# Lake Maumelle Watershed Policy Advisory Council Meeting February 16, 2006

Facilitated by

TETRA TECH, INC.

## Roadmap for Developing Management Plan



## 2/16 Meeting Objectives

- Quick reminder of key protocols
- Provide information on management options
  - Wastewater management
  - Forestry BMPs
  - Land acquisition
  - Good household practices
- Feedback on promising options that should be studied more
  - Discussion/feedback from public meetings
  - Discussion/feedback from PAC

## Reminder of Protocols

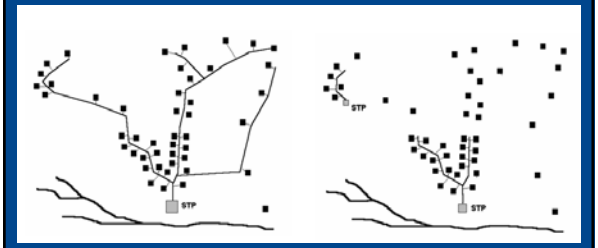
- Groundrule # 1
  - Treat each other, and the organizations represented on the Council, and the Council itself with respect at all times in the interest of the success of the Council. (speak to issues, not personalities)
- Clarifying consensus

## Management Options, Continued

- Performance Standards
- Low Impact Development
- Large Lot Subdivisions/Zoning
- Wastewater Management
- Forestry Best Management Practices
- Land Acquisition
- Good Household Measures

## Wastewater Management Options

## Centralized v Decentralized Facilities




## Discharging v Onsite Systems

- Discharging to streams, river, lake
- Onsite applied to surface or subsurface to allow filtering/absorption by soil

## Management of Systems

- The State regulates discharging and onsite systems
- Pollutants of Concern
  - Pathogens
  - Nitrogen
  - Phosphorus
  - Household Chemicals
  - Pharmaceuticals

## Why be concerned in watershed plan?

- Even properly designed systems don't remove all pollution.
- Often systems are not maintained, increasing loading to streams.
- Incorporate wastewater management procedures that support the vision/plan for the watershed.

## Five Options to Consider

- Pump wastewater out of the watershed to external treatment facility
- Site centralized facility in watershed
- Cluster systems
- Individual systems
- Mix of individual and cluster systems

## Decision Criteria

- Water quality impacts
- Financial planning and financial risks
- Community and watershed impacts
- Capital and O&M costs
- Management
- Reliability, vulnerability, resilience

## Recommendation from TAC

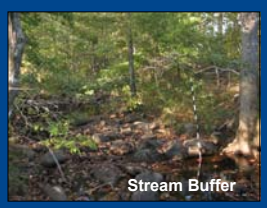
- Allow/encourage systems
  - Pumping wastewater out of the watershed, where feasible
  - Cluster and individual systems (depending on site characteristics)
- Require centralized, professional management entity for collection and treatment facilities

## Forestry Best Management Practices

## Forestry BMPS used to…

- Maintain stand productivity and
- Decrease sediment loading to streams by:
  - Reducing soil loss
  - Reducing soil compaction, channelization, and concentrated flows of stormwater
  - Reducing erosion

## High implementation of timber harvest BMPs in watershed






## Sustainable Forestry Initiative (SFI)

- Deltic and Weyerhaeuser participate in SFI

## Studies in similar watersheds have shown…

- Select harvesting and clearcut harvesting have similar erosion rates
- Erosion rate of harvest sites similar to some non-harvested sites

## Unpaved forestry road impacts – room for improvements

## Recommendation

- Continue high implementation of timber harvesting BMPs
- Enhance compliance with unpaved road BMPs
- Monitor and enforce ATV regulations on forestry roads

## Land Acquisition

## Why do communities invest in land conservation in water supply watersheds?

- Reduce risk of hazardous spills reaching lake
- Reduce loading of conventional and emerging pollutants
- Reduce treatment costs
- Maintain consumer confidence
- Invest in the watershed – help address equity issues

## Types of land acquisition

- Donations
- Outright (fee simple)
- Conservation easements
- Land exchange
- Eminent domain

## Questions posed…

- How much land do we need to meet our source protection goals?
- What land should receive the highest priority for conservation and acquisition?

## Common Prioritization Criteria

- Proximity to intake
- Proximity to lake
- Proximity to streams
- Development potential
- Encompassing small streams
- Natural characteristics
  - Steep slopes
  - Erodible soils

## Applicability to Lake Maumelle Watershed

- Many techniques to preserve forested land and open space
- Two general approaches
  - Conservation policy
  - Performance standards

## Conservation Policy

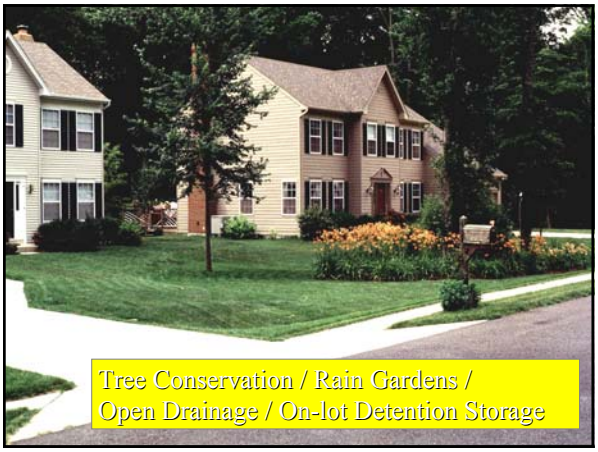
- Begins with policy that conservation should be a centerpiece of the management plan
- For new development require
  - Large residential lots with large % undisturbed open space, or
  - Conservation design with large % undisturbed open space, or
- Land Acquisition program, or
- Some combination of above

## Conservation Design

## Large Lot Residential

## Performance Standards

- Begins by determining extent to which future land management and wastewater management can meet water quality targets.
- Then determine the number of acres of land acquisition needed to make up the deficit.




## Good Household Measures

## Categories of household practices

- Household chemicals
- Unpaved driveways
- Landscaping and gardening
- Septic systems
- Pets
- Automobiles
- Water conservation

## Ways to promote good household practices

- Education and training
- Ordinances
- Maintenance contracts

## Effectiveness of good household practices

- Difficult to measure
- Can increase effectiveness of practices through requiring them
- Conclusions from education studies
  - Providing information alone is ineffective
  - Encouraging "ownership of stormwater pollution" and intensive training can change behavior
  - Needs to be convenient and affordable

## Boat Marina Operations

- Shoreline and streambank stabilization
- Restricting traffic in shallow areas
- Restrict number/type of boats
- Liquid, solid and fish waste disposal
- Sewage facility management
- Stormwater runoff management
  - Boat repair and maintenance areas away from lake
  - Grass buffers around and filtration devices in work areas
  - Sweeping/vacuuming maintenance areas, driveways, parking lots
  - Using vacuum sanders to remove paint

## Questions?

## Input from Council Members

## Discussion of Upcoming Tasks and Meeting Wrap Up