

Lake Maumelle Watershed Management Plan Policy Advisory Council Meeting Summary May 18, 2006

Attendees

See Attachment A.

Introduction

Following roll call and some general reminders, Trevor Clements of Tetra Tech began this seventh meeting of the Policy Advisory Council (PAC) by reviewing the agenda in context of the overall planning project. At the March 16 meeting, the PAC reviewed and discussed baseline analysis results, endorsed lake management targets, and commented on draft concepts for two management scenarios. Since the March meeting, the Tetra Tech project team has been working with Technical Advisory Council (TAC) members to more fully develop and begin evaluating those scenarios. Trevor indicated that this has involved some very intricate modeling, during which Tetra Tech refined the watershed and lake models, further increasing the project team's confidence in the model predictions. The models were applied to establish maximum allowable pollutant loads that protect the adopted lake targets. The objective for this (May 18) meeting was to briefly review preliminary management planning and evaluation results, and to obtain feedback from PAC members on some policy questions that would help guide Tetra Tech in completing the initial management scenario evaluations.

Preliminary information for the meeting was sent out in a May 11, 2006 memo for prior review by PAC members. That material and refinements handed out at the meeting were used to support presentation and discussion.

Management Area Refinement

Feedback from PAC members at the March meeting indicated that some members were concerned about land in the watershed located just upstream of the lake (i.e., along the Hwy 10 corridor and Big Maumelle River) potentially being treated the same as land in the far western portion of the watershed in Perry County. Tetra Tech reviewed several factors in response, including travel time to the lake, subwatershed boundaries, jurisdictional boundaries, and anticipated development pressure in the near term. Based on its review, Tetra Tech recommended revising the delineations of the proposed Critical Area B and Upper Watershed management areas. Critical Area B was expanded (maintaining boundaries by subwatershed) to include contiguous area with stream segment travel times ranging from 1 to 5 hours (for baseline travel time analysis assumptions) and generally averaging less than 2 hours. The Upper Watershed Area was decreased to reflect areas with longer stream segment travel times, ranging from 5 to 12 hours.

One PAC member asked why more management zones weren't created, rather than making Critical Area B so large. Trevor indicated that the intent is for the management areas to reflect areas with relatively similar pollutant delivery to the lake, so that management requirements can be equitably distributed. The similarity of travel time and pollutant delivery within the redefined Critical Area B means that this area should be treated similarly for management (for example, site development performance standards).

Maximum Allowable Loading and Load Allocations

Next Trevor briefly summarized the analyses for establishing the maximum allowable loads that protect the lake water quality targets endorsed the previous PAC meeting. Refined models were used to predict loading for future nonpoint source conditions throughout the watershed using an actual eight year

hydrologic period (1997 – 2004) to drive predictions. Loading rates in the watershed were adjusted until the median lake water quality response values simultaneously met the adopted lake targets. The corresponding maximum allowable loads are repeated in Table 1 below.

Table 1. Maximum Allowable Loading to Lake Maumelle

Indicator	Maximum Allowable Load
Total Phosphorus (TP)	19,250 lb/yr
Total Suspended Solids (TSS)	5,840 t/yr
Total Organic Carbon (TOC)	2,445,000 lb/yr
Fecal Coliform	$2.25 \cdot 10^{15}$ #/yr

Trevor then explained that the total allowable loading was translated to the site-scale (i.e., maximum allowable per acre average loading rates) for each management area, considering differences in pollutant delivery and assigning more stringent rates to Critical Area A because of its proximity to the water supply intake. These rates would apply to land that undergoes new development in the watershed (Table 2).

Table 2. Allowable Loading Rates from Developed Land

	Total Phosphorus (lb/ac/yr)	Total Sediment (t/ac/yr)	Total Organic Carbon (lb/ac/yr)
Critical Area A Allocation for New Development	0.200	0.080	33.30
Critical Area B Allocation for New Development	0.300	0.110	36.30
UWA Allocation for New Development	0.330	0.130	39.00

Trevor then noted that these allocations would need to cover loads from both point source (any direct discharges of wastewater associated with the new development) and nonpoint sources (runoff from the land and built upon surfaces after development). However, analysis indicates that allocation to point source direct discharges would make it impossible to develop the land and meet the overall load allocations. One household would generate approximately 0.95 lb of total phosphorus (TP) per year even if that household's waste was treated to discharge only 1 mg/L (maximum level of treatment that the Arkansas Division of Environmental Quality would likely assign to small community discharging systems). Trevor demonstrated that for a 3-acre lot in Critical Area B, the 0.95 lb of point source load would more than exceed the allowable 0.9 lb TP without even considering the nonpoint source load from the land. For a 5-acre lot, the point source load would take up approximately 63 percent of the total allowable load. The remaining allowable load for nonpoint sources could not be achieved through any reasonable means.

Therefore, to meet the allowable loads that protect the lake water quality targets, a "no direct discharge" policy would need to be implemented in the watershed. Under such a policy, wastewater from new development would need to be either pumped out of the watershed or treated by non-discharge systems

(for example conventional septic tank where permissible, or using alternative capped field and drip irrigation systems where conventional tanks alone will not work adequately).

Policy Discussion

PAC members were asked to provide input on two policy questions:

1. Do the recommended management area load allocations adequately reflect the previous PAC guidance?
2. Would the PAC support a policy of no direct discharges in the watershed as part of the management plan?

After discussing the size and number of management areas proposed, there was no further conversation on the area load allocations. Discussion focused on clarification of the no discharge recommendation for wastewater. One member wanted to know what the costs were for the alternatives. Tetra Tech explained that cost analyses were ongoing and review of results was planned for the next PAC meeting. Another member asked what was assumed in the allocation decisions to date regarding wastewater. Trevor indicated that the evaluation results presented to date reflected a zero allocation to point sources to reflect the no-discharge assumption. Several members stated that they concurred with the recommendation of no-discharge. When asked generally whether the evaluation was going down the right path with this assumption (Tetra Tech needed feedback because this affects how costs will be determined), PAC members generally nodded in or voiced approval although no formal vote was taken.

Draft Management Scenarios

Kimberly Brewer led the Council through a review of preliminary evaluation results. She reminded members that two scenarios are being tested:

1. Non-engineering/Land Conservation.
2. Performance Standards/Land Conservation.

In further defining preliminary options for each scenario, Tetra Tech followed some general guidelines drawn from previous PAC input:

- Increase stringency of requirements as you move from the Upper Watershed Area to Critical Area A.
- Vary requirements based on slope.
- Don't require lots to be > 5 acres.
- Don't require undisturbed open space to be > 50 percent of site.
- Recognize the burden of paving driveways and roads in rural areas.

Kimberly walked through how these were translated into assumptions and evaluated for the two scenarios and the different management zones using five graphic examples. The results showed that for the Non-engineering/Land Conservation Scenario, the performance standards could not all be met through applying an across-the-board 5-acre minimum lot size. The TSS performance standard was exceeded in all management areas due largely to contributions from unpaved roads and driveways. All performance standards were exceeded in the high sloped areas. Examples for cluster development showed this option could be used to meet all of the performance standards on low sloped areas, but would still not meet them for high sloped areas.

Kimberly then discussed what is required (or not required) to meet the performance standards, addressing several of the questions that we have heard in the past from the PAC and other stakeholders. The following questions were posed and then answered as examples of what would not be required:

Do the proposed planning scenarios require *existing* landowners in the watershed to change their *existing* uses or practices?

No, existing uses of the land are assumed to continue and be exempt from the proposed requirements for new development.

Do these scenarios recommend or require that CAW condemn any additional land in the watershed?

No, *voluntary* purchase or land dedication is being recommended for the watershed plan. [Note: this refers to plan components but in no way recommends removing CAW authority to condemn property. The power of condemnation remains an important authority for ensuring protection from threats to the public water supply that cannot be addressed through other means.]

Do the proposed requirements include stream buffers for existing or new development, farms, etc.

No, stream buffers will be encouraged voluntarily under the proposed scenarios, but not required. Buffers will be encouraged for use along key drainage-ways, and particularly for use as vegetated filter strips below areas occupied by animals such as cows and horses.

Do either of the scenarios require that *existing* houses be moved?

No.

Do the proposed enhanced wastewater requirements apply to *existing* onsite septic tanks?

No, only to wastewater associated with new development unless an existing system is an illegal discharge threatening water quality.

Do the road, street, and driveway BMPs apply to *existing* roads, streets, and driveways in the watershed?

No, existing unpaved roads and driveways are assumed to remain unpaved. Paved roads and driveways may be required for new development (alternatively gravel with BMPs or Best Available Technology may be required).

Kimberly then discussed what would be required to meet performance standards. General requirements proposed for the Non-engineering/Land Conservation Scenario Large Lot approach are summarized below in Figure 1. This option will meet TP, TOC, and TSS performance standards if road improvements are required and offsite mitigation is required for conservation land. If paved roads and driveways are used, an estimated 5,255 acres of offsite mitigation would be required (representing approximately 10 percent of available developable land in the watershed). If gravel roads and driveways are used instead of pavement, over 27,220 acres would be required in offsite mitigation (constituting over 50 percent of available developable land in the watershed).

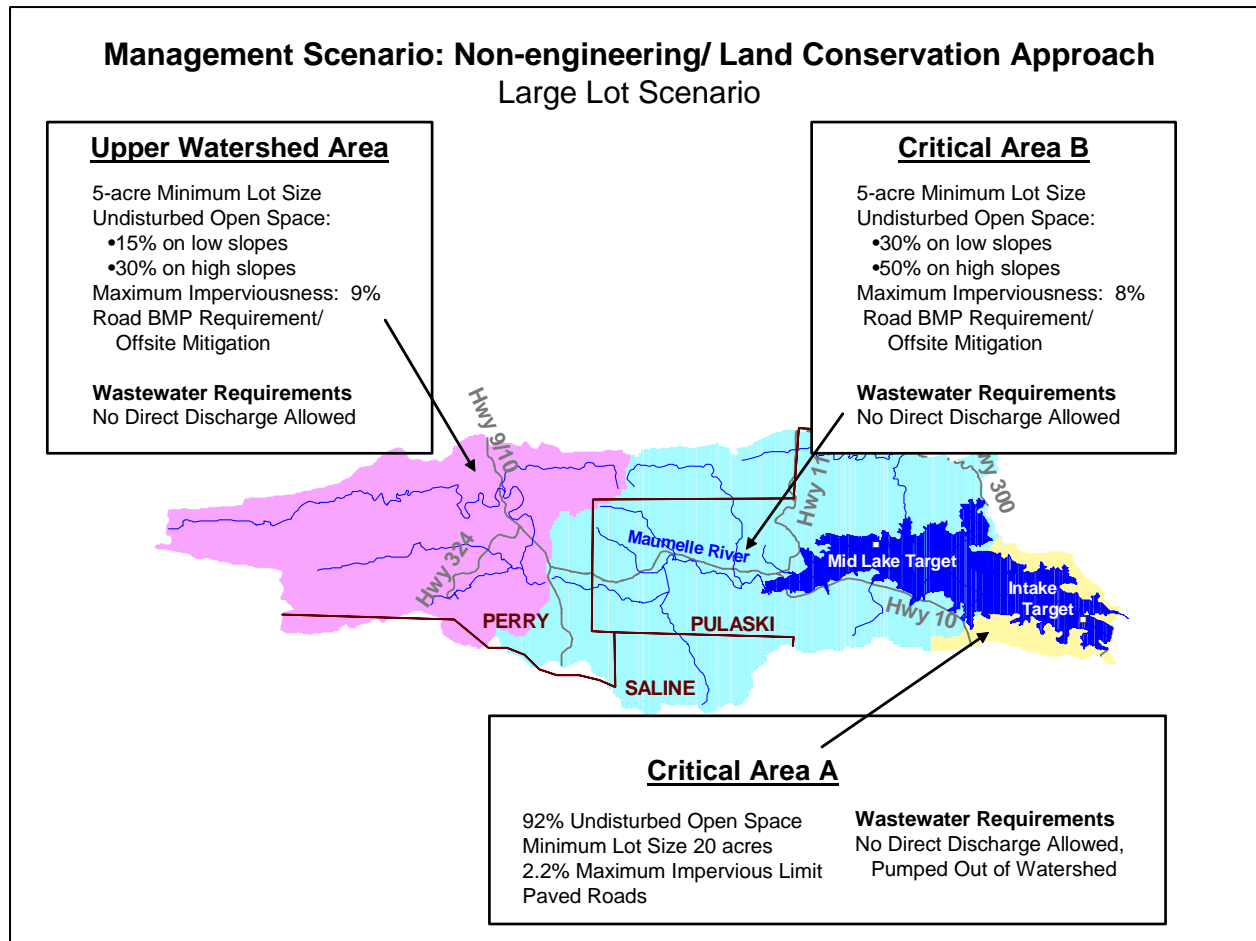


Figure 1. Requirements for the Non-engineering/Land Conservation Approach – Large Lot Option

Proposed requirements for the Cluster Option for the Non-engineering/Land Conservation Scenario are summarized in Figure 2. This option has the same requirements for undisturbed open space as the Large Lot option, but requires slightly more stringent imperviousness caps. Offsite mitigation would be required for high sloped areas since those would not fully meet performance standards. However, development on low sloped areas would not require any offsite mitigation. Also, there is no individual cluster option being recommended for Critical Area A. Development in that area under these proposed scenarios would either need to meet the more stringent Large Lot requirements or the more stringent performance standards (note that a cluster-type design could be part of the performance standards approach, but additional requirements would need to be met as detailed under that option).

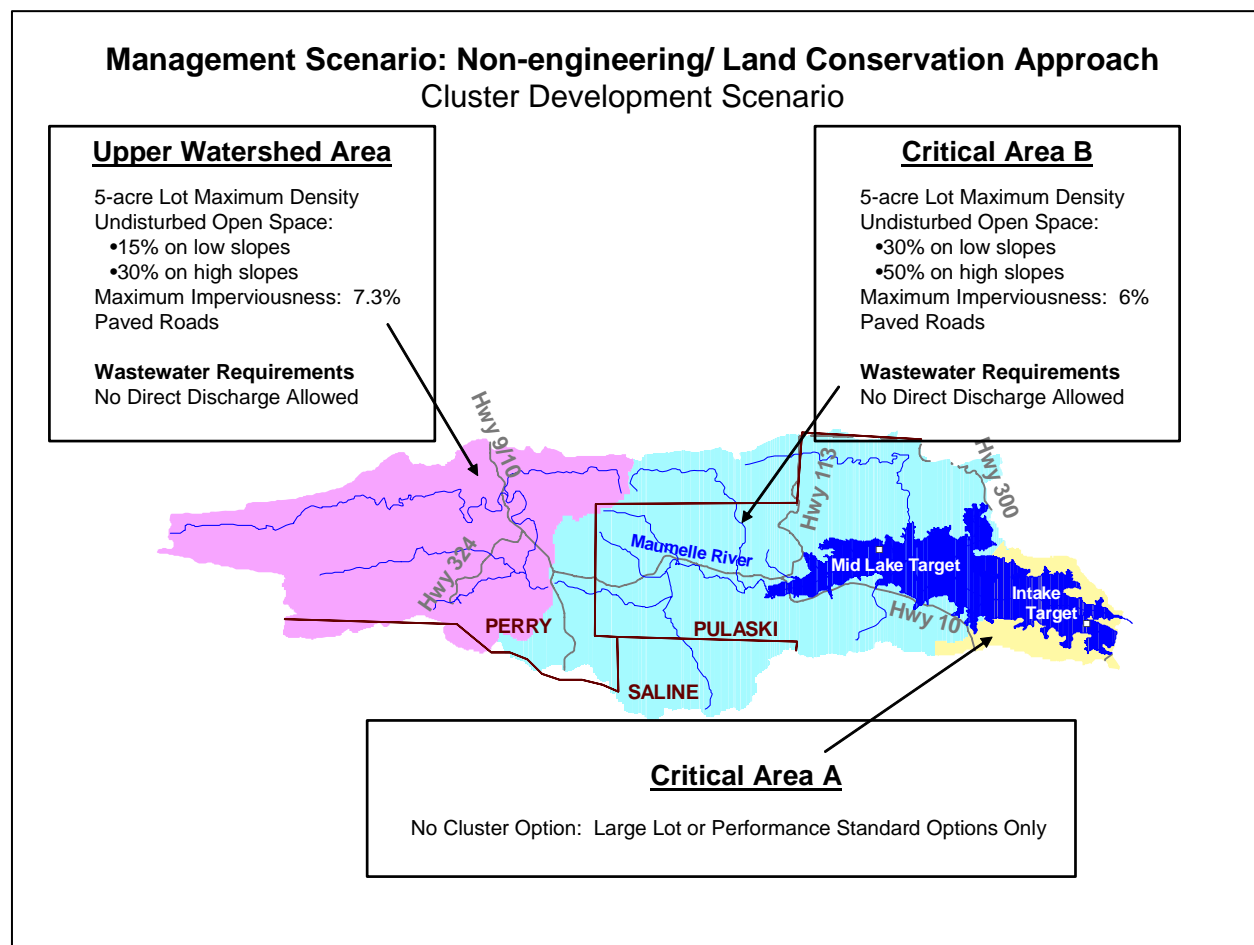


Figure 2. Requirements for the Non-engineering/Land Conservation Approach – Cluster Option

Proposed requirements for the Performance Standard/Land Conservation Scenario are summarized in Figure 3. In the Upper Watershed Area and Critical Area B, this option has the same requirements for undisturbed open space, but does not include minimum lot size requirements or maximum impervious surface requirements. Flexibility is left for the developers as long as they use designs that meet the performance standards for TP, TSS, and TOC in addition to the undisturbed area requirements. Additionally, because they are untested in the watershed and on soils and slopes of this type, BMP pilot projects demonstrating sufficient capabilities would be required outside of Critical Area A before BMPs could be used to meet the performance standards.

Kimberly then provided a big-picture summary:

The proposed Non-engineering/Land Conservation Scenario is expected to meet lake water quality targets if road improvements and offsite land conservation are required, or if stricter onsite requirements are met (for example, substantially larger minimum lot sizes and/or substantially more undisturbed space).

The proposed Performance Standards/Land Conservation Scenario is expected to meet lake water quality targets if onsite engineered BMPs are used. Note, however, that since engineered BMPs are untested in areas similar to the watershed, pilot projects must be conducted outside of Critical Area A to determine effectiveness before they can be used.

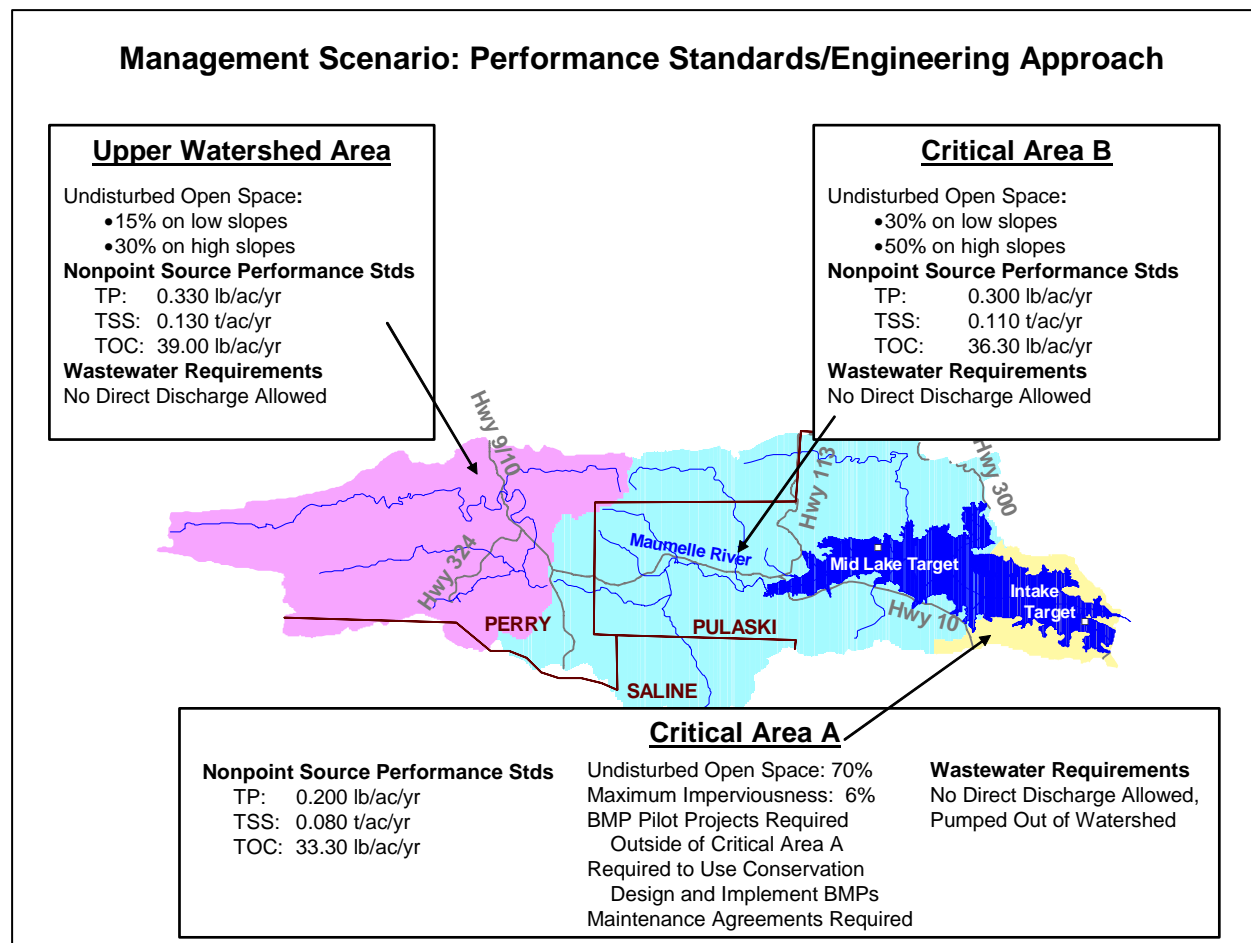


Figure 3. Requirements for the Performance Standards/Land Conservation Approach

Discussion

Tetra Tech then posed a series of policy questions for the PAC to consider. The questions and discussion are summarized below:

1. *Does 5-acre minimum lot size meet the right balance between minimizing burden on the property owner and trying to preserve the rural nature of the watershed?*

One member said she thought it inappropriate to have the same fixed minimum lot size requirement for all areas (i.e., five acres). She asked Tetra Tech to evaluate how requirements for larger lots on steep slopes would affect the offsite mitigation acres needed. She didn't like the "one size fits all approach."

One member asked whether a single house would require a paved road. Tetra Tech responded that paving the road would be one option. Several members indicated that it might be good to have a type of "sliding scale" whereby choices were offered. For example, if someone was willing to have a lot large enough (i.e., much greater than 5 acres if needed) such that it didn't require more than a gravel road, or someone else decreased imperviousness and increased undisturbed area to meet the requirements, those would be acceptable alternatives. Tetra Tech agreed to look at more combinations of large lots with different road and driveway types, and bring the information back to the PAC.

Another member asked whether some of the burden could be relieved by putting BMPs on existing property to provide credit for another area. It was pointed out that this “banking” type of approach would require careful consideration with regard to the complexity and cost of administration that may be required.

One member brought up the issue of defining development and who would be required to comply with the proposed requirements. The member felt that size should be required as well as a consideration for handing down property within the family for small family building plots. Tetra Tech agreed to bring some examples of exemptions for family legacy reasons, and to revisit the new development definitions shared with the PAC at an earlier meeting.

Some PAC members were also interested in seeing examples of how land values are affected by adoption of management provisions of this type. Tetra Tech mentioned a couple of examples where some studies have been performed. The project team will look into this further and see what information it can bring back to the PAC in this regard.

Finally, a member stressed that the state has lot size requirements for different wastewater systems and that those requirements need to be considered.

2. *To meet TP, TOC, and TSS allocation limits under the Non-engineering/Land Conservation Scenario:*
 - a. *Should offsite conservation land mitigation be required? Or...*
 - b. *Should there be stricter onsite requirements (e.g., larger lot sizes, greater undisturbed space requirements, less impervious surface)?*

One member asked if both could be allowed. Trevor indicated that this is one option to explore. For example, a landowner with steeply sloped land could choose to create 17-acre lots with about 75 percent undisturbed open space, or could choose to have smaller lots with offsite mitigation. This is essentially the performance standard approach applied to the non-engineering scenario (i.e., you have flexibility in meeting the onsite load allocations but cannot use stormwater BMPs). This would provide more flexibility to the landowner, but would also be more complex to administer. Trevor said that Tetra Tech would present additional information on this option as well as costs for the various options at the June meeting.

Members said they need more information about the large lots on steep slopes, as discussed above, before deciding this issue.

3. *If offsite mitigation is required, should the mitigation land be targeted in the management areas closest to the lake, or be allowed in the same zone?*

A member said since Tetra Tech indicated that there is no difference within a management area in terms of travel time, then there would be no justification for requiring that all mitigation land be closest to the lake. Trevor clarified that this means providing mitigation conservation land within the same management zone as the proposed development unless one is proposing mitigation in a more protective zone (i.e., a developer in Critical Area B can mitigate in Critical Area B or Critical Area A, but not in the Upper Watershed Area).

Another member stressed that mitigation needs to occur where there is a willing seller. Trevor suggested that an entrepreneur might buy land or dedicate land with a conservation easement to create a credit bank, then sell credits to those who need them. Another member asked about establishing credits for those developers who do not use their entire load allocation—could they use those credits on another parcel? A member asked if existing residents in the watershed could receive credits for not developing their property. Another

member asked if Tetra Tech could identify existing egregious sources of sediment or TP—like existing unpaved roads, and determine how much credit could be generated if CAW paves the roads. The question is “how do we get the biggest bang for the buck” in mitigation. Trevor said Tetra Tech would analyze these credit banking ideas and present information to the PAC at the next meeting. Finally someone asked if Tetra Tech had explored Transfer of Development Rights (TDR). Kimberly said that the local governments would need to pass a zoning ordinance, get special enabling legislation from the State, and set up a complex administration system. She said the credit banking system proposed above could achieve many of the same things as a TDR program without additional legislation. However, TDR might be something to explore for the longer term (it can take local governments decades to establish a TDR program, some without success).

A member asked if the proposals address verticality. In other words, if a developer dedicates 70 percent of the land in open space and meets the performance standards, could he or she build a 10-story high rise? Trevor said that the performance standard proposal does not address verticality (because it does not have a density limit). If adopted as currently proposed, “verticality” would be something local governments would have to undertake outside of this watershed plan. A member noted that the Health Department would have to ensure that there was adequate space for wastewater systems for the development. (Note this restriction would not apply if wastewater is pumped out of the watershed).

4. *Should offsite mitigation be required of the developer, CAW, or some combination?*

One member noted that this relates to the issue of “who bears the burden.” The residents of the watershed do not drink the water, and yet may be asked to pave driveways – a cost they may not be able to afford. He said it seems that CAW customers should share the burden since they benefit from the water quality protection. He asked if credits could be provided to existing residents to help offset the burden.

Another member noted that USEPA has a policy on mitigation for wetlands that requires the party causing impact to do the mitigation.

A member asked how other areas have helped offset the burden to watershed residents. Trevor and Kimberly used the example from the Cane Creek Watershed in North Carolina where the Orange Water and Sewer Authority:

- Provides cost share dollars to farmers to assist with installing/using agricultural BMPs.
- Provides workshops for landowners on estate planning to help them “hand down” land to their family members.
- Allows landowners to create up to five 2-acre lots on their land that are exempt from the watershed regulations. This was done to help address legacy issues as well as help provide retirement income for the residents.

A member asked if the study is showing that development can occur in Critical Area A that is consistent with protection of the lake water quality, and if the TAC had endorsed this analysis regarding performance standards. Trevor said that Tetra Tech is still in the process of evaluating options and putting alternatives on the table to help meet the adopted objectives. The role of the TAC is not to endorse but to provide technical comments. Kimberly said the TAC had recognized that the performance standards are both technical and policy based, and stressed the need to show sensitivity of different options (which we did in the Memorandum for this meeting).

Next Steps

The group agreed to postpone the public meetings scheduled for June and reschedule them for July. This would provide time for Tetra Tech to address the questions posed above and present additional information to the PAC at its June meeting. The “vote” scheduled for June on the management scenarios will be postponed until the July meeting. Trevor clarified that the vote will be more like a survey of PAC members (similar to the last survey), asking members what they like and don’t like about each scenario, and for those things that they do not like, asking member to propose an alternative that meets the adopted goals and objectives.

Trevor said that an announcement will be mailed to the watershed property owners with the dates and times of the July meetings.

The next meeting of the PAC will be June 15.

Lake Maumelle Policy Advisory Council Meeting Sign-In Meeting Date: May 18, 2006

Present	Member Name	Designation	Representing
P	Herb Dicker	PRIMARY	Ratepayers (Little Rock Neighborhoods)
P	Kathy Wells	Alternate	Ratepayers (Little Rock Neighborhoods)
NP	Sue Corker	PRIMARY	Ratepayers (North Little Rock Neighborhoods)
NP	Jack Finnegan	Alternate	Ratepayers (North Little Rock Neighborhoods)
P	Mike Simpson	PRIMARY	Ratepayers – Jacksonville Water Works (Master-Metered Customers)
P	Robert Stout	Alternate	Ratepayers – North Pulaski Water Works (Master-Metered Customers)
NP	Jane Dickey	PRIMARY	Central Arkansas Water Commission (Member)
P	Tony Kendall	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)
NP	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)
P	Jay Chesshir	Alternate	Community (Little Rock Regional Chamber of Commerce)
NP	Kate Althoff	PRIMARY	Community (Citizens Protecting Maumelle Watershed)
P	Barry Haas	Alternate	Community (Citizens Protecting Maumelle Watershed)
NP	Alderman Neil Bryant	PRIMARY	Elected Official (North Little Rock City Council)
P	Vice Mayor Barbara Graves	PRIMARY	Elected Official (Little Rock Board of Directors)
NP	City Director Stacy Hurst	Alternate	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)

Present	Member Name	Designation	Representing
NP	Dale Ingram	Alternate	Environmental (Sierra Club)
P	Kevin Pierson	PRIMARY	Environmental (Audubon Arkansas)
NP	Stephanie Hymel	Alternate	Environmental (Audubon Arkansas)
P	Charles Nestrud	PRIMARY	Property Owners (Deltic Timber Corporation)
P	Larry Hedrick	Alternate	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
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 (Member of Arkansas Realtors Association)
NP	Kenneth Gill	Alternate	Realtors (Coldwell Banker Advantage)
NP	John Bryant	PRIMARY	Recreationists (Grand Maumelle Sailing Club)
NP	Nicole Claas	Alternate	Recreationists (Grand Maumelle Sailing Club)
P	Randy Day	PRIMARY	Recreationists – Fishermen (President of Maumelle Bass Club)

NON-POLICY ADVISORY COUNCIL MEMBERS IN ATTENDANCE

Name	Representing
Lee Bodenhamer	Property Owner within Lake Maumelle Watershed
Kimberly Brewer	Tetra Tech, Inc.
Shani Canada	Central Arkansas Water/Staff
Marie A. Crawford	Central Arkansas Water/Staff
Trevor Clements	Tetra Tech, Inc.
Tim Daters, P.E.	White-Daters & Associates, Inc./Deltic Timber Corporation/Waterview Estates, L.L.C.
Craig Douglass	Craig Douglass Communications/public relations firm representing Deltic Timber Corporation
Gary Hum	Central Arkansas Water/Staff
Jordan Johnson	Citizens Protecting Maumelle Watershed
Bruno Kirsch, Jr., P.E.	Technical Advisory Council/Central Arkansas Water Staff
Nicole Lacy	Central Arkansas Water/Staff
Jim McKenzie	Technical Advisory Council/Metroplan Council of Local Governments
Ashley Pope	Technical Advisory Council/Pulaski County Planning Department
Scott King	A-V Arkansas, Inc.
Sam Ledbetter	McMath-Woods, P.A./Attorney for Central Arkansas Water
Jim Malcolm	FTN Associates, Ltd.
Bruce McMath	McMath-Woods, P.A./Attorney for Central Arkansas Water
Norvell Plowman	Attorney for Lee Bodenhamer, Property Owner within Watershed
Roby Robertson, Ph.D.	Central Arkansas Water/Commission
Guest of John M. Bentley, III	