

**Lake Maumelle Watershed Management Plan  
Policy Advisory Council  
Meeting Summary  
September 21, 2006**

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**Attendees**

See Attachment A.

**Introduction**

Following roll call, Trevor Clements of Tetra Tech welcomed members to the eleventh meeting of the Policy Advisory Council (PAC). Trevor recognized that the PAC has come a long way since its first meeting in September of last year. He acknowledged that most members probably felt both disappointment and frustration at the last meeting because of the lack of progress on reaching some consensus. However, Trevor advised the group not to lose sight of what it has accomplished to date, including:

1. Reaching consensus on the Goals and Objectives, which form the very foundation of the plan.
2. Endorsing the watershed indicators and water quality targets that are critical to evaluating management options and determining what works from a water quality protection standpoint.
3. Using the baseline analysis results to help focus where the most attention should be placed in developing management strategies for the plan, and to set pollutant thresholds that need to be met to achieve the water quality targets.
4. Narrowing the list of management options down to several that will meet the water quality targets and that are technically and economically feasible, and that – for the most part – are more politically acceptable than others.

Trevor summarized that what it has come down to are a few sticking points on details, mostly with regard to implementation issues. He stated that in his experience, this is typically the most challenging stage of planning. The good news, Trevor indicated, was that many others have faced similar challenges and have successfully moved forward. The Tetra Tech team firmly believes that this community can, also.

Trevor then reviewed the meeting agenda stating that this meeting provided an opportunity for the PAC to move forward on several issues. The first two items on the agenda were information items that the PAC members requested prior to further debate: 1) administration and enforcement, and 2) understanding next steps for pursuing the performance standards, including what constitutes pilot projects. The Council members would then be asked to vote on several items including: 1) short-term development options, 2) recommended exemptions, and 3) mitigation options. The meeting would then end with a discussion on the issue of development or no development in Critical Area A held over from the last meeting by PAC member request.

Trevor completed his opening remarks with an appeal to members to seize the opportunity to provide input that can influence the recommendations that will be input to the management plan. Showing progress toward consensus will make a difference. Trevor pointed out that this is the last scheduled meeting before the draft plan is released. Next month members will review and comment on the draft plan which will then be taken out for public review and comment during the month of November. The management plan and Tetra Tech's recommendations will then be taken to the CAW Board in December for its consideration.

## Administration and Enforcement (information item)

In recent months, the subcommittees asked Tetra Tech to share examples of how other jurisdictions deal with oversight and enforcement in their watersheds. The subcommittees spent almost two entire meetings focused on this issue, including looking at long-term coordination/non-regulatory oversight and regulatory oversight for:

- Non-discharging wastewater systems.
- Sedimentation and erosion control.
- Watershed protection ordinances.
- Development approval oversight.

The purpose of tonight's presentation is to share a brief summary of what was presented to the subcommittees and Tetra Tech's recommendations regarding oversight and administration.

Kimberly first provided the "big picture" recommendations:

- (1) For onsite wastewater systems, form a responsible management entity (RME) that owns, operates, and maintains all new systems.
- (2) For development impacts, adopt local sedimentation and erosion control ordinances and watershed protection ordinances, and hire a watershed administrator to enforce the ordinances (working with local commissions).
- (3) For long-term coordination, form a non-profit Watershed Stewardship Council and hire a Coordinator to staff the Council.

Kimberly said all of these are important pieces of the administration/oversight puzzle. Based on Tetra Tech's research and legal counsel, local governments have adequate authority to put this puzzle together; however, it will take time, money, and political will to put in place.

She then provided more details for each of the recommendations above.

### *Coordination/Non-regulatory Oversight*

Kimberly said the management plan will depend on collective efforts and strong partnerships, and must adapt to changing conditions, needs, and information. Therefore Tetra Tech recommends that a Watershed Stewardship Council be formed to allow interested parties to work together, carry out mutually beneficial projects (like paving unpaved roads in the watershed); track progress, and make recommendations to update the management plan and ordinances. She said that Tetra Tech recommends hiring a watershed stewardship coordinator to staff the Council. CAW has said that it would provide funding for such a position.

### *Managing Onsite Wastewater Systems*

Kimberly reviewed EPA's five models for managing onsite wastewater systems. Tetra Tech recommends that model # 5 be used in the Lake Maumelle Watershed – forming an RME with ownership, operation, and maintenance responsibilities—since this provides the greatest assurance of system performance for environmentally sensitive areas (according to USEPA).

Local governments would need to identify or establish the RME, which could be an existing entity such as Little Rock Wastewater, or could be a new entity such as a special sanitation district. The RME would establish system performance and monitoring requirements, provide professional management of all new non-discharging systems, track permits and compliance monitoring, inventory all systems, and charge monthly or quarterly fees to new homeowners to cover operations (typically \$30-\$40 per month).

*Managing Development Impacts During and After Construction*

Sedimentation and Erosion Control (to manage construction impacts)

Kimberly first reviewed the current federal requirements. Any activity disturbing one acre or more must have and use a stormwater control plan. This requirement applies to all cities and counties in the U.S. Where a local program is not in place, the state is supposed to enforce these federal requirements. This year, ADEQ only has 12 staff to enforce the requirements statewide.

Tetra Tech recommends that local governments adopt local sedimentation and erosion control ordinances for the watershed and enter into a memorandum of understanding with CAW to enforce the ordinance requirements (working with the local governments). CAW would hire a Watershed Administrator to carry out the sedimentation and erosion control program duties including plan review, site inspections, and enforcement. This would be more efficient and cost-effective than each local government hiring its own administrator.

Some minimum site requirements found in other drinking water supply watersheds include:

- Revegetation after grading.
- Controls to retain all sediment on site.
- Ground cover following construction.
- Streamside management zones.
- No channeling of stormwater into streams.
- Limiting alteration of water courses.
- Limiting land disturbing activity.

Key, instead of being triggered at one acre of land disturbance (the state's requirement), some local governments trigger the sedimentation and erosion requirements at ¼ to ½ acre of land disturbance in their water supply watersheds. Tetra Tech recommends the latter more protective approach in order to mitigate the cumulative impacts of smaller land disturbing activities.

Kimberly next reviewed a list of remedies commonly provided in ordinances for non-compliance with sedimentation and erosion control requirements. Of the list, she said that local government staff in other areas have indicated that the most effective remedies are the threat of stop work order (and issuance of stop work order), as well as revocation of the land disturbance permit and requiring that the permit fee be repaid.

Watershed Protection Ordinances to Manage Impacts After Construction

Tetra Tech recommends that local governments

- Adopt a watershed protection ordinance which is a free standing police power ordinance (not a zoning ordinance). Alternatively, they could adopt or amend subdivision ordinances.
- Establish a Watershed Review Board to hear appeals and variance requests.
- Enter into a memorandum of understanding with CAW to review development applications and work with local boards in development approval.

Tetra Tech recommends that CAW hire a Watershed Administrator to conduct plan review, site inspections, and enforcement activities. Again, this would be more efficient and cost-effective than each local government hiring its own administrator.

Kimberly summarized the ordinance's subdivision and development requirements. She said the applicant would need to obtain three permits during the development process ensuring compliance from the

planning or drawing stage though final site construction. If the performance standards approach is adopted, additional ordinance requirements would include a process for ensuring compliance with the performance standards (such as the site evaluation tool), posting of financial security for BMPs during construction, and maintenance covenants for long-term maintenance of BMPs.

Next she reviewed the remedies for noncompliance including:

- Withholding of development approval.
- Withholding of certificate of occupancy or disapproval of subsequent permits.
- Injunctive order.
- Correction of public health nuisance.
- Civil penalties.
- Criminal penalties for willful violation.
- Restoration of areas affected by failure to comply.

#### Models for Regulatory Oversight

Tetra Tech discussed with local planners on the TAC and with the subcommittees various models for regulatory oversight, including the following questions:

- Who decides?
- Who is the staff evaluating the development application and conducting inspections?
- What organization houses the staff?
- Who pays the staff?

Kimberly reviewed the different options discussed. As a startup for regulatory oversight, Tetra Tech recommends the following:

- CAW hire a Watershed Administrator for sedimentation and erosion control and development applications in the watershed and to conduct site inspections.
- The Watershed Administrator would be housed at CAW and paid for by CAW ratepayers and permit fees.
- Alternatively, CAW could contract with a local firm to provide these services.
- Begin discussing inter-local agreements for:
  - A joint planning commission for the purpose of reviewing development proposals in the Lake Maumelle Watershed, or
  - A regional planning commission for Lake Maumelle Watershed.
- If local governments fail to adopt ordinances
  - Explore creation of a Watershed Management Authority.
  - Until ordinance/authority is in place, use Development Agreements to implement Management Plan requirements.

Kimberly said that the subcommittees discussed the models for oversight and two very different visions emerged:

- Watershed Management Authority

- Immediately request the legislature to create a Watershed Management Authority (with complete oversight and regulatory control).
- Local Governments
  - Immediately work with local governments to adopt ordinances; if that fails, work to create a Watershed Management Authority.

Kimberly said this was the most substantive issue debated and the biggest issue to resolve regarding administration and oversight. She noted that Tetra Tech had not found a watershed management authority with such powers elsewhere, however that does not mean that it could not be established for the Lake Maumelle Watershed. She said Tetra Tech believed the most effective strategy would be to begin working with local governments, and only ask for a watershed authority if needed. Kimberly said that the Subcommittee did not take action on this issue, but wanted the full PAC to deliberate on it in the coming months and develop a recommendation.

### *PAC Discussion*

Marge Brewster asked to speak to the issue of unity on the Council. She noted that the newspaper article in the morning paper had projected that most important policy decisions would be going to the CAW Board because of disunity within the PAC. The PAC is losing its voice because of a failure to reach consensus. She believes that many of the PAC members are idealists with specific visions for what the plan should be and what would be perfect. However, by taking the moral high ground and refusing to compromise, the PAC is losing its voice. She explained further:

- Rate-payers representatives are expecting water quality protection enhancement at zero cost – that's not possible. It's going to take money to administer the plan and to buy some land for the plan to be viable. Ratepayers need to focus on how to get the most out of their dollars.
- Multiple groups are concerned with the quality of the lake with visions of protecting it totally – that's not possible. There is not enough money to buy all of the land, but that is what would be required to provide total protection. It is possible to develop a plan that's not only better than what we have now, but one that has a management structure that can let the plan grow and get better with time. The plan will evolve if we have the right structure.
- Property owners want no restrictions on property use – that's not possible either. We're [speaking as a property owner] going to need to follow some rules. Tetra Tech and the PAC have developed some exemptions that help to lessen the burden to property owners. Yes there are still many issues that are scary to property owners, but if we get the right structure that has adequate administration and enforcement, and that has adequate planning with input from the people, then we can deal with not having all of the answers right now.

Ms. Brewster stated that she thought that the PAC can find middle ground between the property owners and those wishing to protect the lake totally, but only if council members can move off of the moral high ground and agree to compromise. She asked all to get into the spirit of compromise (she commented that she wished everyone were on her porch enjoying fried chicken and tea together), and to bend a little so that the PAC can collectively have a voice in this plan instead of sending it all back to CAW, and then having to go back and tell our constituents that we have failed.

Chuck Nestrud raised concern about the wording for non-discharging systems. He would like to see the option for pumping out of the watershed kept as a viable alternative.

John Bentley made a motion to create an Implementation Subcommittee. A vote was called: 17 members voted in favor of the motion, 1 member was opposed, and 3 abstained from voting.

## **Key Steps to Pursuing a Performance Standards Management Option (information item)**

Trevor Clements stated that the next steps for pursuing a Performance Standards management option would include three key components: 1) Pilot monitoring projects, 2) Supplemental sediment and turbidity modeling for the land disturbance phase of construction, and 3) Performance Standards program capacity development.

### Pilot Monitoring Projects

Trevor reviewed the key questions to be addressed by the pilot monitoring projects:

1. What level of effectiveness can be expected for sediment and turbidity control with proposed enhanced sedimentation and erosion controls during the construction phase? (In other words, can we expect to have good enough reduction of turbidity and sediment from the controls to prevent plumes of turbidity from reaching the water supply intake at unacceptable levels?)
2. Can engineered stormwater best management practices (BMPs) be sustained in the watershed's steep slopes and type of soils? (Here, we are concerned with the sustainability of structural BMPs such as bioretention, wet ponds, water quality swales, etc., through large storm events.)
3. Are the proposed BMPs and development designs capable of meeting post-construction performance standards?

He indicated that the projects will involve two primary types of monitoring – construction phase and post-construction phase monitoring. During the construction phase, emphasis will be on the effectiveness of the sedimentation and erosion control measures. For the post-construction monitoring, emphasis will be on testing sustainability of practices and on whether performance standards can be achieved.

Tetra Tech is recommending that the monitoring be performed by an independent monitoring expert jointly funded by both CAW and the developer so that there are no outside claims of bias. Similarly, an independent engineering expert with experience in structural and nonstructural stormwater management practices should be hired to provide independent review. The engineer would focus on witnessing design, installation, and maintenance of the stormwater practices, documenting lessons learned and determining BMP sustainability.

As part of the implementation strategy being developed, the following key considerations will need to be addressed: site location (must be representative of soils and slopes), site design (representative of proposed development type), monitoring design, quality assurance, evaluation criteria (how results can effect decisions), and roles (who pays for what, who performs which tasks, who interprets the results, etc.).

### Supplemental Modeling

Based on concerns raised by some TAC and PAC members, Tetra Tech is recommending that some additional modeling be performed. The purpose of the modeling would be to answer the question, "What level of treatment must be attained for runoff from construction to protect the in-lake turbidity target?" Tetra Tech is recommending further adaptation and use of the EFDC model along with the HSPF watershed model to establish allowable concentration versus precipitation relationships. The results could then be compared with the pilot study construction phase monitoring results to determine the levels of threat posed.

### Building Performance Standards Program Capacity

If the pilot projects are successful in demonstrating the applicability of engineered BMPs, the capacity for operating a Performance Standards program will be required before development can proceed under this approach. In addition to addressing the governing basis for a Performance Standards program (e.g.,

ordinances or development agreements), Tetra Tech recommends that three key components be developed:

1. Design Manual – The manual would include design specifications and requirements for developers, engineers, designers, landscape architects, etc., to follow under the program.
2. Program Standard Operating Procedures (SOP) – The program SOP would provide daily operations guidance to staff for review, inspection, and enforcement tasks.
3. Training – Appropriate staff would need to be hired/assigned and trained in carrying out the program SOP and in use of the Design Manual.

***PAC Discussion***

Chuck Nestrud stated that he wanted the TAC to continue to help refine the recommendations. Trevor indicated that there were no formally scheduled meetings of the TAC at this time, but that Tetra Tech would contact individual members or the full TAC as needed to help define the implementation strategy components. Stephanie Hymel added that TAC members were asked for input and can provide additional comments.

Ruth Bell wanted to know how the evaluation criteria would be applied. Trevor responded that the evaluation criteria need to be defined as part of the implementation strategy before the pilot projects proceed. A successful outcome would include documenting what works best and including the information and lessons learned in the Design Manual, and eliminating practices from consideration that are shown to be unsustainable or ineffective.

**Short-Term Development Options (action item)**

Kimberly said that the Subcommittees and Tetra Tech had evaluated numerous short-term development options over the last three months, and narrowed the options to four for the PAC consideration:

- Menu.
- Fixed large lot.
- Fixed large lot plus cluster.
- Fixed large lot plus cluster; menu allowed for development agreements.

She said that all meet the pollutant loading limits and require, at minimum:

- 5-acre lots on low slope areas.
- 10-acre lots on high slope areas.

The Cluster option:

- Allows lot size to vary, overall average must be 5- and 10-acre lots.
- Decreases allowed impervious area.

The Menu option varies the lots size, amount of undisturbed open space, impervious area, and road/driveway options.

Kimberly walked through the Memorandum sent to the PAC prior to the meeting, including the specific requirements for each option in the Upper Watershed and Critical Area B, and the pros and cons of each option. Below are the highlights:

(1) Menu Option

Provides 17 to 18 design options for landowners to choose from, varying depending on whether the parcel being developed is on low-sloped or high sloped land, whether using the large lot or the cluster design option, and design features that influence pollutant runoff: road surface, minimum undisturbed area, maximum impervious area, and lot size. The Upper Watershed Area and Critical Area B have very similar options, except as a general rule for the Upper Watershed Area half of the undisturbed area is required compared to Critical Area B and more imperviousness is allowed than in Critical Area B.

Pros of the Menu option are that it provides flexibility to landowners and allows environmental design (cluster). Cons of this approach are that the cluster design might use discharging systems; it is more complex to understand, and it is somewhat more complex to administer.

(2) Fixed Large Lot

Provides 2 options for the landowners to choose from, depending on whether the parcel is on low- or high-sloped land. For example if the landowner is in the Upper Watershed Area, he or she could build on 5-acre lots in the low-slope area, preserving 15 percent open space and having a maximum imperviousness of 8.25 percent. On high-sloped areas, 10-acre lots would be needed, with 30 percent of the site preserved in undisturbed open space and 4.25 percent imperviousness. Both would require paved roads, but would allow gravel driveways. Critical Area B is similar except a minimum 30 percent undisturbed open area is needed on low slope area and 50 percent on high sloped areas.

Pros of the fixed large lot option include that it helps negate the use of discharging systems, is simple to understand, and is somewhat less complex to administer than the menu option. Cons include that it provides no flexibility and does not allow environmental design (cluster).

(3) Fixed Large Lot Plus Cluster

This provides four design options for landowners. It allows both the fixed large lot and the cluster design option if the state prohibits discharging systems. If the state does not prohibit discharging systems, it allows the cluster option only under the condition that a non-discharging system is used. In absence of an ordinance, the same requirements would be allowed through development agreements.

Pros of this option include that it is simple to understand, provides more flexibility than fixed large lot, is less complex than the menu, allows environmental design, and negates the use of discharging systems. The con is that it provides less flexibility than the menu option.

(4) Fixed Large Lot Plus Cluster in Ordinance; Menu in Development Agreements

This is the same as option 3, but in absence of local ordinances it allows CAW to use the menu option in development agreements conditioned on use of non-discharging systems.

Pros include the same as those in option 3, but in addition it provides more flexibility to landowners. Tetra Tech has not identified any cons.

Kimberly said that the subcommittee took an initial vote on these options and the majority voted for #4. In a consensus vote on # 4 (how many can live with it), 5 voted for it, 4 against it. Those against it preferred ultimate flexibility or more simplicity.

Kimberly said that Tetra Tech believes a compromise is needed on this issue and that option 4 represents a good and reasonable compromise. Tetra Tech thinks that it best meets the overall objectives and addresses the concerns raised during the subcommittee discussion.

Kimberly then opened the floor for discussion and action.

***PAC Discussion and Vote***

Randy Wilbourn wanted clarification as to whether the options were only requiring non-discharging systems and why the explicit terminology for the cluster options. Kimberly summarized how the PAC Subcommittee wanted to clarify the non-discharging requirement for the cluster option such that the flexibility beyond the fixed large lot option alone could be added without the concern regarding potential direct wastewater discharge. Trevor added that requiring non-discharging systems is an overall recommendation regardless of the cluster issue.

Chuck Nestrud asked whether the definition of non-discharging was being changed. He believes that the option for pumping out of the watershed has been being discussed since late last year. Kimberly clarified that the option for pumping out of the watershed was only being recommended for Critical Area A because of the relatively small collection systems. Chuck said that Tetra Tech requested input nine months ago from Daters-White for areas in Critical Area B where wastewater could be pumped out of the watershed.

Trevor clarified that although information was requested from Daters-White for consideration, no maps or explicit information was ever received. Based on research and discussion with TAC members and other experts, it was determined that it would not be a good idea to extend sewer lines into the drinking water supply watershed. Trunk line sewers frequently place pressure for higher density development down the road, and the sewer lines and pump stations add unwanted additional threats from leaks and spills. Tetra Tech is not recommending use of sewer lines within the watershed outside of small collection systems within development properties.

Pat Dicker stated that a simple solution in the short run is to require only the fixed large lot option. Ruth Bell suggested that we start with the fixed large lot option and, if ordinances pass and oversight capacity is developed, then the other options could be considered.

Herb Dicker asked for clarification of what is meant by “short-term.” Kimberly summarized the basis behind the estimate of four years (i.e., time needed for pilot projects and administrative capacity building).

Kate Althoff stated that the plan is complex, and she thinks that many PAC members are frustrated because there are so many unknowns. Tetra Tech has provided a long list of recommendations for administration and enforcement, and we know that it will take some time to accomplish those actions. Kate indicated that based on what is known, she would support choosing the fixed large lot option for now, let the administrative capacity be built, and then be open to adding the other options later when the infrastructure is in place.

Chuck Nestrud stated as a representative of a landowner with 24,000 acres at risk that, since the realm of needed environmental protection has been defined, the landowners should be granted as much flexibility as possible in how to meet the standards. Developing the administrative means to providing flexibility needs to be part of the plan. The PAC would be making a big mistake and lose support of key landowners if a viable option is taken off the table when everyone can see that it meets the environmental needs.

Kimberly stated that Tetra Tech has worked with others and are aware of many others that have also faced these concerns. She indicated that it has been demonstrated that proper administration and enforcement can be set up – it can be done.

Randy Wilbourn warned that the more monolithic the regulation, the less it is effectively used. When a broad range of options are available, and a cookie cutter approach is applied, it usually results in failure – often in a court of law. The menu option provides the needed flexibility and should be supported.

Wally Loveless added that the group does not need to reinvent the wheel. Tetra Tech has proposed a conservative approach that has been shown to work elsewhere, so he has confidence in not taking options away from landowners.

Ruth Bell stated that she had real problems with development agreements. The League of Women Voters believes that such agreements are too individualized in nature, and frequently nontransparent as they are developed behind closed doors. This lends the perception of special deals, and favors large entities that have the financial resources to hire the best attorney and others to negotiate. If the way to flexible development is to adopt local ordinances or create a regional authority, then the development community will support them much more quickly if they don't have an option for development agreements.

Some questions were raised again about non-discharging options. Tetra Tech clarified that non-discharging systems would include onsite options such as drip irrigation and non trunk-line sewers. Stephanie Hymel added that she thought the definition of non-discharging systems were pretty clear. The limiting factors of the watershed were better suited to low density and onsite, non-discharging systems.

Tetra Tech called for a vote on the short-term development options as presented. Option 1 (Menu) received no (0) votes. Option 2 (Fixed Large Lot) received 10 votes. Option 3 (Fixed Large Lot plus Cluster in the ordinance and development agreements) received 1 vote. Option 4 (Fixed Large Lot plus Cluster in the ordinance and menu allowed in development agreements) received 8 votes. One (1) member abstained from voting.

## Exemptions

Kimberly summarized the two proposed exemptions and who would be eligible for them:

- 1) Additions Exemption. In this exemption, landowners with existing houses, businesses, or institutions would be able to add on to houses, commercial structures, driveways, parking areas, barns, and outbuildings and not have to comply with the watershed protection requirements. All existing watershed residents with houses built and lots recorded prior to the effective date of the ordinance would be eligible, as would all existing businesses and institutions with lots recorded or structures built prior to the effective date of the ordinance. Such businesses and institutions would have to propose additions with 10,000 square feet of imperviousness or less to receive the exemption; additions greater than that would need to comply with the watershed protection requirements.
- 2) Subdivision Exemption. Requirements (except for wastewater requirements): All landowners as of December 2000 would be allowed to create *up to* five 3-acre lots that would be exempted from watershed protection (they must own more than 3 acres). To create such a subdivision, Kimberly reminded the group, legal counsel had said that since this exemption is to address legacy issues, it should only be provided to longstanding residents of the watershed. The Counsel recommended that "longstanding" be defined as 5-10 years. This will also help negate the creation of additional landowners before an ordinance is developed to add to the exempted land in the watershed. Kimberly said such a rush to create exemptions would undermine the plan.

Prior to tonight's meeting, the PAC Subcommittee voted on its support of the exemptions. All supported or conditionally supported the exemptions. The conditional support based on maintaining 5-acre lots on low-slope areas, mainly due to the concern raised about equity issues posed to large landowners by the other options.

Tetra Tech's recommendation is to support both exemptions:

- Additions exemption for all areas of the watershed, and
- Subdivision exemption for Upper Watershed Area and Critical Area B. If development is allowed in Critical Area A, allow the exemption only if it is transferred to other parts of the watershed.

***PAC Discussion and Vote***

Tetra Tech called for a vote in support of the exemptions as proposed and presented. The group agreed to separate out Critical Area A for discussion in the later agenda item for that topic.

Kate Althoff wanted to be sure that everyone understood that voting for the exemptions didn't mean that existing landowners could only develop on the five 3-acre lots; they can still develop the rest of their property, its just that any of that development would be subject to the watershed plan requirements.

Twenty (20) members voted in support of the exemptions. No one (0) voted against the recommended exemptions. One (1) member abstained.

**Mitigation Options**

Kimberly said that these exemptions generate additional pollutant loading. In order for the lake water quality targets to be met, this pollution from the exemptions must be offset. The subcommittee considered and evaluated many different alternatives for mitigating the exemptions, and narrowed the options to three for the PAC's consideration:

- 1) Increase low-slope minimum lot requirement to 6 acres.
- 2) Maintain 5-acre minimum lot on low slope; CAW purchases 1,500 to 1,700 acres for conservation.
- 3) Increase low-slope minimum lot to 5.5 acres; CAW purchases 568-773 acres.

Kimberly said that the subcommittee voted on which mitigation option it preferred. She reported that the subcommittee was evenly split on mitigation options 1, 2, and 3.

Kimberly then summarized Tetra Tech's recommendation to the PAC:

Support Mitigation Option 2:

- Maintain 5-acre minimum lot requirement on low slopes.
- CAW adopt a policy to purchase 1,500 acres within 10 years through CAW ratepayers and grants.
- Monitor progress made in 10 years; revise plan/ordinances as needed.

Kimberly said that Tetra Tech had worked with a utility in the last decade that had established a policy to acquire approximately 1,300 acres in its 32 square mile watershed over 10 years to meet its water quality targets. It achieved its target, using ratepayer funding and grants.

Kimberly then explained why Tetra Tech recommends adoption of option # 2 for mitigation of the exemptions:

- 5-acre minimum lot on low slope was presented to the public in the past. Increasing the requirement would add to the landowners' resistance and resentment.
- Requiring 5-acre lots on low slopes and 10-acre lots on high slopes is asking enough of landowners.
- Raising the low-slope requirement poses equity issue for large landowners.
- It shows CAW is willing to invest in the watershed.

***PAC Discussion and Vote***

Tetra Tech called for a vote on the options to mitigate the additional pollution generated by the exemptions. Option 1 (increase the low slope minimum lot size requirement to 6 acres) received 1 vote. Option 2 (maintain the low slope minimum lot size requirement at 5 acres and have CAW adopt a policy to acquire 1,500 acres of conservation land over the next 10 years to offset the exemptions) received 19

votes. Option 3 (Increase the low slope minimum lot size requirement to 5.5 acres and have CAW adopt a policy to acquire 568 to 773 acres of conservation land over the next ten years to offset the exemptions) received no votes. There was one abstention. The lone voter for Option 1 was asked if he would like to reconsider his vote given the strong PAC member support for Option 2. He indicated that he could not vote for Option 2 because he was concerned that it would result in a utility rate increase.

### **Critical Area A**

PAC members continued their discussion of whether there should be development in Critical Area A.

Wally Loveless advised the group to not rush to a decision of no development. The potential loss of tax revenue needs to be considered. He believes that it would be better to conduct the pilot project studies to have improved information upon which to base a decision with such large consequences.

Randy Wilbourn said that he thought that the previous decision to break the watershed into two zones and acquire the land in zone one was based on good intentions but insufficient science. We now have information that suggests that limited development with very strict requirements could be environmentally acceptable if we can confirm some of the assumptions through the pilot studies. We don't have enough information today to say no or yes; we should wait for the pilot studies.

Pat Dicker stated that the attitude of the individual landowner should be considered. Realtors that she has talked to indicate how much difficulty they have in communicating special provisions and requirements to homeowners who feel that their property is theirs to do with as they see fit.

Marge Brewster asked the PAC to consider allowing landowners that would be eligible for subdivision exemptions under similar provisions recommended for Critical Area B and the Upper Watershed Area to be able to build up to five conforming lots (i.e., given the sensitivity of Critical Area A, allow limited development at the levels predicted to protect the lake). She brought up the case of Mr. Lee Bodenheimer who has a dream of building five homes, one for himself and one for each of his four sons. She does not think that it is fair that he could lose his dream if this lower level of development should be accepted.

Stephanie Hymel stated that she believed that the decision to set aside zone one, which is similar to the current Critical Area A, was based on science; it considered travel time and the potential threat of contaminants on the intake area.

Randy Wilbourn and Chuck Nestrud clarified that they believe that the previous decision for no development in the near intake area was based on incomplete science. We now have information that indicates that limited density with environmental design may be sufficiently safe.

Several PAC members asked Tetra Tech what it thinks. Trevor summarized that the Tetra Tech team has looked closely at post-construction impacts of development with limited density. With a minimum of 70 percent land conservation and a 5-acre minimum lot size, a 6 percent impervious cap, required conservation design, and BMPs to improve the water quality of runoff and increase travel time, the models show that the performance standards and selected water quality targets should be met – if the design and BMPs can perform at assumed levels, which the pilot projects need to verify.

Trevor stated that issues have also been raised about the potential impacts during the construction phase, particularly turbidity. Unfortunately, from a modeling standpoint, we don't have the resolution of data from what has been collected to date to calibrate a 3-dimensional water quality model that would allow evaluation of lateral sediment/turbidity movement in the lake. Therefore, we are recommending a construction phase monitoring component for the pilot projects along with supplemental turbidity modeling to help address these questions.

Trevor went on to say that an issue has also been raised about potential health impacts of having human activities relatively close to the water supply intake. He confirmed that allowing development in Critical Area A would increase the sources of pollution and threat in that zone. However, by requiring at least 70

percent conservation of the area and the special management provisions, the level of contamination would be lower than that for development elsewhere in the watershed. He indicated that Tetra Tech has looked at other water supplies throughout the country and found mixed results when comparing them to the Lake Maumelle situation: some have larger buffered areas around their intake and many have smaller buffered areas. This is why Tetra Tech has said that resolution of this issue becomes a policy decision; how risk averse is the community? Trevor added that there are other potential ways to minimize the risk besides setting aside Critical Area A. Tetra Tech thinks that the group should consider what other ways there might be to minimize the overall risk to the water supply (i.e., without placing Critical Area A in isolation, consider the overall watershed and what provides the most protection to the water supply intake).

Pat Dicker stated that there is always something to learn – the future may reveal that there are unanticipated impacts that cannot be addressed effectively because of the proximity to the intake.

Steve Owen noted that Tetra Tech had made recommendations for the first two action items, but he had not heard a recommendation for this issue. He asked for Tetra Tech's recommendation.

Trevor said that Tetra Tech has not put a specific recommendation forward for the reason mentioned earlier: there is technical information that provides insight, but ultimately this is a policy decision. Tetra Tech can envision a protection approach that includes no development in Critical Area A, and we can envision a protection approach that allows a limited amount of restricted development in the area with a number of provisos including the need to consider what else happens in the remainder of the watershed – large scale development agreements need to be in place that ensure for implementation of the plan provisions on developable properties in Critical Area B and the Upper Watershed Area regardless of whether ordinances pass in the local jurisdictions. That would help reduce overall risk, as would using the funds that otherwise would have been spent purchasing Critical Area A land (i.e., for projects such as repaving problem unpaved roads or adding spill containment along bridge crossings).

Thus, Tetra Tech can envision ways of achieving the goals and objectives using either approach – what we can't do is make the decision for you regarding the level of risk that you are willing to live with. That is a policy and community decision. Trevor added that such decisions are made frequently by communities across the nation, but there is not one definitive technical answer for you.

Kate Althoff noted that she liked and agreed with what was just said. She liked that Tetra Tech could envision that it is possible. She thinks that it is hard for members to agree on a concept and not have some really concrete things in place. Tetra Tech provided a long list of what needs to be in place to administer and enforce the plan and another long list for conditions under which limited development in Critical Area A might be acceptable. She then asked the PAC members to list the other things that might be needed to move this decision forward.

Wally Loveless said one thing that is needed is a paradigm shift. The community has never experienced a structure and the level of administration and oversight that is being proposed by Tetra Tech. He said it has been hard to sit and listen to the horror stories that PAC members and local officials and planning staff share regarding the apparent current inadequacies, but that the community needs to work together to turn this around to manage effectively. He believes that the overarching concern for the quality of the water supply should provide the impetus for this shift.

Kimberly cautioned against the two extreme approaches to watershed planning – the architect's approach and the bricklayer's approach. In the "architect" approach, plan architects wait until they have the complete set of blueprints with all of the details fully mapped out before anything is done – in which case it may be too late. Under the "bricklayer" approach, planners just keep laying bricks (i.e., taking actions) not knowing what the overall product is that they are building. The management plan being recommended by Tetra Tech aims for something in between the two extremes by developing a plan and

implementation strategy that can be acted on in the short term, then adapted and built upon over time. If the PAC tries to do too much at once, you may not be able to get anywhere.

Kate Althoff recommended saying no to development now, allowing the pilot projects and studies to move forward along with the building of administration and enforcement capability. If the studies and capacity prove that it could be done in the future, then the plan could be adapted accordingly.

Chuck Nestrud said that he concurred with most of what Kate said, except he doesn't think that the PAC should make a decision until it has all of the answers.

Herb Dicker stated that as a ratepayer, he was not willing to risk any damage to the water supply. If science proves later on that it can work, then the Watershed Administrator and Watershed Stewardship Council could approve a change to the plan. At this time, he feels that the answer needs to be no development.

Randy Wilbourn noted that the group does not know what it would cost CAW and ratepayers to purchase all of the land – it has not been determined what an acre of land in Critical Area A is worth. He feels that the PAC doesn't have enough scientific information yet to make a decision, so that in essence, members are being asked to make a decision based on emotion. He does not want to recommend to the CAW Board to blindly agree to buy that land.

Marge Brewster wondered whether things might happen in Critical Area B that the PAC might be equally concerned about as it is for Critical Area A. She asked whether the travel time was that much different, and whether monitoring was even frequent enough to capture these differences.

Trevor clarified that the travel time was quite different, and that the boundaries of Critical Area A were drawn based on that difference. In the southeastern portion of Critical Area A, travel time ranges from 24 to 48 hours. Along the northern shore of the area, travel time ranges from 72 hours to approximately 5 days. Once you go past the narrow confines of Critical Area A, the travel time quickly rises to 12-20 days and on up to 30-37 days in the upper portion of the lake.

Bruno Kirsch, Director of Watershed Management for CAW, added that CAW monitors the raw water supply daily for key parameters.

Harrison Jones pleaded with the group to stop arguing over this issue. Since the CAW Board will have the final say, he thinks that members should cast their vote and then let go of this issue.

Wally Loveless said that he thought the closest toward consensus that the PAC might achieve is to defer the decision on development in Critical Area A and let the pilot projects be performed and the governing mechanisms established. Then let the Stewardship Council and CAW make the decision based on that information.

Randy Day asked why a pilot project couldn't be conducted in Critical Area A. He feels that there are no areas outside of the watershed like Critical Area A. He recommended allowing Mr. Bodenheimer to develop his property as a pilot project.

Kimberly and Trevor responded that Tetra Tech would not recommend risking failure in Critical Area A given its relative sensitivity. They indicated that it would be wise to allow any mistakes to be made outside of the watershed, and to note lessons learned to incorporate within a design manual for future guidance.

Glen Hooks stated that he is risk averse, but is interested in Wally's motion.

Ruth Bell asked who would make a final decision on the success or failure of the pilot projects and on whether development could occur in Critical Area A under Wally's motion.

Tetra Tech responded that the final decision would likely be made by the Stewardship Council if the recommended plan moves forward.

Stacy Hurst indicated that she feels governance is very important in what is being proposed. She asked whether this would be a first of a kind.

Kimberly responded that establishing a regional watershed authority with governance powers would be a first of a kind, but that Tetra Tech was recommending going to local governments first for adoption of ordinances and coordination through a Watershed Administrator, individual or joint commissions, and a Watershed Review Board.

Stacy noted from experience that ordinances can be very difficult to pass, and even when they do pass she observes enforcement problems more frequently than she would like. Based on her discussions within the community, local residents want the water supply protected.

A vote was called regarding Wally's motion to defer the decision on development in Critical Area A until pilot projects are done and modeling is completed. At that time (estimated to be about 4 years), determine if the pilot projects have been successful, and – if capacity has been built – how administration and enforcement governance is working in the watershed. No development would be allowed until that determination has been made.

Seventeen (17) members voted in favor of the motion, 1 member was opposed, and 3 abstained from voting.

Marge Brewster then made a proposal to allow limited development in Critical Area A for the landowners that would have qualified for a subdivision exemption if the same provisions recommended for Critical Area B and the Upper Watershed Area were applied. The landowners would be allowed to build up to 5 lots, however, they would need to conform with the proposed watershed regulations. Under the proposed Non-engineering/Land Conservation approach, this would require limiting density to 1 house per 20 acres, 92 percent open space conservation, a 2.2 percent impervious cap, and paved roads and driveways. Several questions arose and the group decided to continue this discussion at the October PAC meeting.

### **Next Steps**

Tetra Tech stated that a summary of this meeting, a meeting agenda, and supporting materials will be sent out prior to the next meeting scheduled for October 19. The Preliminary Draft Management Plan should be available by October 10.

The meeting was adjourned.

	MEMBER NAME	DESIGNATION	REPRESENTING
P	Herb Dicker	PRIMARY	Ratepayers (Little Rock Neighborhoods)
P	Kathy Wells	ALTERNATE	Ratepayers (Little Rock Neighborhoods)
P	Sue Corker	PRIMARY	Ratepayers (North Little Rock Neighborhoods)
NP	Jack Finnegan	ALTERNATE	Ratepayers (North Little Rock Neighborhoods)
NP	Mike Simpson	PRIMARY	Ratepayers – Jacksonville Water Works (Master-metered Customers)
P	Robert Stout	ALTERNATE	Ratepayers – North Pulaski Water Works (Master-metered Customers)
P	Tony Kendall	PRIMARY	Central Arkansas Water Commission (Chair)
P	Jane Dickey	ALTERNATE	Central Arkansas Water Commission (Member)
NP	Roby Robertson, Ph.D.	ALTERNATE	Central Arkansas Water Commission (Vice Chair)
P	Ruth Bell	PRIMARY	Community (League of Women Voters of Pulaski County)
P	Kathleen Oleson	ALTERNATE	Community (League of Women Voters of Pulaski County)
P	Steve Owen	PRIMARY	Community (North Little Rock Chamber of Commerce)
NP	James Dietz	ALTERNATE	Community (North Little Rock Chamber of Commerce)
P	Randy Wilbourn	PRIMARY	Community (Little Rock Regional Chamber of Commerce)
NP	Jay Chesshir	ALTERNATE	Community (Little Rock Regional Chamber of Commerce)
P	Kate Althoff	PRIMARY	Community (Citizens Protecting Maumelle Watershed)
P	Barry Haas	ALTERNATE	Community (Citizens Protecting Maumelle Watershed)
P	Alderman Neil Bryant	PRIMARY	Elected Official (North Little Rock City Council)
P	City Director Stacy Hurst	PRIMARY	Elected Official (City Director, City of Little Rock)
P	Justice Pat Dicker	PRIMARY	Elected Official (Pulaski County Quorum Court)
P	Justice Harrison Jones	PRIMARY	Elected Official (Perry County Quorum Court)
NP	Justice Charlie Clements	ALTERNATE	Elected Official (Perry County Quorum Court)
P	Glen Hooks	PRIMARY	Environmental (Sierra Club)
NP	Dale Ingram	ALTERNATE	Environmental (Sierra Club)
NP	Kevin Pierson	PRIMARY	Environmental (Audubon Arkansas)
P	Stephanie Hymel	ALTERNATE	Environmental (Audubon Arkansas)
P	Charles Nestrud	PRIMARY	Property Owners ( Deltic Timber Corporation)
P	Larry Hedrick	PRIMARY	Property Owners (U.S. Forest Service)
NP	Jeff D. Allison	PRIMARY	Property Owners – Water Association within Watershed
P	John M. Bentley, III	PRIMARY	Property Owners – within Watershed – Western Watershed
P	Ray Vogelpohl	ALTERNATE	Property Owners – within Watershed – Western Watershed

	MEMBER NAME	DESIGNATION	REPRESENTING
P	Marge Brewster, Ph.D.	PRIMARY	Property Owners – within Watershed – Northern Watershed
P	Earl Hillard	ALTERNATE	Property Owners – within Watershed – Northern Watershed
P	Wally Loveless	PRIMARY	Realtors (Arkansas Realtors Association)
NP	Kenneth Gill	ALTERNATE	Realtors (Arkansas Realtors Association)
P	John Bryant	PRIMARY	Recreationists (Grand Maumelle Sailing Club)
NP	Nicole Claas	ALTERNATE	Recreationists (Grand Maumelle Sailing Club)
P	Randy Day	PRIMARY	Recreationists – Fisherman (President of Maumelle Bass Club)
	OTHERS IN ATTENDANCE	REPRESENTING	
P	Kimberly Brewer, A.I.C.P.	Tetra Tech, Inc.	
P	Shani Canada	Central Arkansas Water	
P	Matthew Cate	<i>Arkansas Democrat-Gazette</i>	
P	Trevor Clements	Tetra Tech, Inc.	
P	Tim Daters, P.E.	White-Daters & Associates, Inc.	
P	Troy Ellison	Citizen	
P	Hester Estate	Property Owner	
P	Gary Hum	Central Arkansas Water	
P	David Johnson	Arkansas State Representative	
P	Scott King	A-V Arkansas, Inc.	
P	Bruno Kirsch, Jr., P.E.	Technical Advisory Council/Central Arkansas Water	
P	Brandi McGreevey	Central Arkansas Water	
P	Jim McKenzie	Technical Advisory Council/Metroplan, A Council of Local Governments	
P	Norvell Plowman	Attorney for Lee Bodenhamer, Property Owner within Lake Maumelle Watershed	
P	Eddie Powell	Central Arkansas Water Board of Commissioners	
P	Tim Welter	Citizen	