

## Lake Maumelle Watershed Policy Advisory Council Meeting October 19, 2006



Facilitated by

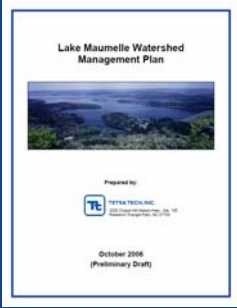


TETRA TECH, INC.

## 10/19 Meeting Objectives

- Provide overview of the Preliminary Draft Watershed Management Plan.
- Receive preliminary input from the PAC on the Preliminary Draft Plan.
- Make certain that PAC members understand next steps.

## Overview of Management Plan



## Charge to Tetra Tech


- Develop a comprehensive watershed management plan.





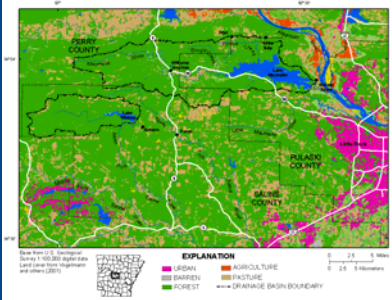
## Overarching Goals

- Maintain long-term, abundant supply of high quality drinking water.
- Provide equitable sharing of costs and benefits for protecting Lake Maumelle.



## Key Finding

- Many landowners have been good stewards.
- Watershed is currently 92% forested.




### Biggest Threat

- Converting forest to houses, lawns, and roads.
- Increased population and associated wastewater.




### Key Focus of the Plan

- Managing impacts from new development.




### Recommended Changes to Local Regulations

- Adopt Local Sedimentation and Erosion Control Ordinances.
- Adopt Watershed Protection Ordinances.



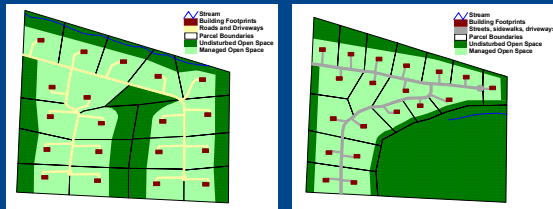
### Upper Watershed Short-Term: Large Lot and Cluster Design Options

	Minimum Road Surface	Minimum Driveway Surface	Minimum Undisturbed Area	Maximum Percent Impervious.	Minimum Lot Size (Acres)
<b>LOW SLOPE</b>					
Large Lot	Paved	Gravel	15%	8.25%	5
Cluster	Paved	Paved	15%	7.50%	5 (avg.)
<b>HIGH SLOPE</b>					
Large Lot	Paved	Gravel	30%	4.25%	10
Cluster	Paved	Paved	30%	4.25%	10 (avg.)

### Critical Area B Short-Term: Large Lot and Cluster Design Options

	Minimum Road Surface	Minimum Driveway Surface	Minimum Undisturbed Area	Maximum Percent Impervious.	Minimum Lot Size (Acres)
<b>LOW SLOPE</b>					
Large Lot	Paved	Gravel	30%	8.00%	5
Cluster	Paved	Paved	30%	7.50%	5 (avg.)
<b>HIGH SLOPE</b>					
Large Lot	Paved	Gravel	50%	4.25%	10
Cluster	Paved	Paved	50%	4.00%	10 (avg.)

### Example Large Lot and Cluster Developments



Large Lot

Cluster

### Upper Watershed and Critical Area B: Long Term Option



- Performance Standards/Land Conservation
- Allows engineered stormwater BMPs to help meet water quality targets.
- Conditioned on:
  - Successful pilot projects.
  - Capacity for administration and enforcement.

### Critical Area A



Two options for CAW Board to consider.

### Critical Area A – Option 1 No Development

- No development poses the least risk from land in Critical Area A.
- CAW needs to acquire 1,500 acres of conservation land to offset landowner exemptions in the Plan. Critical Area A:
  - Meets the criteria for high priority acquisition.
  - Meets majority of land acquisition needed.
- CAW could reasonably continue existing policy.

### Critical Area A – Option 2 Allow Very Limited Development

- Require 70% to 92% of the land to be conserved.
- Require strict development standards on remaining area.
- CAW could reasonably adopt this new policy. However,
  - Near intake risks would be increased over Option 1.
  - Would need to secure other land for conservation.
- Recommend new policy only if 5 conditions are met...

### Five Conditions for Development in Critical Area A

- (1) Overall risk to the lake and intake must be reduced.
  - Major landowners must agree to follow plan requirements in Critical Area A and elsewhere in watershed.
- (2) Major landowners must work with CAW to obtain other watershed land.
- (3) Major landowners must conduct pilot studies for BMPs.
  - Estimated to last 4 years.

**Five Conditions for Development in Critical Area A, cont.**

- (4) If pilot studies are not successful, CAW should not be penalized for increased price of land (in four years).
- (5) Administrative, regulatory, and enforcement capacity must be in place.

**Critical Area A Short-Term: Large Lot Option**



- 92% undisturbed open space
- Minimum 20 acres per house
- Maximum 2.2% imperviousness
- Paved roads and driveways
- Non-discharging wastewater systems

**Critical Area A Short-Term: Large Lot Option**

- At build-out, would result in estimated 68 additional houses.
- Tetra Tech believes this option:
  - Poses manageable risk to the lake and intake area.
  - Should be allowed in the short-term (while the pilot studies are being performed).

**Critical Area A Long-Term: Performance Standards/Land Conservation**

- Conservation design required
- Minimum 70% undisturbed open space
- Minimum 5 acres per house
- Maximum 2.2% imperviousness
- Paved roads and driveways
- Pump wastewater out of watershed
- Landowner maintenance agreements

**Critical Area A - Long-Term: Performance/Land Conservation**

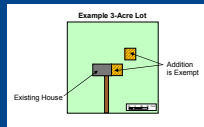
- At build-out, this option would result in estimated 230 – 240 new houses.
- Tetra Tech believes this option should be contingent on five conditions being met.

**Tetra Tech's Recommendation**

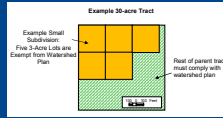
- Consider Critical Area A in the context of the whole watershed.
- Consider overall risk reduction to the water supply.
- Consider how well options meet the adopted goals and objectives.

### Exemptions for New Development

- Additions to existing houses, businesses, and institutions.



- Small subdivisions for landowners as of December 2000.



### Offsetting Exemptions

CAW to acquire 1,500 acres of conservation land in the watershed.

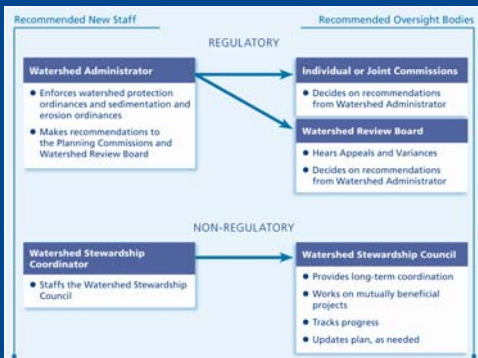
### Other New Actions Recommended

- ADEQ prohibit discharges.
- Local governments form Responsible Management Entity (RME) to own, operate, and manage new non-discharging systems.
- CAW hire Watershed Administrator.
- For open space, develop enhanced fire management plan and forest stewardship plan.

### Other New Actions Recommended

- Strategic plan for transportation spills.
- Identify high priority unpaved roads for paving.
- Form Stewardship Council for long-term coordination.
  - Hire Watershed Stewardship Coordinator.

### Oversight



### CAW Supporting the Plan

- Funding Watershed Stewardship position
- Funding Watershed Administrator position
- Purchasing land to offset landowner exemptions
- Funding long-term water quality monitoring

### CAW Supporting the Plan

- Explore with local governments and existing residents...
- Working with existing water systems to provide supplemental water.
- Working with existing watershed property owners to provide water service.
- Work with Perry County to fund collection of household hazardous waste.
- Work with counties on cost-sharing to pave critical roads.
- Others...

### At build-out, the Plan is predicted to result in:

- Conservation of approximately 65% of the land in the watershed.
- An estimated total 6,590 houses.
- 5% imperviousness in the watershed.
- 30% of the land covered with grass and meadow.
- Achievement of the water quality targets.

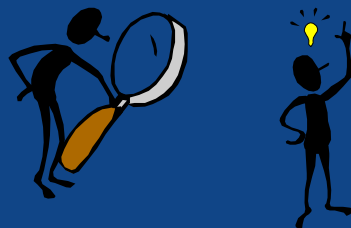
### Does the plan meet the goals? Yes

- Accommodates growth.
- Provides flexibility:
  - Traditional large lots in the watershed.
  - Cluster design.
- Addresses landowner legacy issues.
- Maintains high quality drinking water supply.

### Equitable Sharing of Costs and Benefits

- CAW and ratepayers take on costs for:
  - Administration and enforcement
  - Mitigation
  - Water supply
  - Services
- Watershed landowners cost:
  - Increased restrictions on development
    - Offsets to reduce burden:
      - Exemptions for legacy landowners
      - CAW/ratepayers pay for mitigation
      - Increased water availability
      - Services (e.g., household hazardous waste collection)

### PAC Discussion of Preliminary Draft Watershed Management Plan



### Next Steps and Meeting Wrap Up

