Lake Maumelle Watershed Policy Advisory Council Meeting September 21, 2006

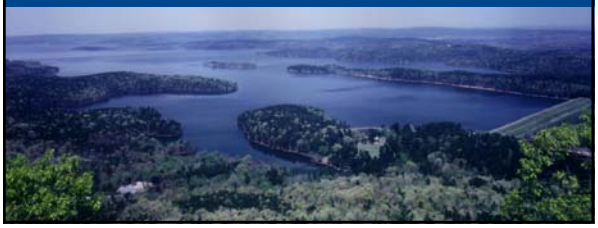
Facilitated by

TETRA TECH, INC.

Roadmap for Developing 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.



9/21 Meeting Objectives

- Administration and enforcement (information item)
- Pilot projects for the performance approach (information item)
- Short-term development options (action item)
- Exemptions and exemptions mitigation (action item)
- Continued discussion of Critical Area A action item

Administration and Enforcement (Information Item)

- Coordination/ Non-regulatory Oversight
- Regulatory Oversight
  - Non-discharging wastewater systems
  - Sedimentation and erosion control
  - Watershed protection ordinance
  - Development approval/oversight

Big Picture Recommendations

- On-site wastewater systems
  - Responsible Management Entity with operational requirements and fees.
  - Owns, operates, and maintains systems.

Big Picture Recommendations (cont.)

- Development impacts
  - Local sedimentation and erosion control ordinances and watershed protection ordinances.
  - Watershed administrator to enforce local ordinances working with local commission(s).

Big Picture Recommendations (cont.)

- Coordination on Watershed Stewardship:
  - Non-profit (non-regulatory) Stewardship Council to provide long-term coordination and oversight.
  - Watershed Stewardship Coordinator to staff the Council and its work.

Big Picture

- All are important pieces of the administration/oversight puzzle.
- Local governments have adequate authority.
- It will take time, money, and political will to put in place.

Coordination/Non-Regulatory Oversight

Effective Watershed Management

- Depends on collective efforts and strong partnerships.
- Must adapt to changing conditions, needs, and information.

Tt Recommendation

- Form a Watershed Stewardship Council as a non-profit entity to:
  - Allow interested parties to work together.
  - Carry out mutually beneficial projects.
  - Track progress.
  - Make recommendations as needed to update the watershed management plan.
- Hire a Watershed Stewardship Coordinator to staff the Council.

Managing On-site Wastewater Systems

USEPA's Recommendations for Management of On-site Systems

- 5 models with increasing levels of protection
  1. Homeowner Awareness Model
  2. Maintenance Contract Model
  3. Operating Permit Model
  4. Responsible Management Entity (RME) – Operation and Maintenance Model
  5. Responsible Management Entity (RME)– Ownership Model
- #5 "provides the greatest assurance of system performance in the most sensitive environments".

Who Creates RME? Tt Recommendation

- Local governments identify or establish the RME
- Could be existing entity (Little Rock Wastewater)
- Could be new entity (e.g. special sanitation district)

On-site Wastewater RME – How it Works

- RME
  - Establishes system performance and monitoring requirements.
  - Provides professional management of all new non-discharging systems.
  - Provides regulatory oversight through permits.
  - Conducts inventory all systems.
  - Tracks permits and compliance monitoring.
  - Charges monthly or quarterly fee to new homeowners to cover operations.

On-site Wastewater RME – How it Works (continued)

- In model #5, all new development in watershed would be required to:
  - Build wastewater systems according to specifications.
  - Turn over components to the RME for ownership, operation, maintenance.
  - At minimum, RME must provide for system operation and maintenance (model #4).

Managing Development Impacts

During and after construction.

Sedimentation and Erosion Control

To manage construction impacts.

Current Federal Requirements

- Activity disturbing 1 acre or more must have and use a stormwater control plan.
- The sedimentation and erosion control requirements apply to all cities and counties in the US.
- Where a local government program is not in place, the state is supposed to enforce these federal requirements.
  - ADEQ has 12 staff to enforce the requirements state-wide.

Tt Recommendation

- Local governments adopt sedimentation and erosion control ordinances for the watershed.
- Local governments enter into a memorandum of understanding with CAW to enforce the ordinance requirements.
- CAW hires a Watershed Administrator to carry out the sedimentation and erosion control program duties, including:
  - Plan review.
  - Site inspections.
  - Enforcement.

Minimum Site Requirements

- 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

Remedies for Non-Compliance

- Threat of stop work order/issuance of stop work order.
- Revocation of land disturbance permit; repayment of permit fee.
- Civil penalties of $5,000 per day.
- Criminal penalties for willful violation.
- Injunctive relief.
- Restoration of areas affected by failure to comply.

Watershed Protection Ordinances

To manage post-construction impacts.

Tt Recommendation

- Local governments adopt watershed protection ordinance (or amend subdivision ordinance).
- Local governments establish a Watershed Review Board for appeals and variances.

Tt Recommendation

- Local governments enter into a memorandum of understanding (MOU) with CAW
  - to review development applications.
  - work with local staff and planning commissions in development approval.
  - work with the Watershed Review Board.
- CAW hires a Watershed Administrator to conduct plan review, site inspections, and enforcement activities.

Ordinance Subdivision Requirements

- All proposed subdivisions must submit vicinity map to determine if in watershed.
- Proposed subdivision in watershed must be filed with the Watershed Administrator.
- Must receive a Certificate of Approval for Recording (saying that plat complies with watershed protection ordinance).

Ordinance Development Requirements

- Ordinance would include residential and non-residential (e.g. commercial and institutional) requirements per the management plan.
- Applicant would need to obtain 3 permits during the development process ensuring compliance from planning through final construction:
  - Watershed Permit.
  - Building Permit.
  - Occupancy Permit.

Additional Requirements Under the Performance Standards Approach

- Process for ensuring compliance with performance standard.
- Posting of financial security guaranteeing proper installation and maintenance of BMPs through construction/development.
- Maintenance covenant for long-term maintenance of BMPs.

Remedies for Non-Compliance

- 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

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

Who Decides?

- Regional watershed authority (requires state legislation).
- Individual planning commissions from Little Rock, Pulaski, Saline, and Perry Counties.
- Joint planning commission (requires inter-local agreement).
- Regional planning commission (requires inter-local agreement).

What organization houses the staff?

- New regional authority
- Metroplan
- Individual local planning and engineering staff from Little Rock, Pulaski, Saline, and Perry counties.
- CAW
- Consulting firm

Who evaluates development application?

- Consultant (outsourcing plan review and inspections)
- Regional authority staff
- Metroplan staff (through inter-local agreement and contract)
- Individual local planning and engineering staff from Little Rock, Pulaski, Saline, and Perry counties
- CAW staff
- Some combination of the above

Who pays the staff?

- CAW ratepayers
- Local governments
- Plan review fees
- Development impact fees
- Some combination of the above

Tt Recommendation for Start-Up

- CAW hire a 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.

Tt Recommendation for Start-Up, cont.

- 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.

Tt Recommendation for Regulatory Oversight

- 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

Regulatory Oversight: Two Visions Debated in Subcommittee

- Watershed Management Authority
  - Immediately request 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 Watershed Authority.

Key Next Steps for Pursuing Performance Standards Option (Information Item)

- Pilot monitoring projects
- Supplemental sediment and turbidity modeling for disturbance/construction phase
- Performance standards program development

Pilot Monitoring Projects

- Primary questions to be addressed:
  1. What level of effectiveness can be expected for sediment and turbidity control with proposed enhanced sedimentation and erosion controls during the construction phase?
  2. Can engineered stormwater BMPs be sustained in these slopes and soils?
  3. Are proposed BMPs capable of meeting post-construction performance standards?

Pilot Monitoring Projects

- Two types
  - Construction phase
  - Post-construction phase
- Independent expert monitoring
- Independent engineering oversight

Pilot Monitoring Projects

- Key considerations:
  1. Site location choice
  2. Site design
  3. Monitoring design
  4. Quality assurance
  5. Evaluation criteria
  6. Roles: who pays, who performs, who interprets the results?

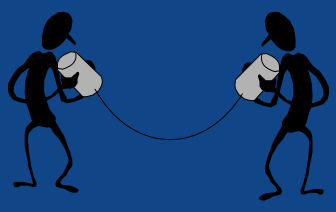
Supplemental Modeling

- Answer question: What level of treatment must be attained for runoff from construction to protect the in-lake turbidity target?
- Use EFDC lake model and watershed model to establish allowable concentration versus precipitation, and compare to pilot study results.

Building Performance Standards Program Capacity

- Design manual
- Program operating procedures
- Training

Short-Term Development Options Report and Action Item



Four Options to Consider

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

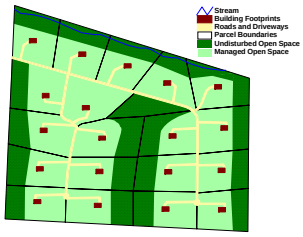
Requirements

- All meet the pollutant loading limits and require, at minimum,
  - 5-acre lots on low slope areas
  - 10-acre lots on high slope areas
- Cluster
  - Allows lot size to vary, overall average must be 5- and 10-acre lots
  - Decreases allowed impervious area
- Menu
  - Varies the lots size, amount of undisturbed open space, impervious area, and road/driveway options

Option 1 - Menu

- Pros
  - Flexibility
  - Allows environmental design (cluster)
- Cons
  - Cluster might use discharging system
  - More complex to understand
  - Somewhat more complex to administer

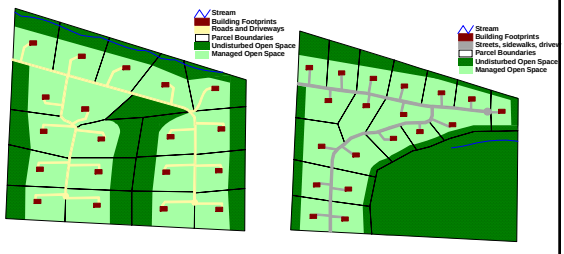
Option 2 Fixed Large Lot



Fixed Large Lot

- Pros
  - Helps negate use of discharging systems
  - Simple to understand
  - Somewhat less complex to administer
- Cons
  - No flexibility
  - Does not allow environmental design (cluster)

Option 3 – Fixed Large Lot Plus Cluster



Option 3 – Fixed Large Lot Plus Cluster

- Allows both if state prohibits discharging systems.
- If state does not prohibit discharging systems:
  - Allows fixed large lot.
  - Allows cluster under condition that non-discharging system is used.
- In absence of ordinance:
  - Same requirements through development agreements.

Option 3 Fixed Large Lot Plus Cluster (continued)

- Pros
  - Simple to understand
  - Provides more flexibility than fixed large lot
  - Less complex than the menu
  - Allow environmental design
  - Negates use of discharging systems
- Cons
  - Provides less flexibility than menu

Option 4 – Fixed Large Lot Plus Cluster in Ordinance; Menu In Development Agreements

- Same as options 3, but in absence of local ordinances:
  - Allows CAW to use the menu in development agreements.
  - Conditioned on use of non-discharging systems.

Option 4

- Pros
  - Same as option 3 plus
    - Provides the more flexibility to landowners
- Cons
  - None identified by Tetra Tech

Vote by Subcommittee:

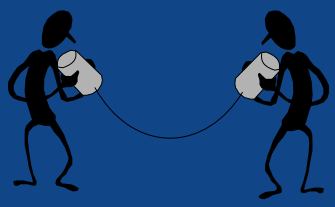
- Initial vote, majority for Option 4
- Consensus vote on Option 4 (how many can live with it)
  - 5 for
  - 4 against
    - Preferred ultimate flexibility or more simplicity

Tt Recommendation

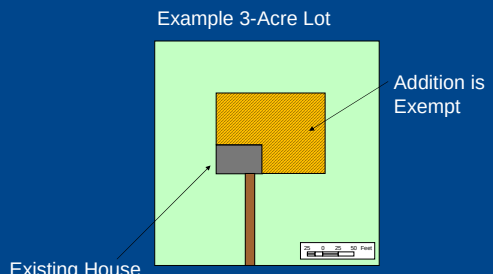
- Option 4 best
  - Meets overall objectives of the plan.
  - Addresses the concerns raised during discussion.

Call for Full Council Vote on Consensus for Short-Term Development Option

Exemptions Report and Action Item



Proposed Exemption #1 - Additions to Existing Houses, Businesses, and Institutions



Who would get the exemption?

- All existing watershed residents with houses built and lots recorded prior to effective date of the ordinance

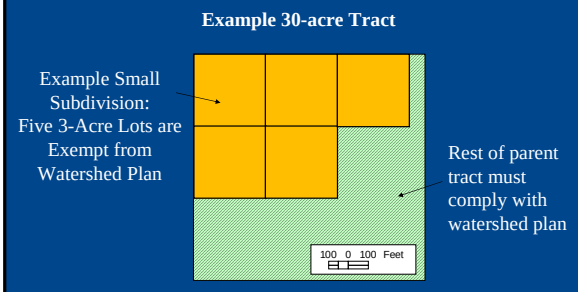
  and

- All existing businesses and institutions
  - With lots recorded structures built prior to effective date of the ordinance.
  - Proposing addition with 10,000 square feet of imperviousness or less.
  - Additions greater than that would comply with the watershed protection requirements.

Exemption #2 - Small Subdivision

- Landowner allowed up to five 3-acre lots that would be exempted from watershed protection requirements (except for wastewater requirements)
- Eligibility
  - All landowners as December 2000
  - Must own more than 3 acres

Proposed Exemption #2 - Small Subdivisions for Existing Landowners



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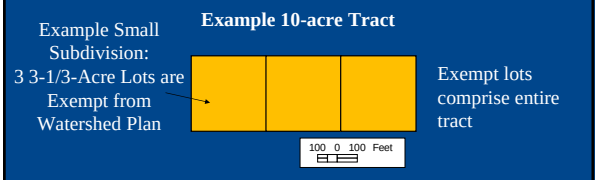

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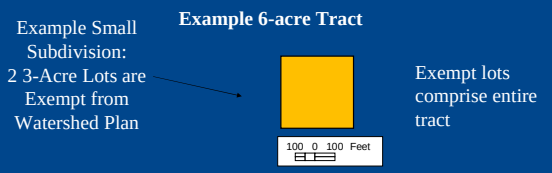

Reminder: Non-Conforming Lots

- If a landowner has a lot recorded prior to the effective date of the ordinance; and
- The lot is smaller than the minimum lot size required; then
- The lot is grandfathered and does not have to comply with the ordinance.

Exemptions Must be Offset…

- Additional pollutant loading from exemptions must be offset.
- Three offset (or mitigation) options to consider…

Mitigation Options

1) Increase low-slope minimum lot requirement to 6 acres.
2) Maintain 5-acre minimum lot on low slope; CAW purchases 1500 to 1700 acres for conservation.
3) Increase low-slope minimum lot to 5.5 acres; CAW purchases 568-773 acres

Subcommittee Vote

- Do you support the exemptions?
  - All supported or conditionally supported the exemptions.
  - Conditional support based on maintaining 5-acre lots on low-slope areas.
- Which mitigation option do you prefer?
  - Evenly split on mitigation options 1, 2, and 3.

Tt Recommendation

Support both exemptions

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

Tt Recommendation

Support mitigation Option 2:

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

Why this approach?

- 5-acre minimum lot on low slope was presented to the public in past.
- Requiring 5-acre lot on low slope and 10-acre lots on high slope is asking enough of landowners.
- Raising the low-slope requirement poses equity issue for large landowners.
- Shows CAW is willing to invest in the watershed.

Call for Full Council Vote on Consensus for Exemptions Option

Decision on Development or No Development in Critical Area A (Action Item continued)

PAC Consensus Approach

- Focus on how established goals and objectives can best be met.
- Work toward ideas that all can live with.

Discussion of Upcoming Tasks and Meeting Wrap Up