN JIM BARRY: When it’s stuck.

BOB COOK: - by - by wastewater.

KATHY CHAVEZ: I think - I think the best person to answer that - I don’t know - probably Ed or Jim - Eric would be the right person, but I guess he’s not here.

BOB COOK: And - and - go ahead. Go ahead.

MELODY LAUER: I - I believe - well, I believe that at the present time it is potable. We have been working with the County to - to - to get installed a filling station, a reclaimed filling station that would fill up the County's flushing trucks with reclaimed water -

BOB COOK: Flushing, that's the word I was searching for.

UNIDENTIFIED MALE SPEAKER: Bob, that's very good, clarify. I think you were talking about the flushing of sewage lines -

BOB COOK: Right, right, yeah.

UNIDENTIFIED MALE SPEAKER: - or -

BOB COOK: Wouldn't reclaimed water be better?

UNIDENTIFIED MALE SPEAKER: Yes, sir. And we are working with Tucson Water to find a place where we can have filling stations to fill up our trucks and go out and use them.

BOB COOK: What is the minimum quality of water that's required before it's recharged into the aquifer for - for future use?

MELODY LAUER: Depends on the use.

BOB COOK: Well, I mean, say, the - the facility that Tucson Water uses to recharge CAP water.

SANDY ELDER: Actually, recharged CAP water.

BOB COOK: Yeah, I mean, what - if you were to use reclaimed water, what - what class would it have to be? What grade would it have to be -

SANDY ELDER: Well -

BOB COOK: - before you could put it in that same system?

SANDY ELDER: One of the - when you're building a recharge facility, one of the main things there is the quality of the existing water in the - in the location of that recharge facility -

BOB COOK: Uh-huh. In the aquifer?

SANDY ELDER: Yeah, in the aquifer.

BOB COOK: Right.

SANDY ELDER: Where we're doing the recharge of the effluent, which then later becomes the reclaimed water, that existing water quality was degraded; it was a poor quality from decades of other land uses in that area. So, the quality of water that's permitted to be used at the Sweetwater Facility is very different from the quality of water out in Avra Valley where we 're recharging the CAP water.

BOB COOK: Right.

SANDY ELDER: So that - that's . . .

UNIDENTIFIED MALE SPEAKER: But - but, I think it's important, Bob, Sandy, to realize that the water that goes into the Santa Cruz River straight from the treatment plant out-falls is being recharged and, as Sandy said, we're looking at that being called a "B" category water by the reuse standards, but for the discharge standards, that meets all the discharge standards and the difference between that and the "A" quality water is filtration and additional disinfection.

So, you have really two sets of standards here, and so there's water in the Santa Cruz which is being recharged in recharge projects currently that leaves the treatment plant as B quality and is perfectly adequate for that recharge.

BOB COOK: Yeah, I understand that. My question was more if - if you were to use reclaimed water for the Avra Valley recharge system, what quality would it have to be?

JOHN CARLSON: (Inaudible; not speaking into a microphone) - right now.

MELODY LAUER: You're talking about recharging for purposes of indirect potable use?

BOB COOK: Yes -

MELODY LAUER: Okay.

BOB COOK: - yes.

MELODY LAUER: Up in Scottsdale they are doing just that, they go through - they have a facility that they treat to Class A+ first for the wastewater, and then they add on a reverse osmosis system on the end of that to take that originally wastewater to the point of pretty well drinkable

potable water quality standards before they recharge it and then it - it - it's near potable water - or potable wells; they recharge it and it's near potable wells and, after a certain amount of time, it makes it way - its way to the wells.

BOB COOK: So it's almost potable water -

MELODY LAUER: Yes.

BOB COOK: - when it's recharged?

MELODY LAUER: Yes. So, you have to add further beyond A+ and that -

BOB COOK: Right.

MELODY LAUER: - reverse osmosis.

VINCE VASQUEZ: And - and while I think really legally they can recharge B, whatever, it just happens - really they would be regulated as to when - what then are you pulling back up? That's where the - the - the test would really come and is that water that you're pulling back up after it's mixed with the groundwater -

BOB COOK: So if you had a well right near the Santa Cruz where they're putting in B.

VINCE VASQUEZ: Yeah, then - then it would just be - it would just be what are you pulling back up? Is it - is it effluent blended with enough groundwater so that it's dissolved it to where it's perfectly good to drink.

CHAIRMAN JIM BARRY: Marcelino?

MARCELINO FLORES: I just had a question now. If - is it more cost-effective to allow the effluent to just recharge versus having it go into the reclaim system? I mean, 'cause it seems that - that there's an extra step, an extra delivery cost.

And - and then just kind of on the - on the thinking outside of the box, are there any projects to have like lakes, recreation areas that are served by the - the reclaimed water, not the effluent? And, if so, where would they be located if - is there anyplace that's feasible or are - is that something that's even in the works or cards, possibilities?

SANDY ELDER: From a cost perspective, we have - when we take the effluent from the wastewater facility, we have two ways to get it to A+ water; one is through a filter plant and the

other one is to actually - we recharge it and it - then we pump it back out through the wells. The operation of the filter plant is more costly. So, when that - the stream of water that goes through that does cost more than doing the recharge.

With regards to the lakes, we have a num- - most of the golf courses that we serve take our reclaimed water and put it into a lined lake and it's used as a fore-bay for their irrigation pumps, so they're already - they might be considered small-scale lakes, but there - there are many water bodies on reclaimed. There are some issues, though. You do get fish kills occasionally as the temperatures change and the water levels change, and even some of the chemistry changes, so . . .

CHAIRMAN JIM BARRY: Mark?

MARK STRATTON: You know, there's been over the years plenty of discussion about utilizing the area washes for reclaimed discharge to enhance riparian areas and so forth. Can you talk a little bit about some of the regulatory hurdles that may need to be overcome in order to do that in areas where discharge permits don't currently use (inaudible)?

MELODY LAUER: A few years ago we were - we looked at a project at Attaberry (ph.) Wash to - to discharge for riparian enhancement. In the reclaimed system, we had - the reclaimed - the water is disinfected. To be able to discharge to a wash, we would've had to - to, number one, disinfect - or dechlorinate the water so there was no chlorine in the water, much like wastewater treatment has to do - plant before - has to do before it discharges. Plus, there was elevated levels of copper - and I forget the other constituent - we would've had to add an additional treatment process to meet the Azipdes (ph.) require - discharge requirements, or ensure that we met the Azipes (ph.) discharge requirements at that point.

SANDY ELDER: One of our recommendations is actually - to actually deal - work together to cooperatively work with the Arizona Department of Environmental Quality on some of these issues so that we can do more of this - these type of projects; that's the -

MARK STRATTON: And part of the reason I ask - I mean, the extension of some of the reclaimed water lines, say, to the Forty-Niners' area for the golf course adjacent to the Tanque Verde Creek which Tucson Water stopped pumping groundwater to protect that riparian habitat.

Ideally, that would be a good place to have some reclaimed water to help restore some of the previous pumpage (inaudible), but my - my real question was: Are there such regulatory hurdles that makes it extremely difficult, if not impossible, in order to do that without significant cost or additional fee?

MELODY LAUER: These - these - these would - overcoming these - these hurdles would be expensive, and we may be able to overcome some of these regulatory by going per, you know, recommendations by going as a team and making recommendations.

For - for example, we can discharge potable water, which has a chlorine residual up to a certain amount. Why can' t we discharge reclaimed water that has a certain amount of residual in it? The same context applies.

MARK STRATTON: Well, under the potable water it's (inaudible) permit, could the same thing be achieved for discharge of reclaimed water at various locations throughout

. . .

SANDY ELDER: Not under the current regulations, no, we can't discharge any reclaimed water, and that's -

MARK STRATTON: Okay.

SANDY ELDER: - that's one of these things that we're - and I think it's in Recommendation Number 3 that we're . . .

MARK STRATTON: I kinda new the answer, but I wanted to make sure everyone else heard it.

KATHY CHAVEZ: I want to clarify something on that, Mark. Pima County has tried doing this in a - in a couple of cases, particularly the Kino Environmental Restoration Project, harvest storm water, and then we supplement that with reclaimed water, so we 're - we're mixing - we're using reclaimed water for an environmental restoration project. And there were a lot of permitting - permitting issues as - as Melody and Sandy mentioned; it - it is waters of the U.S., so you would think that we'd need an Azipdes (ph.) permit, but the way we worked with that is we said the water originates from Roger Road, so the State said, okay, just add another discharge point to your Roger Road permit.

We have to - the - the reclaimed system has a reuse permit, so we worked with that. All of those water courses are lined, so that's how we addressed the aquifer protection permitting issue, and then - and then the only remaining issue is that we have to dechlorinate when we - when we reclaim water. So, there - there are a lot of permitting issues and we've been able to work with it successfully and - and - in those areas.

MARK STRATTON: And I think the Kino Restoration Project is a prime example of - of how you can reestablish a riparian area that the community can enjoy. I think it's a great project.

JOHN CARLSON: Point of confusion: How did the Bu Rec end up owning some of this effluent? And the fact that it goes down and crosses into Pinal County and they caught it - some of it above ground and they cut that off - giving them our water, but how about the stuff that's subsurface flow? Anyway, go ahead -

SANDY ELDER: Well, the first question: How did they end up with some of our water?

JOHN CARLSON: Yeah.

SANDY ELDER: It was part of a settlement. There were some court cases on - claims about water rights that go back decades and, as part of those settlements, that portion of the water was set aside for tribal use.

JOHN CARLSON: Okay. For the - for the Indians. Yeah, 'cause, you know, Vegas receives a credit to get more Colorado River water because of their effluent flowing into Las Vegas Wash, back into our system, and - and we can't get it ourselves.

SANDY ELDER: Well, theoretically, our water doesn't get back to the river, to the Colorado River.

JOHN CARLSON: Yeah.

VINCE VASQUEZ: (Inaudible; not speaking into a microphone.)

JOHN CARLSON: Well, that - I said I was confused. Thanks. Forgive me.

VINCE VASQUEZ: (Inaudible; not speaking into a microphone) -

CHAIRMAN JIM BARRY: Get him the microphone, please.

VINCE VASQUEZ: I thought one of the most interesting discussions, particularly for a policy discussion like this, was the use of general obligation bonds to extend the reclaim system, and I think it raised some interesting points in terms of where there's environmental benefits of taking - of taking certain users off groundwater to creating, essentially, some kind of a community subsidy in order to make the - the economics more appealing to bring that groundwater user off of groundwater and/or when there's multiple benefits of extending a line in a certain area, where not only might you be eliminating a - or taking a groundwater use off of groundwater, but you also might be extending out to an area where direct service to parks and schools and environmental restoration efforts in a similar area are all kind of lining up.

And I - I think definitely when there's some - when there's some kind of environmental benefit - and anytime we're taking groundwater users off of groundwater - there's a definite environmental benefit there. And the costs of something like that, it's a community benefit and the cost - the beneficiaries are the community, and so it makes an interesting - poses an interesting question in terms of the GO bonds because it is an environmental benefit serving the region should the cost-bearers also be the region, so . . .

KATHY CHAVEZ: I think the one point to clarify is that - is that the proposal as we saw it would be for projects that have a public use, you know, like public parks, things that have a community benefit, not just an environmental benefit, but a public benefit.

CHAIRMAN JIM BARRY: Bonnie, go ahead.

BONNIE POULOS: Couple of questions. In your background material on the reclaimed water technical paper, you say that there are other valued uses for effluent besides use in the reclaimed system. Can you itemize what some of those valued uses are?

SANDY ELDER: Well, earlier we were talking about drought-resistant communities, and Bob later - in this conversation you were starting to go to the indirect reuse questions; Mark, you were kinda getting there too. We see this aquifer augmentation. Melody talked about Scottsdale. In the long-term, some sort of aquifer augmentation benefit where we're banking our water. Vince, you were - somebody was talking about water leaving the AMA and going on to others - or maybe, John, that was

you - if we can - the more water we can keep in this basin and store in the aquifer, you know, under appropriate regulatory conditions, under appropriate hydrologic conditions, that's a big benefit for the community, so that when we do have shortages and droughts and we're outside the - the long-term averages, or whatever they are, we have a water source locally to - to go to.

KATHY CHAVEZ: And the other - the other valued use that we see is environmental restoration.

BONNIE POULOS: Okay. So what was in parenthesis are the itemized uses that you see?

NICOLE EWING-GAVIN: Yes.

BONNIE POULOS: Okay. That was not clear from that sentence. From that sentence it seemed like . . .

NICOLE EWING-GAVIN: (Inaudible).

BONNIE POULOS: Yeah. Which brings me to the other issue: Overcoming regulatory barriers. I have training in public health and, normally, regulations when it deals with water has to do with public health, and I feel like a white paper and a recommendation that tries to overcome a regulatory barrier, in my mind, implies that we're trying to get around a regulation. And I think a much better way to deal with that is how to address the regulatory climate that exists because it, in my mind, when it comes to public health you always have to err on the side of the precautionary principle that says if there is a danger - and we've had enough instances in the southwest where our water systems have been contaminated through oftentimes negligence, but also because regulations were not in place to deal with them.

And I guess there was a section in here where it talks about - where is it? On overcoming financial barriers, bullet number two talks about private customers with a revenue source paying the full cost of - of reclaimed water, but exploring options to encourage potential customers who potentially - who currently have no financial incentive to join the system, such as phased-in rates and expanded potable water ratepayer subsidies. And I guess this hinges on what I heard earlier is that the potable water ratepayers are the ones who provide the vast majority of the raw material that is used to

provide reclaimed water, and I think that there will be a lot of resistance in this community to have ratepayers charged so that people can use reclaimed water, because it - it seems like a disproportionate burden that we're putting on the people who are already ratepayers.

And I think that there needs to be a way to look at this without saying that, oh, the people who are already here and are already paying sewer fees, providing the effluent, conserving their water are the ones who should somehow subsidize people who don't have the money for reclaimed systems. And I think that's really a part of growth paying for itself, and it seems to me kind of a guise - a disguised way of trying to say that, no, we are going to move those costs onto the current ratepayers and I - and I really find that that is an issue that is not going to be acceptable, and I don't know that it should be a recommendation.

I also think that incorporating consideration evaluation of how - of reclaimed water into the City and development review processes for both new growth and infill projects, and I guess there needs to be a real effort on the part of people who do this to specifically specify how that water will be used, if it's used in that way, and what the standards are and that the standards have to be more than simply the minimal standards that are required by regulatory agencies. And, again, I go back to the issue of public health.

NICOLE EWING-GAVIN: Just to follow up on the funding issue. This was something we talked a lot about and would appreciate your feedback on. Yeah, there's a - there's a couple of examples now where there's two golf courses that the reclaimed system goes right past and, you know, it's like, whatever, ten feet to hook them up, but they're pumping groundwater right now and there's no financial incentive for them to get on the system because it costs so little for them to pump groundwater.

And so we discussed, you know, are there things we should do as a community to - to make that happen financially, and whether it's the ratepayers subsidizing or a general tax, or do we just say, you know, we can't control it or - you know, that was something we talked a lot about and didn't come to final decisions, but . . .

BONNIE POULOS: But what about changes in policies that prohibit these people from being able to pump?

NICOLE EWING-GAVIN: I mean, it would be State level, and so that's where it gets into the - the advocacy, the regulatory . . .

VINCE VASQUEZ: (Inaudible; not speaking into a microphone) - value of us to take you - if it's value to me to take you off groundwater, then I should be willing to pay some of that cost burden to - to - to impose my value on you, essentially, and -

BONNIE POULOS: But why - why is that? I mean, if I, as a ratepayer, am being told that even if I conserve, I'm going to have to pay more for water in the future because there's less of it, how come somebody who has a business doesn't have to do that as well?

VINCE VASQUEZ: I'm not necessarily - I guess my - my piece with it, I think most of the - a lot of the economic breakdown I think comes in the - the extension of the line; that's - there's two parts of it I think we have to break out, there's the - the infrastructure cost component and - and the - the cost involved in - (end of audio recording 2 of 3) - that if you're going to impose your values on somebody who has a right, a legal right, an entitlement to it, then there should be some consideration to what we can do to make it a win-win.

CHAIRMAN JIM BARRY: Let me ask a question. The golf courses you mention, are they on Tucson Water or are they on their own wells?

NICOLE EWING-GAVIN: Their own wells.

CHAIRMAN JIM BARRY: They're on their own wells; then they're grandfathered. So, there is no legal resource - recourse that Tucson Water has to force them onto the system; right? Okay.

JOHN CARLSON: When it's good water that City Water might want -

CHAIRMAN JIM BARRY: I understand that.

JOHN CARLSON: - (inaudible; speaking over one another.)

CHAIRMAN JIM BARRY: I understand that and I would rather they be on the reclaimed system, but I wanted to find out whether we are talking about a situation where Tucson Water

is delivering it already and has any legal recourse, or whether they are - have their own wells and we - and Tucson Water has no legal recourse.

VINCE VASQUEZ: The instance would be - is, say, a golf course that's on a type 2 right, you know, a grandfathered groundwater right for non-irrigation use, the golf course, turf irrigation is not considered irrigation use, but - so they have this type 2 right and they're pumping groundwater every year pursuant to that right to operate their golf course in, you know, the most economically efficient manner that they operate it in, and then you come along and impose some kind of - or attempt to impose a restriction on them that forces them to - to go to a water that's maybe five times as expensive or to hook into a system that requires some enormous infrastructure cost, it just - it - it doesn't make sense to me that - that you would even consider going down that kind of a policy discussion without some kind of consideration to what their legal right is.

CHAIRMAN JIM BARRY: In the City of Tucson, is it right that any new golf course has to go on the reclaimed system, and that's -

NICOLE EWING-GAVIN: Correct.

CHAIRMAN JIM BARRY: - also true in the County?

KATHY CHAVEZ: Yes.

CHAIRMAN JIM BARRY: Yes.

KATHY CHAVEZ: Well, with the County ordinance, it prohibits newly-zoned golf courses from using groundwater, so they can use reclaimed water or another renewable source like CAP, but that's right, newly - golf -

CHAIRMAN JIM BARRY: Margot's mother can bring her -

KATHY CHAVEZ: - golf - golf courses -

CHAIRMAN JIM BARRY: - her buckets of water.

KATHY CHAVEZ: Can't use groundwater.

CHAIRMAN JIM BARRY: Let me just follow up, in the City of Tucson, there are how many golf courses? Nineteen and 17 of 'em are on reclaimed or something like that?

SANDY ELDER: Yeah, that sounds - that sounds right.

CHAIRMAN JIM BARRY: And there's like 34 in the County and 24 are on reclaimed? ADWR gave us some numbers like that.

KATHY CHAVEZ: Right.

NICOLE EWING-GAVIN: So there's - within eastern Pima County, there's 39 golf courses; 23 of which are within Tucson Water's Service Area; of those 23, 18 are on reclaimed; one is using potable from Tucson Water; and four are pumping their own groundwater.

CHAIRMAN JIM BARRY: Marcelino?

MARCELINO FLORES: Well, I - I had an earlier - well, I got a question just because of a recent conversation. Is there something like if they come or they want to add like a little water feature or some sort of other amendment to their golf course, do they like - like a rezoning, you know, come back now they have to be held to that standard? Is there anything like that in terms of those . . . no?

SANDY ELDER: It's pretty much - for Tucson Water, it's in our Mayor and - adopted Mayor and Council policies that any new turf facilities, golf courses, would use reclaimed water.

MARCELINO FLORES: I don't know that that happens very often in terms that they change the - the . . .

SANDY ELDER: Right.

MARCELINO FLORES: But I had an earlier question kind of with the - your comments, Sandy, about keeping the water within the aquifer or the AMA, and does it - and also the example that Mark brought about the Forty-Niners, does it make more sense then to have projects that start further up the watershed and then like a series of recharge basins from there, as opposed to like from the Roger Road Plant further downstream from there where there's a threat of it going to Pinal County? I mean, has that been considered and, you know, infrastructure out further up upstream . . .

SANDY ELDER: Marcelino, you're - from a hydro- - there's two aspects to this: From a hydrologic perspective, you're absolutely right, the farther up the basin you are, upstream you are, the better for the whole community; the downside on that is cost because now all of our wastewater - it's a gravity-fed system, I don't know if you remember our water 101 schematics, it's all flowing

downhill, then we have to lift it back up, like the reclaimed systems we have in Savano (ph.), up along Houghton Road, we're lifting that water hundreds of feet to get it back up there; that's the ideal place to put the water, you know, to do the aquifer augmentation that we're talking about, but we have to put a lot of energy to get it back up there. And if you were to do the aquifer augmentation, like Melody was saying, we'd have to put more costs in to cleaning it up, more energy into cleaning that water to get it in there.

MARCELINO FLORES: Well, with that in mind, I mean, one of the things is - is alternative modes of transportation; I mean, just pipe it, but truck it; is that something that's feasible?

SANDY ELDER: No.

MARCELINO FLORES: Is that . . .

SANDY ELDER: The volumes are -

MARCELINO FLORES: Or you can do a train - train rail - a light rail.

(Inaudible; multiple speakers.)

MARK STRATTON: With respect to the fundamental question, does it make sense for the future to be looking at treating at a location that the intended end use is more appropriate at that location, as opposed to letting it flow all the way to the lowest part of the basin and pumping it back up to the . . .

KATHY CHAVEZ: And that's - that's a good . . .

JOHN CARLSON: Can I break in? 'Cause I pushed that idea the last two years at the Wastewater Committee and I get my head cut off every time I bring it up, and I say at some point in time -

MARK STRATTON: Well, there's no one there from Wastewater -

JOHN CARLSON: - there's got to be a compromise. There you go.

KATHY CHAVEZ: No, but that's a good point, Mark, because we have considered putting upstream reclamation facilities higher up in the basin, and as we see more - if we ever see - more growth in - in that area, that's something that we'll look to do and that has been in the wastewater long-range plans for some time.

MARK STRATTON: Well - and under your - your new development section, you know, you talk about extending the existing reclaimed potential dual-pipe system to the new developments or other outlying facilities, but you don't talk about possibly a new reclamation scalping plant that could be utilized.

And - and I'm a strong proponent of dual-piping in new developments, going back to a total water management for a master plan community and it goes back to making us drought-resistant communities.

So, I think that that section should include in there that potentially it could also include a small reclamation facility to meet the needs of those new communities.

SANDY ELDER: Do you remember on Phase 1 we had those four other tasks that Staff were working on? One of those tasks talked about a southeast plant, and this is -

MARK STRATTON: Right.

SANDY ELDER: - exactly what we're talking about here. And, you know, we have been working together to look at when there's an opportunity to evaluate this situation; it's on our - definitely it's more than just on our radar screen - it's on our to-do list - to - to go through these evaluations when everything comes together. Right now, there' s very little flow in the southeast area, so there's nothing to work -

MARK STRATTON: That's understand, but you identify extending the existing reclaimed system or utilizing outlying facilities, but you preclude the concept of potentially having a new facility to meet those demands, where maybe an outlying facility in that vicinity is too far away or it's too costly to extend the existing, but I think you need to include that as an option. I'm not saying it needs to be done, but I think it is an alternative for new development.

CHAIRMAN JIM BARRY: Vince?

VINCE VASQUEZ: One other concept that - I think it's a really interesting thing that I was thinking of as I read this - is as you extend the reclaimed system to various areas of town, it opens up the opportunity to have recharge basins in multiple areas around the basin where you then could -

you know, right now most of the recharge occurs out in Avra Valley or - or in the - in the far north end of the - of the region, far northwest end of the region.

The reclaimed system allows you then to wheel renewable supplies to various locations around - around the region and to recharge that so that you have a more stable aquifer, I guess, in all - in all parts of the region. And - and I wondered if that was considered or has been considered in this?

SANDY ELDER: You're right on - you have the right concept there. One of the practicalities, obviously, is we have existing customers; they're all, let's say, mostly outdoor turf. The time of year that they need the most water is the summertime, so we have a large seasonal demand in the summertime. Most of the pipes are sized to meet those seasonal demands.

In the wintertime, particularly when it's raining in December, there's very little flow moving through those pipes; that's the time when you can do the recharge. So, there's - it's not an all-year-long thing; it would be seasonal. You take advantage of the opportunities in the winter months when there's very little turf demand for water, and then in the summertime you might have to cut back on the recharge if you could do it.

The challenges are - as we were talking before about the regulations and the disinfection and that stuff in Scottsdale is, you know, getting through to do those recharge projects in those facilities, and once you get past those hydrologic things, then you get into the regulatory concerns and, of course, again the energy to get it up there.

JOHN CARLSON: Yeah, that's what I was going to ask.

MELODY LAUER: There are - just following up on that, there are other recharge proj- - facilities that are ongoing right now with the County. The County is recharging at the - their Avra Valley Water Reclamation Plant, and Green Valley and Corona de Tucson?

KATHY CHAVEZ: Uh-huh.

MELODY LAUER: Yeah. So there are some other outlying facilities.

CHAIRMAN JIM BARRY: Marcelino?

MARCELINO FLORES: As opposed to completely recharged, would - would like small little recreation lakes be something that could be considered? I mean, you wouldn't need an

aquifer permit; would that be right? And then, you know, maybe those lakes could be used so that you can work with - with - with deliveries at night. I mean, the golf courses water their - No? It's like kinda working with some of the - the energy costs.

MELODY LAUER: Any lakes or any facilities you would require the APP for those.

SANDY ELDER: Well, the golf courses actually irrigate at night -

MARCELINO FLORES: Yeah.

SANDY ELDER: - the bulk of that stuff happens at night, and we have actually - that's our, you know, we talked about a seasonal demand, we actually have a daily demand cruve, and it's - right now we're ramping up . . .

MELODY LAUER: Yeah, the - the golf courses generally like to have their - their lakes filled by morning so that when you get out there to tee off you have a nice little lake, part - part of the daily demand.

SANDY ELDER: We - we - there is a community lake that we've had a lot of experience with, Lakeside, on the southeast side; it's been a real challenge to manage that lake with . . .

JOHN CARLSON: Yeah, the poor fish are hurting.

SANDY ELDER: Yeah, with the fish in there and the water quality challenges; again, it gets - it heats up . . . yeah, the . . .

MELODY LAUER: Yeah (inaudible).

SANDY ELDER: So, I mean, these are good words - I mean, it's easy - the words come out of our mouth really easy, but when you actually go to implement them, there are lots of challenges.

CHAIRMAN JIM BARRY: Well, but I think what some of us on the Committee would like to hear you say is that it's a good idea and we will proceed forward to try to solve those things, rather than just throwing out the problems and - and - and making it sound like no - no use trying it.

SANDY ELDER: Okay.

CHAIRMAN JIM BARRY: So, it's a matter of how you're presenting this stuff.

SANDY ELDER: Okay.

CHAIRMAN JIM BARRY: John?

JOHN CARLSON: Yeah, I think this is appropriate this time, and what I'm talking about is pharmaceuticals in the water. We've got scant information out. We had a special report at this - at this Wastewater Management Committee, and there's very little data. But, unbelievable last week Channel 6 had a very extensive thing and it's a growing thing, and two things, I - I - I don't know that we've got all our - our specifications up to the latest thinking.

The other thing, I see no publicity at all from these two utilities telling people to take their damn pills back to their - their local drugstore, and I think we need a total education program on that.

CHAIRMAN JIM BARRY: Are we planning a paper on the emergent contaminant issue?

NICOLE EWING-GAVIN: Yes, that's the last - I think it's August that we have that scheduled for.

CHAIRMAN JIM BARRY: That one was of my points, I think that's a - that's a very major point that we have to - we have to address.

VINCE VASQUEZ: I think one of the - oh, go ahead, Bob.

BOB COOK: I'd just like to make two points that I think that we might want to consider. One is that I think we ought to be developing in all the white papers a laundry list of issues that pertain to developing a statewide water plan. The - the example you gave where you've got a golf course that's pumping potable water, and you've got a, you know, reclaimed line infrastructure very close, and the fact that we have these conditions - while maybe not problematic right now - could be very problematic under other scenarios.

So, I think we're looking at a range of issues where, if the severity of drought and supply and so on get to a point, the demand for a statewide water plan is going to increase and we ought to be prepared with - with all the issues that we see need to be addressed at that level.

I think that California is moving in that direction; they're restricting uses in - in major sectors of their economy because of - of their water shortages. Australia, as a - as a country, had to

change its entire water laws because of the severe drought that they're experiencing. So, I think that, ultimately, water law itself is on the table and we ought to be at least anticipating that.

The other thing is that, in general, in all these infrastructures, the further out we go, whether we're pumping things out or pumping them back, it gets more expensive per unit, and we need to have a fair way of allocating those costs. And I don't know what the details are in your thinking about how those formulas would work, but I would like to see some evidence in - in any final recommendations that - that that is - that's considered, because we really need to create some disincentives for over - over-extending ourselves especially and in terms of public investment, I believe.

CHAIRMAN JIM BARRY: Vince?

VINCE VASQUEZ: Just another thing I think deserves some attention is - and I think it's one of the City/County joint projects, the Joint Constructed Recharge Project, and what that - a better understanding of what that means in terms of the - the water portfolio of this region and that just - that as we just discharge it into the channel, into the Santa Cruz, the - the discharge in that event - it gets a 50% credit. If you just - if you put it into a recharge basin, it gets 100% credit.

And so, in a sense, as we - as we discharge water without capturing it, we're not - we're not only physically losing it outside the AMA, but we're also losing the legal availability of that water and that adds up every year. I don't know, I forgot what the math is exactly right now, but every year it's, say, 10,000 acre-feet - I think I remember (inaudible) conversation on this - 10,000 acre-feet that - that - that Tucson Water is not getting credit for; and it might've been Tucson Water, Metro and Oro Valley altogether.

So - but it's basically - it comes down to that by building this recharge basin and funding that, that adds to our annual water supply portfolio by 10,000 acre-feet. You - you add that up over many, many years and it provides a really good buffer for drought in the event that we - we get curtailed from CAP allocation for a number of years, or a year for that matter; it's building up a bank account to increase that buffer that we have against drought.

And so I think it - it's really, as we talk about the economics of water and in - and in developing or purchasing more supplies and the options of - that are on the table, such as: Do we invest

in conservation? Do you invest in supply acquisition? Or do you invest in a recharge project? And where money is allocated should be based on kind of this metric of dollars per acre-foot, you know. If we get 10,000 acre-feet, you know, to build a ten-million-dollar recharge facility, what's the - what's that break down to in dollars per acre-foot? If we invest in retrofitting every toilet in Tucson, you know, that's got a dollar component and it's got an acre-foot component to it. If we invest in a water right on the Colorado River, it's got a dollar amount to it and it's got an acre-foot component to it, and I think - so, I - I would like to see that teased out a little bit more as we - as we move forward with this discussion.

CHAIRMAN JIM BARRY: Marcelino?

MARCELINO FLORES: Can you explain what the industrial uses of reclaimed are? There's two facilities, but they do take up a significant amount of irrigation rate. And, I guess, one of the - what other industries are - are - might have a market for the reclaimed water? I'm thinking maybe like a paper recycling facility or something like that, that could use the water for their pulp manufacturing.

SANDY ELDER: Most of the industrial uses are based on some sort of use for cooling. For instance, the U of A was - there's a large line that was built into the U of A, they say they were going to use some on turf; they're also going to use a much larger group on industrial for cooling. Yeah - okay. So you're talking specifically . . .

NICOLE EWING-GAVIN: So, in the report on page 15, we have a table of potential customers and it showed two industrial; is that the one you're talking about?

MARCELINO FLORES: Yeah.

NICOLE EWING-GAVIN: Yeah, so those aren't current customers, but one of the studies that was done to identify customers identified - one of them I believe is TEP, which would be a really large user. What would they use it for?

SANDY ELDER: Yeah, that's cooling water.

NICOLE EWING-GAVIN: Cooling, yeah.

SANDY ELDER: And the - the cooling waters - both the U of A I was talking about and TEP, the reclaimed water, they - they had some challenges with it for cooling because of the large nitrate concentrations and so . . .

MARCELINO FLORES: They would probably - I mean, they wouldn't necessarily - well, I don't - I don' t know exactly the particulars of the system but, I mean, there could be a closed-system design where the heat is exchanged and - somehow, but

. . .

SANDY ELDER: It's in the cooling towers where the problems are in -

MARCELINO FLORES: Yeah.

SANDY ELDER: - scaling and fouling.

MARCELINO FLORES: Well - and then so that would be primarily it for the cooling systems then -

SANDY ELDER: Uh-huh.

MARCELINO FLORES: - and, thus far, like you're saying technology doesn't lend itself to -

SANDY ELDER: Right.

MARCELINO FLORES: - being sustainable. And then, in that case, you know, if it were something that were possible, or something that were feasible, then trying to locate those type of facilities near the reclaim system might be a goal for economic development, for example, so . . .

SANDY ELDER: Yeah, and, again, it's kind of the right use; it's kind of where Vince was with that dollars per acre-foot; it's - it's matching the use with the quality of the water. And if you're trying to force some issues, you know, you might be upside down on your costs or you might be adding more costs to the - whatever the use of that water is.

CHAIRMAN JIM BARRY: Would the mines ever be a potential customer for reclaimed water?

SANDY ELDER: Yeah, they're a long ways away from the City of Tucson reclaimed -

CHAIRMAN JIM BARRY: I understand.

SANDY ELDER: - reclaimed system.

VINCE VASQUEZ: But I guess it's - they're pumping - right now their - their - they have - their - their mining right is free -

CHAIRMAN JIM BARRY: I understand.

VINCE VASQUEZ: - essentially, and so their - their water costs are just whatever their pumping costs are, and what is that? Isn't that usually somewhere around $100.00 an acre-foot?

SANDY ELDER: Yeah.

VINCE VASQUEZ: So, if they're pumping at $100.00 an acre-foot then - and we have to be selling them reclaimed water at somewhere closer to that for it to be a consideration -

CHAIRMAN JIM BARRY: I understand.

VINCE VASQUEZ: - and - and if we're willing, as a community - again, it goes back to that discussion - if we're willing as a community, it's important enough for us to take them off - to take them off groundwater to subsidize that cost down to where they will take it, then that's something that the community should discuss. I mean, if we don't want Rosemont Mine, should we - should we then give them their - their water? I mean, is that -

CHAIRMAN JIM BARRY: Well, that's -

VINCE VASQUEZ: - that's part - that's - that's kind of the inflammatory version of the - of it, but . . .

CHAIRMAN JIM BARRY: I asked a question: Are the mines a potential customer?

SANDY ELDER: No.

CHAIRMAN JIM BARRY: You say "no."

SANDY ELDER: No.

CHAIRMAN JIM BARRY: You're saying, no, they aren't; it's not even worth thinking about?

SANDY ELDER: It's a quality issue.

VINCE VASQUEZ: No, no, I'm saying that if the community is willing to both ex- - extend the line out to them, so there's one - an infrastructure cost, and then also price the resource such

that it's comparable to what their pumping costs are, or close enough to where it's - it's reasonable, then I think the mines would be amenable to that; if the - if the quality of water was sufficient to meet their needs.

ROB KULAKOFSKY: Well, the reality is that they need better-quality water -

JOHN CARLSON: Well . . .

ROB KULAKOFSKY: - so they're not going to take it.

JOHN CARLSON: Well, they have different uses in it: refining the ore and floating it out and then . . .

ROB KULAKOFSKY: Maybe for settling ponds. Once again -

JOHN CARLSON: Yeah.

ROB KULAKOFSKY: - they get into the DEQ issues, too.

One - one of the things that - yeah, I see in the report that the City's trying to improve, say, a 10% addition to the use of reclaimed, and County 25%, and most of this is going to turf. I'd like to actually see the City and County trying to reduce the quantity of turf irrigation. I think it's an incredibly wasteful use of water, whether it's reclaimed, or whatever, in a desert community.

Having said that, I also agree with Vince that there are - I actually do agree with him - that - that if - if a reclaimed line is going by a golf course that's pumping groundwater that is a community resource, I think it makes sense for the community to subsidize the use of that reclaimed water in that golf course because it's actually replacing a community resource that's going to be destroyed anyway by pumping groundwater and having a - what I would consider a - partially recyclable or a water type for the turf.

So, I do agree that we do have to push the use of reclaimed for - for turf where currently they're using aquifer water, but I really think we need to be discussing less turf in our community.

CHAIRMAN JIM BARRY: Let's see if there's anybody in the audience that wants to say anything. Michael?

MICHAEL: (Inaudible; not speaking into a microphone.) Well, you've had a pretty good discussion here; get a chance to see the research that you have done. Rosemont Mine, you know, I

don't know, it just - you get off into these policies things very bad; it only would've cost $11 million dollars to procure that a while ago.

Look at the UASC, for instance, $275 million dollars lost, dead lost to a proposed U of A Science Center; that's not going to happen and I'm going to continue fighting in court to stop that kind of thing; that's an obligation bond that requires public approval, or that kind of thing like the question about the bond before, the people will decide where the money will - that's when the governments choose to follow the law and they don't make it impossible for somebody to take 'em to court and have the court discuss the merits and make a decision on the merits, rather than just dismiss the case.

But, first let me say something I think is very important about the situation with the snow pack, is - is - is really crucial and I was quite surprised that then when David Modere said before last April, oh, we may pick up a little bit more snow in April. We picked up a terrific amount of snow in the snow pack last April and, again, there was a huge storm that passed through the Denver area and left quite a bit there. However, I think it's dropping.

The snow pack is very closely related and the global weather pattern because of the break-up of the old ice sheets; northern Pacific, northeast Pacific ice sheets cracking up and helping in the ocean, cooling down the ocean surface. Temperature, that's the La Nina and it's passing out of the cyclical period you see with the tree rings, et cetera, I think because we have a phenomenon, these 3,000-year-old ice sheets are cracking up, they're cooling down the ocean surface; therefore, the winter and later April snows are not going to be coming as heavily as they were before.

And there are people, meteorologists, who could figure out with - they came to very good calculations. How long is that going to last that this phenomenon of those big ice sheets breaking up and keeping that cool there? Kentucky gets a lot of rain, et cetera, so it's a very different kind of phenomenon with that.

And USBR has some articles that say we know that - we don't know when - sooner or later this drought is going to end. But, remember Lake Meed and Lake Powell are limited in their time period to at least just a century I think till they fill up; 37 years has passed. There's probably 5 acre-feet

- five million acre-feet of silt in there now. So, in terms of this thing, if it's going to - then you're going to have to consider what are you going to do.

And the power and energy situation, they're cutting a three-mile channel through the limestone in Lake Powell, take it down to a lower level. And the USBR did say it's going to be 13 feet lower, Lake Meed, this year because of the way they are operating the triple-tier system, and it goes down to 1075, we could hit 1075 next summer.

I think that the question is going to revolve around growing smarter legislation which had - let me finish up real quick here - kicked off in 1998 and here's the chart of that 1998 - growing smarter is right here - is right here; that's 1998 growing smarter up there and we had a radical precipitous drop. One section here came up. You've got over a 20-foot drop right here. Lower tiers of Lake - Lake - the lower tiers of both Lake Meed and Lake Powell are coming in. You don't - you don't take - it doesn't take 20 feet to - to knock off five million acre-feet. You can go down - the amount of drop - the amount of drop you're going to get in the lower tier is going to be much less significant in volume of - of water; it can lose - it can lose the same volume that was lost up much higher and it can drop twice as far, which means you could see a 30-foot drop in probably five years from now; it'll be down to a roiling, muddy stream.

Development can't - and they shouldn't keep retiring the agricultural lands because - like Steve Leal had said - a very accurate observation - you've got to bring the food in from much further away; it's going to cost more, et cetera. So the energy costs, the whole thing. Thanks for the time.

CHAIRMAN JIM BARRY: Okay. Yes, sir.

BILL CROSBY: Regarding the water quality of our reclaimed water, I believe there are standards that have to be met, the NCUs and the NTUs, the National (inaudible) Unit Measurement, and NTU is a chemical -

MELODY LAUER: Turbidity.

BILL CROSBY: - formula.

MELODY LAUER: It's a measure of turbidity of the water -

BILL CROSBY: Right.

MELODY LAUER: - particles in the water.

BILL CROSBY: Right. If this is true for reclaimed, is it also true for effluent?

KATHY CHAVEZ: Well, again, the - the water quality standards match with the - with the use. So, for reclaimed water, it's being used where people come into contact, so the water quality standards and requirements are more stringent.

BILL CROSBY: All right. As far as recharge, we can go back - I think it was in the mid-'80s when CAP first came to town, they tried to recharge in the Pantano at Christopher City, and there was quite a lot of publicity about the fact that they found some chemical in - when they tested the aquifer right there, that was responsible for kidney disease in the Christopher City - Christopher City population, and this is - I don't know if - I guess the question is: If CAP is looking for recharge points now, is that still an option?

SANDY ELDER: Well, remember in the beginning of this conversation, we talked about recharge in different places of the aquifer, different - kind of the quality of the water - the water in the aquifer at those places being different. We talked about like the Roger Road area that kind of had over decades it developed a poor-quality water. Avra Valley was a more pristine potable quality water.

Likewise, one of the challenges as this community evolved over the last century, we had different land uses all along the river channels and sometimes when we, you know, if we're going to do recharge adjacent to some of our old landfills, we would have some new, you know, we might have the cleanest water in the world and then put it in the ground right adjacent to a landfill and then we generate some problems in subsequent water quality degradation.

So, you got to really match what you're doing. If you're going to do recharge, you want - for aquifer augmentation, you want to do it in an area where it's good quality water; you're not going to create more problems. I think that's what you're alluding to -

BILL CROSBY: Uh-huh.

SANDY ELDER: - with the Christopher City situation.

BILL CROSBY: Right. Well, they found that out, but it was -

SANDY ELDER: After the fact.

BILL CROSBY: - after the fact.

SANDY ELDER: Yeah.

BILL CROSBY: Right. So, I guess in thinking of the big picture, isn't this maybe the time and an opportunity to consider reform of Arizona water law? Is that what we're doing maybe?

UNIDENTIFIED MALE SPEAKER: No, not this Committee.

CHAIRMAN JIM BARRY: I - I quit if we are.

(Inaudible; multiple speakers.)

CHAIRMAN JIM BARRY: I think it has to be done; this Committee is not going to tackle that one. I - I just don't see us tackling that one.

BILL CROSBY: It'd be nice.

CHAIRMAN JIM BARRY: It would be. It would surprise the hell out of me.

VINCE VASQUEZ: Have you seen the make-up of the legislature though, it's . . .

CHAIRMAN JIM BARRY: All right.

JOHN CARLSON: Yeah, it could be one of our recommendations that they look at IT.

CHAIRMAN JIM BARRY: Yes, absolutely, and I didn't mean - yes, I think we would say that, yes.

COLETTE ALTAFFER: I haven't been up here in a while. Colette Altaffer. One real quick thing on the meds. Household hazardous waste used to take pharmaceuticals; this year they did not take them; but there is some kind of recommendation out there for proper disposal, so that might be something you want to circulate.

With regard to CAP water, and Tucson's increased reliance on the use of CAP water, I know the salt content is rather high, 600+ parts per million, and EPA recommends that you serve a customer nothing higher than 500 parts per million. Now, we 're diluting that in Avra Valley but, eventually, we're going to get water out of there that pretty closely represents the salt content in CAP water, and with drought the salt content in CAP water is probably going to go higher. Then we're redistributing that, and we redistribute that throughout the Tucson valley. So, I think over time the

combination of using reclaimed water and redistributing again and again means that over time we're going to alter the environment. We' re going to alter the salt content in the soil.

And I don't think we have fully addressed or discussed the long-term environmental implications of what can survive in that kind of a salt content, and I think we need to think about what it is we're doing to this valley and whether we're turning it ultimately into an unlivable dust bowl.

CHAIRMAN JIM BARRY: You are always so cheerful, you know?

BOB COOK: I mean, that's a question, I mean, are we - are we - are we supposed to regulate - are we - are we subject to salt regulations?

SANDY ELDER: No, there's no enforceable standards on total dissolved solids.

BOB COOK: So, EPA has the recommended level, but we don't -

SANDY ELDER: That's correct.

BOB COOK: - it's not enforceable?

SANDY ELDER: Right. It's not the same as some of the other, you know, contaminants that have set levels.

BOB COOK: So, what - what is the . . .

CHAIRMAN JIM BARRY: Bob? Bob, I'm going to end it here. We've got another - we got another subject to talk about, okay?

Val, you want to come up? And let's - let's -

VAL LITTLE: You want to keep going?

CHAIRMAN JIM BARRY: No, no, no, we - I want -

VAL LITTLE: You don't want to keep going?

CHAIRMAN JIM BARRY: - I want you. Well, let me rephrase that. We're at 8:20 -

VAL LITTLE: Yes, we are.

CHAIRMAN JIM BARRY: - how about we get this conversation started with the understanding that we'll continue it at the next meeting. Can you come back to the next meeting?

VAL LITTLE: Oh, yes.

CHAIRMAN JIM BARRY: And we are going to have the Staff report on conservation at the next meeting; that's guaranteed now? Okay.

So, why don't we get started and - and we'll continue it next week. And you wanted to do some sort of a Power Point . . .

VAL LITTLE: Well, I have Power Point for - I'm thinking that there might be people in the audience who hadn 't seen the report or didn't have -

CHAIRMAN JIM BARRY: Okay.

VAL LITTLE: - a copy of the report.

CHAIRMAN JIM BARRY: If you went through the Power Point, how long would that take?

VAL LITTLE: Well, I can talk really fast. I mean, it's just an overview of what the . . .

CHAIRMAN JIM BARRY: Okay. Why don't you do that?

VAL LITTLE: Here, Melaney? Anyway, I'll - I'll just . . .

CHAIRMAN JIM BARRY: Okay. What - what we've done here is we - we are waiting for a joint City/County Staff report on conservation, but we are also aware of Water CASA and its breadth and experience and we thought it would be a good idea for this whole kind of adaptive management subject matter; to get somebody . . . in here - what's the matter, Bob?

BOB COOK: Oh, I think there may be - oh (inaudible) got it.

CHAIRMAN JIM BARRY: Okay. To get another perspective on - on what other people are doing; what our future challenges may be; and that's what we've asked Val to - to bring to us.

VAL LITTLE: Is that part of my ten minutes?

CHAIRMAN JIM BARRY: It's - it's - what ten minutes? Okay. So . . .

VAL LITTLE: Thank - thank you for the opportunity to do this. I'm so sorry and I apologize - what?

UNIDENTIFIED MALE SPEAKER: (Inaudible; not speaking into a microphone.)

VAL LITTLE: Okay. I apologize in advance, I am not a night person. If I was to do this at 5:30 in the morning, I would be hot and ready to go. I am not ready to go right now.

CHAIRMAN JIM BARRY: Oh, you're not a night person. I thought you said I'm not a nice person.

VAL LITTLE: Oh, I'm not that either, but . . .

CHAIRMAN JIM BARRY: And nobody disagreed with that.

VAL LITTLE: - you still want me, so . . .

I wanted to begin by saying that the - the white paper that I prepared for this Committee and this process was directed - and as I wrote it I was thinking in terms of the entire region. I was thinking in terms of the Water CASA members and the regulatory agencies and everybody, so I think it's meaningful for you folks, but I wanted you to know that I consciously thought about the issues on a regional basis, so some of it might not be as . . . specific to this Committee's charge.

The - the first thing I did was something that Jim asked me to do. The first time we ever talked about the possibility of Water CASA providing a paper for this process, and he said, "Who's using? Where - how much is the water? What - what - how's the water being used?" And so I wanted to go through a process and show very concisely what total water use in the AMA was so that when you talk about a program - get down to the - to the nitty-gritty of a program that has to do with multifamily outdoor water use within Tucson Water's Service Area, what percent of our water - of our overall water use in the AMA is that? And it - I think it' s kind of telling, and anyway I hope that met your needs, dear.

CHAIRMAN JIM BARRY: Uh-huh.

VAL LITTLE: The next thing I was asked to do was talk about all the tools in the toolbox, and I'm not going to take the time - oh, sorry - I do want to give this - this quote because I think it's important. This was in a report done by Pacific Institute in 2003 and it says sort of concisely what I think is - is a way of looking at conservation that not everybody does. "We conclude - this report concluded that it's much cheaper to conserve water and encourage efficiency than to build new water supplies or, even in some cases, expand existing ones, and that the savings can be had without the many

environmental, social and economic consequences that any major water project will bring." And that gets back to the triple-bottom line that we have talked about in other contexts here.

Moving on, there's a list and a description of all the - all the tools that Water CASA considers in our programs and our projects, and I'm not going to go through 'em here. We can certainly talk about 'em or field questions.

I was also asked to provide an overview of efforts other places, and I specifically just dealt with . . . oh, how are we doing there, Melaney? I went to Australia, China and India and looked at - at what they're doing, and it's in the paper; I'm not going to go into that as well. I'm trying to get to recommendations, 'cause I know that's what you - what you're interested in right now.

CHAIRMAN JIM BARRY: Well, you're - you're done.

VAL LITTLE: I am? Well, thank you, Melaney.

CHAIRMAN JIM BARRY: End of slide show.

VAL LITTLE: You don't have a clicker?

CHAIRMAN JIM BARRY: No.

VAL LITTLE: You don't have a clicker?

CHAIRMAN JIM BARRY: From the beginning - from the beginning and just start clicking . . . so stop.

VAL LITTLE: I was asked to do demand projections of what I thought the future might hold; and, again, it's in the paper. But, I do want to call out these three things because it is reflected in the - in the recommendations again: I believe that pretty soon we 're going to have all outdoor water non-potable, and I think that's a direction we ought to go, and I think that this Committee might be able to incorporate that in their recommendations.

I think that water use in new homes will be down at the level that Australia is in the not-too-distance future, and I think that it's not going to be that long until new homes are going to be required to be retrofitted to equal the efficiency in - existing homes are going to be required to be retrofitted to the efficiency of new homes.

JOHN CARLSON: What's the GPCD mean?

VAL LITTLE: Gallons per-capita per day.

JOHN CARLSON: Okay.

UNIDENTIFIED FEMALE SPEAKER: (Inaudible; not speaking into a microphone.)

VAL LITTLE: I'm talking about everything. I'm talking about the irrigation system, indoor plumbing fixtures, everything would have to come to a certain standard of equaling new construction.

VINCE VASQUEZ: Val, we're meeting in the realtors' building, come on now.

VAL LITTLE: Say it again.

CHAIRMAN JIM BARRY: This is - right, Tucson Association of Realtors' building.

VINCE VASQUEZ: Easy with the retrofit ordinance.

VAL LITTLE: They can't even spell environmental in their handout, so . . . we'll just move on from that.

UNIDENTIFIED MALE SPEAKER: Think of the jobs, just think of the jobs.

VAL LITTLE: This is a trick - this is a trick because this is not the same order that the recommendations are in your paper, but I decided on the Power Point I was going to do it that way.

Just very briefly, use all the tools. We're going to have to use all the tools that I've outlined in this paper. It's a misnomer to target overall high water use which may, in fact, be a very efficient water use, so you've got to look at actual inefficiency, as opposed to overall high water use.

Structured plumbing is a term that I hope all of you will investigate and think about because it's going to be, I believe, the plumbing of the future and we ought to be recommending that that be required in this community. I could - I could give you more detail, but there's a lot of information out there and there's a new outfit called "Green Plumbers" that I think is going to move the plumbing profession in a very good and new direction very quickly.

One of the things that concerns me is we've got lots of ordinances on the books, not only related and water efficiency, but all of you know who work in other areas that if we had full enforcement of the ordinances and the regulations that we had in place, we would make great improvements.

And I think there's no reason why this community, this region, should not very quickly require only HET toilets in any installation; that should be the only kind of toilet you can get in this community; and that's the new second-generation from ultra-low-flow, which is defined by being 20% lower water using than the 1.6-gallon per flush. You want me to keep going?

JOHN CARLSON: You have some pipes that won't carry that; it's not steep enough.

VAL LITTLE: In new construction, they're going to have to change - they're going to have to change the pipe configuration and they - they know that's coming, and I think Wastewater's working on that, but I don't think that to retrofit an AG toilet in a - in a system in the older parts of town where they're already -

UNIDENTIFIED MALE SPEAKER: 1.3 gallons to flush instead of -

VAL LITTLE: Yeah. We need regional consis- - regionally-consistent ordinances. I think all of us know that intellectually; this is one of the areas that in Phase 3 and Phase 4 I think we can really make some progress. All the other municipalities, all the Water CASA members, everybody ought to be working toward that, and I know that folks like Kathy Chavez and others of us who worked on trying to get as much consistency and compatibility in the Drought Plans in this region know that it's a tough sale, but I think it might even be easier to do this than it was to have consistent Drought Plans, so that definitely needs to be worked on.

There is no reason in the world why we shouldn't come together as - as utilities and municipalities and agencies and have regional messaging. We're all in the same media market. We read the same newspaper. We listen to the same radio stations. And that's, again, something else that you folks could recommend in Phase 3 and I think we could make some good progress.

I'm a believer that every utility in every city and - and county should come forward every year with water efficiency and energy-efficiency ordinances. The community should know it's coming; that keeps Staff looking at new things coming along, and I touch on that in technology, staying current. And I think that to have small rate increases on a regular basis is far better than - than waiting several years and biting the bullet and trying not to go through that horrible process. Thank you, Melaney.

I think we've got to really embrace going to full indirect potable reuse; that's going to have to happen. And the sooner and the - and the more effectively we decide how we're going to get there; how we're going to bring the leadership, the elected officials, the public along toward that, the smoother will be the ride. I think we've got to tackle that and tackle that in a big way.

Going back to one of the things I recommended earlier, I think we have to eliminate all outdoor potable water use; that is not a good match of the use of the water or the source of the water and the quality of the water; and that's just got to come. And, again, charting a path to getting there will serve this community and this region well.

I feel very strongly that we're going to have to bite the bullet and ask for ordinances that require a retrofitting upon resale; that's the only thing that seems to make sense; it's an easier time to do when houses and businesses change hands; it 's - it's not ever going to be comfortable or pleasurable, but that's the way to do it, and other communities are finding good success with it.

And, number two I think is analyzing all programmatic outcomes. You know, if you're familiar with the work of Water CASA, that we feel very strongly that we have got to measure and analyze actual water use savings for programs that we do, and we've got to calculate, as Vince says, the gallons per - I mean, the dollars per acre-foot saved. We've got to be able to do those kinds of comparisons or we're not being as rigorous as we need to be in devising our programs.

And the last one dovetails right in with this. We've got to justify conservation efforts fiscally, environmentally and socially, and weigh them against engineered or acquisition solutions. This is one of the real downfalls for conservation, is it has been typically been considered an aside or an adjunct, an add-on or fluff. And I think as times get tougher and dollars get more scarce and costs go up, we're going to have to look at conservation in the same way with the same cost benefit analysis that we do a new reservoir, a new pipeline, a new source, a new purchase, a new treatment. So, that's my - that's my shtick in a nutshell.

And thinking about what we were - we were talking about all evening. The charge I think to you folks is: Can we be a drought-tolerate community? Can we be a drought-resistant community? Or, better yet, can we be a drought-immune community? Thank you.

(Applause.)

CHAIRMAN JIM BARRY: Staff is complaining that you get applause. Bob, good going.

VAL LITTLE: Thanks for that.

CHAIRMAN JIM BARRY: Okay. Any questions of Val?

VINCE VASQUEZ: Are we going to have discussion on this or . . .

CHAIRMAN JIM BARRY: Yes, yes, sure.

VINCE VASQUEZ: Well, I like the dollars-per-acre-foot metric as you know.

VAL LITTLE: Me too, me too; that's one of my favorites now.

VINCE VASQUEZ: And I think it's a great - I think it's a great thing to - to - to throw in the middle of this conversation continuously because it really allows us to compare alternatives in an apples-to-apples kind of comparison, and I also think that - I mean, it 's a great laundry list, and it is all the tools in the toolbox; but, again, you work through those kind of in least cost - least costs first, and you kind of work your way into the kind of more expensive supplies; it's - if conserva- - it's goes, you know, if retrofitting toilets saves you more, you know, than - than rainwater harvesting, you invest in - in the toilet retrofit. When you've exhausted that, and you've purchased all the cheap water, essentially, you move on to the next least-cost strategy and on and on until you get into the, you know, probably de-sal, you know, the end game in that is de-sal. And - and I just - I think it's important as we have the conservation discussion that we understand that continuum of least-cost scenarios, or least-cost options along the way that are all measured in kind of a dollars-per-acre-foot with - dollars-per-acre-foot meaning the triple-bottom-line dollars-per-acre-foot, not just the economic component of that, and you can monetize all three and - and get to a -

VAL LITTLE: And the life cycle costs and savings as well.

VINCE VASQUEZ: Absolutely.

VAL LITTLE: And one the barriers that I talk about in the paper is that the - the field of water resource management is so dominated by engineers, it's very difficult; and there's only special engineers like Mark who really get the really big picture.

CHAIRMAN JIM BARRY: Calm down, John. Calm down. She's not criticizing you.

VAL LITTLE: And I put you in that -

JOHN CARLSON: Well, he's - he's so much older than me.

VAL LITTLE: It's very difficult when you would ask an engineer, "Well, let's talk about doing a toilet retrofit program;" that is so not what they want to be doing. An engineer wants to do an engineered solution. If you go to a surgeon, you're going to get cut.

So, I think it's important for groups like this to be educated enough and informed enough to be able to say we want to look at all the solutions, all the tools, rather than the typical - what we've always done.

UNIDENTIFIED MALE SPEAKER: (Inaudible; not speaking into a microphone.)

JOHN CARLSON: Hey, two - two points, one that makes us happy, I - engineers' solutions aren't bad, how are you going to get it to work if you don't engineer it? And I'm an engineer, so don't answer that.

But, anyway, I do belong to a homeowners' association that will not allow lawns. There's one guy that's grandfathered in and they're thinking since the - the water use is out of meters, it'd furnished three or four houses, but anyway we don't allow lawns and I think you can encourage that around, too.

CHAIRMAN JIM BARRY: Mark?

MARK STRATTON: Val, I had a question on your report. You had identified San Antonio Water System and they had decreased some 213 gallons per-capita down to 121. You know, their rainfall is about twice what it is here in Tucson, except for the last 18 months, but -

VAL LITTLE: Right.

MARK STRATTON: - we're probably passing them. But, what - what have they done there that was able to drop their GPCD as much as they did that, perhaps, maybe we haven't looked at?

VAL LITTLE: Everybody heard the question? San Antonio, first of all, they've spent huge amounts of money; they are very cost-benefit oriented and they, with their mix of sources and supply and cost and that sort of thing, got very clear fairly early that it was cheaper to invest the money

in - in very rigorous conservation efforts; and they have everything. If you go on their web site you can see all the things that they have that are still ongoing.

But, it was the investment from the top down, not just having a conservation office that was an aside; it was fully integrated into the management and, again, being willing to spend the money and being able to show their decision-makers and their elected officials what they had saved, and they really got their folks all onboard.

VINCE VASQUEZ: And the other - the other component - the other - the other component to that is scarcity. Scarcity, I mean, Australia, India, China, the places that we're talking about that have these really low GPCDs they have a real scarcity problem; they have a greater scarcity problem than we do, and so it's - that - that is what drives the economics that make sense to invest in these really expensive conservation technologies.

And I think that's the other thing we have to keep in mind is right now we don't have a real big scarcity problem, and so we actually have excess CAP for the State. Now, that's not the greatest thing to publicize out there in terms of a conservation message; but, at the same time, the things that we're doing are preventative for the future and to kind of setting ourselves up.

So, it's essentially what you invest in insurance and, you know, the closer you get to death, the more you invest in insurance. And right now - right now we're - we're pretty far away from death, and so it just - you got to keep that in mind, too, I think in terms of what we - what triggers our investment; that our investment response is proportionate to the risk management response. And, again, these are things that are very cost-benefit oriented, very monetized kind of metrics that you can measure risk, you can - in - in terms of the probability of occurrence versus the financial impact, you know, of that occurrence. So - and those should trigger our investment decision in consideration.

CHAIRMAN JIM BARRY: Marcelino?

MARCELINO FLORES: Is Water CASA involved with the LDIGs and is there maybe an inside or different position on the indicators that are used? And then I have another question that I guess . . .

VAL LITTLE: We are involved. We were pretty optimistic at the very beginning of the process that we would try - Water CASA tried to bring Tucson Water to our table and see how much compatibility and consistency we could get when were each developing our - our Drought Plan. And we had a commitment that we'd all try to stay at the same level; in other words, the County, the City, the Water CASA members are all sort of at drought level one. They all have different triggers and they all have different things that happen with their different levels; but that, again, reflects their actual situation.

So, the short answer to your question is: Yes, I go to the LDIG meetings and we try to communicate as much as possible with each other, and sometimes that's - it's just making that commitment to say, well, I'm not going to go into stage three without telling you folks.

And also we were very aware - it gets back to the regional messaging - we were very aware that we didn't want to see one of the entities making an announcement that they were going to a different drought stage without everybody having a chance to weigh in. And when we went to stage one, we had Tucson Water and Marana and several others all there at the same news conference, so we try to do the best we can even though every utility has a different scenario.

MARCELINO FLORES: Okay. And then the second question is that there's a goal for ultimate 35 GPCD. The - the water budget is established on the current use, which is kinda tied to the water rights that people have, and so do you see that lowering your - your consumptive use - your - to 35 GCPDs and what kind of ramifications that would have on the ability to seek CAP water or claims to that water, or what would - what would be - what would you do with the difference -

VAL LITTLE: I don't -

MARCELINO FLORES: - in terms of your paper -

VAL LITTLE: I don't -

MARCELINO FLORES: - rights, you know?

VAL LITTLE: Yeah, I - I think I might've gone, you know, going so fast I think we sort of glossed over that. The 35 GCPD that I think we will eventually get to is down the road, and I don't think it's going to be something that's going to be mandated or required, I just think that's simply

going to happen. I think the price of water, the scarcity, all the factors are going to move in that direction, so I don't see that being a requirement.

So, I think the second part of your question is: What are you going to do with the excess? Well, I think by the time we get to 35 GPCD, it's all going to be used. There's not going to be a big pot of water and I don't see the Santa Cruz, you know, running again, so . . .

JOHN CARLSON: We're going to get her next time; right?

CHAIRMAN JIM BARRY: Right.

JOHN CARLSON: So we can let her go home tonight?

CHAIRMAN JIM BARRY: Let me ask a question.

VAL LITTLE: Sure.

CHAIRMAN JIM BARRY: Am I to understand that we are in drought level one in Pima County? I didn't know that until -

VAL LITTLE: Yeah.

CHAIRMAN JIM BARRY: - Val told me. Thank you.

You look like you want to get up and speak.

BILL CROSBY: Conservation certainly is a big part of our future. I should hope that we would be able to meet the needs of the present population, and I hope your recommendations are going to reflect that.

Every time CAP comes along they say, oh, we have lots of water that's unused and we're not using our full allocation, how can this be true? Do we have any measure of that? Do we know what our water budget is? This I think is a very important part of this Committee's responsibility to determine that.

I wonder about what happens with the Roger Road excesses that go down the Santa Cruz. I took a tour, a water tour, down the Santa Cruz and we were way - ten miles from town, and evidently Roger Road was eating that water. So, how does this work? I guess this is a question for you. How does - how do we conserve here or conserve so that the downstream users are going to have their allocation of the water flows in the Santa Cruz? How does that work?

JOHN CARLSON: We brought that up earlier.

SANDY ELDER: I think there's several aspects to that question.

CHAIRMAN JIM BARRY: Come up to the microphone, Sandy, please.

SANDY ELDER: There's several aspects to that question. First of all, it's can we put that water to use so there's not - put a larger portion of it to use so there's not as much going into the Santa Cruz River channel, which means less travels down the channel.

Some of that means: Can we get more - can we do things to get more recharge actually in the channel or alongside the channel to keep it in the basin? That's the second thing.

The other thing you talked about is the downstream users. If we actually are withholding it, yeah, there is an impact on water levels that is being - that are being supported by that downstream; I guess that gets into the whole - we're talking about the Arizona water laws, and it gets pretty complex. I'll let Chris address some of those aspects. You know, that is effluent-derived water; it's different than - we talked about like type-two rights - it's not a type-two groundwater right - I'm talking about the golf courses have it - it's different than that. So, it gets pretty complex quickly when you're on that level, who's going to use that water.

BILL CROSBY: Isn't that watershed management responsibility?

SANDY ELDER: When we talked about the - this is kind of the whole picture - this is where we're talking - you know, a lot of what we've talked about in the last year we've isolated, we got groundwater, we have CAP water, we have effluent, we have reclaimed water. I think the question you just asked is: Well, how do you deal with the whole system? And that's kinda what we're doing on this Committee is trying to improve what we're doing on the whole system.

BILL CROSBY: Hopefully.

SANDY ELDER: I think that's why we're talking here.

CHAIRMAN JIM BARRY: Okay. Colette?

COLETTE ALTAFFER: Just one quick question for you, Val. You had three sources of water that you suggested using to replace potable water for outdoor use, which of those three sources would you suggest for filling swimming pools?

VAL LITTLE: Rainwater.

CHAIRMAN JIM BARRY: (Inaudible).

VAL LITTLE: I just wanted to remark on the handout that I gave you. I referenced our outdoor water use ideals in the paper, and then I neglected to attach it and so I just brought copies tonight so that you know what - what I was I was referring to.

CHAIRMAN JIM BARRY: Tina?

TINA LEE: I've been pretty quiet all night, but one of the things that strikes me from this whole conversation - and that I see little glimpses of it in all the different recommendations and the different reports - is that we really need to highlight education about water; it's so complex; it's taken us a year to get to this point. And if we can start earlier so that the education level of people who are going to be presented with huge changes in their lifestyle, their costs, their regulatory environment, everything. The earlier we start that education about the specific water situations in our local regional area the better; I would add that or highlight that.

CHAIRMAN JIM BARRY: Absolutely.

VINCE VASQUEZ: (Inaudible; not speaking into a microphone.)

CHAIRMAN JIM BARRY: Bob?

VAL LITTLE: And I think Robert Glennen (ph.) makes that point in his new book, *Unquenchable* , if you haven't seen it yet.

BOB COOK: I just have a short question, Val. You've made a strong argument for conservation. Does Water CASA take any positions on the supply choices that we have, CAP, groundwater, rainwater harvesting?

VAL LITTLE: Whether we should use it or not or -

BOB COOK: No -

VAL LITTLE: - take a position on it?

BOB COOK: - to the extent that we are going to be investing in water supply infrastructure.

VAL LITTLE: That's why we make the point that we've got a way, whether we should be looking for other sources of supply or at what point we would need to after we had exhausted all the cost-effective and life-cycle cost-effective conservation efforts.

BOB COOK: So what you're saying is conservation should be the - the first line of analysis before any supply is?

VAL LITTLE: Well, it's got to be - they've got to be looked at together, because sooner or later you will get to the point of diminishing returns, where you can no longer do -

BOB COOK: Sure.

VAL LITTLE: - any more conservation, so you've got to look beyond. But, you've got to look at long horizons.

I'm - I'm a little bit uncomfortable personally because I know that there was discussion about CAP water in the - in the 1910s, in the 1920s, so it was talked about that early, and - and think of how many decades later we finally got the source. Well, there's lots of talk about other sources of supply, but I don't see that happening very quickly.

CHAIRMAN JIM BARRY: Audience, anything? Staff, anything? Margot?

MARGOT GARCIA: (Inaudible; not speaking into a microphone.)

CHAIRMAN JIM BARRY: Sure, final Call to the Audience.

MARGOT GARCIA: I want to make my pitch about the time - (end of audio recording 3 of 3).

* * * * *

CERTIFICATE

I hereby certify that, to the best of my ability, the foregoing is a true and accurate transcription of the audio recording of the City/County Water & Wastewater Study Oversight Committee Meeting held on April 23, 2009.

Transcription completed: June 14, 2009.

_____

DANIELLE L. KRASSOW-TISDALE