

Lake Almanor Watershed Assessment – A Discussion on Moving Forward

Almanor Basin Watershed
Advisory Committee

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Presentation Outline

- Review of Last Meeting
- Summary of Some Key Issues
- Discussion: Toward an Action Plan
- Conceptual Ideas of Committee Actions and Recommendations

Summary Conclusions and Major Issues – The Good News

- Current Lake Water Quality
 - No compromised beneficial uses
 - No apparent degradation trends
- Watershed Health
 - Generally stable/healthy stream channels
 - Currently no critically poor conditions
 - Mostly native forests that are generally healthy
- Mostly Proactive Action Plans Needed
 - Avoid problems rather than reacting to problems

Summary Conclusions and Major Issues – Good News, BUT...

- Increased Development Is Happening
 - Probably most significant potential stressor
 - Multiple development-related issues:
 - Increased erosion and sedimentation in lake
 - Increased nutrient load to lake
 - Potential contamination from stormwater runoff and accidental spills
 - Overall increased recreational pressure
 - In lake
 - On contributing watershed
 - Septage/sewerage handling challenges
 - Habitat loss/degradation

Summary Conclusions and Major Issues – Good News, BUT...

- Increased Recreational Use
 - Proliferation of ORV routes
 - Lake recreational use increasing
 - Increased bacterial contamination risks
 - Increased opportunity for organics (petroleum products) contamination
 - Access/congestion/traffic
- Timber Harvest Practices
 - Generally good management in recent history
 - Spot issues with forest road conditions
 - Limited current condition information

Summary Conclusions and Major Issues – Good News, BUT...

- Continuing Uncertainty on Faulty or Poorly Maintained Septics
 - Lack of information (and limited ability to acquire information)
 - Enlargements of current dwellings occurring
 - Infilling of undeveloped single lots
 - Possible local contamination

Where to Now – Next Steps

- Review Watershed Assessment & Finalize
- Identify List of KEY ISSUES
- Prioritize Issues/Actions
- Begin to Fill Information Needs
- Develop Watershed Action Plan(s)
- Implement Elements of Plan
- Look for/consider Funding Options for Specific Actions
- ENSURE CONTINUED COORDINATION

- Steps not necessarily in chronological order – can be done in parallel

Toward a Management Plan: Discussion – My List of Major Issues

MAJOR ISSUE CATEGORY	COMPONENT ISSUES (Water Quality/Nat. Res.)	ASSOCIATED ISSUES
NEW DEVELOPMENT	<ul style="list-style-type: none"> •Erosion/sedimentation/stormwater •Sewerage/septage management •Accidental spills •Habitat Loss/Degradation 	<ul style="list-style-type: none"> •Aesthetics •Traffic •Affordable Housing
EXISTING DEVELOPMENT	<ul style="list-style-type: none"> •Sewerage/septage •Erosion/sedimentation/stormwater 	<ul style="list-style-type: none"> •Affordable Housing
IN-LAKE RECREATION	<ul style="list-style-type: none"> •Accidental spills/leaks •Bacterial contamination 	<ul style="list-style-type: none"> •Crowding •Aesthetics •Economic Impacts

Toward a Management Plan: Discussion – My List of Major Issues

MAJOR ISSUE CATEGORY	COMPONENT ISSUES (Water Quality/Nat. Res.)	OTHER RELATED ISSUES
Off-lake Recreation	<ul style="list-style-type: none"> •ORVs (Erosion & Aesthetics) •Riparian Degradation 	<ul style="list-style-type: none"> •Associated Development •Traffic •Economic Impacts
Timber Management	<ul style="list-style-type: none"> •Erosion •Hydrologic Modification 	<ul style="list-style-type: none"> •Aesthetics •Economic Impacts •Fire Management

Toward a Management Plan: Discussion – Considerations for Action Plan

- **Become and Stay Informed**
 - Access existing people with knowledge
- **Consider for Each Issue:**
 - Is it significant enough to deserve more attention/action?
 - Is it being monitored and managed with current institutions?
 - Do we know enough about it to take action?
 - What can be done to ensure appropriate management?
 - Are new management mechanisms/protocols needed?
 - Is regular reporting needed?
 - Is appropriate expertise engaged or accessible?

Toward a Management Plan: Possible Responses/Actions for Each Major Issue

1. Additional Information - Gather/Obtain More Baseline or Ongoing Information
2. Education Program - Inform Community and/or Those Involved
3. Develop Action Plan with One or More Components, for Instance:
 1. Monitor and Respond if Necessary (Identify Thresholds of Response)
 2. Encourage Implementation of Best Management Practices or Best Available Technology (voluntary/mandatory BMPs)
 3. Implement Appropriate Projects (e.g. restoration, facilities, etc.)
 4. Coordinated action (voluntary/mandatory planning and reporting)
 5. Implement Other Policy/Regulatory Response – e.g. limitations, restrictions
4. LONG TERM – Institute “Adaptive Management” – Monitor and Modify Management Plan as Needed

Possible Actions – Development – Wastewater

(Including Existing and New Systems; Includes Community and Individual Septic)

Additional Information Needs	<ul style="list-style-type: none"> •Review existing permitted or planned systems with RWQCB; clarify reporting requirements & identify issues
Education Program Components	<ul style="list-style-type: none"> •Public – Proper septic maintenance – BROCHURE IN DEVELOPMENT •Developers/contractors – Emphasize concerns and appropriate BMPs
Possible Management Plan Components	<ul style="list-style-type: none"> •Conduct Sewerage/Septage Study – IN PROCESS NOW •Conduct “tours” of WW systems in new developments •Implement special monitoring/reporting
Monitoring Needs	<ul style="list-style-type: none"> •Track and document status of new developments & building (yearly) •Monitor implementation and operation of new WW systems
Possible Recommendations to County	<ul style="list-style-type: none"> •Establish and fund permanent oversight entity to carry forward multiple efforts •Respond according to Sewerage/Septage study findings

Possible Actions –Development – Stormwater/Erosion

Additional Information Needs	<ul style="list-style-type: none"> •Clarify existing regulatory instruments – are they sufficient? •Track stormwater plans for major developments
Education Program Components	<ul style="list-style-type: none"> •Public – Identification and Reporting of Potential Erosion/Stormwater Problems •Developers/contractors – Emphasize concerns and appropriate BMPs
Possible Management Plan Components	<ul style="list-style-type: none"> •Develop special recommended/mandatory guidelines for watershed development projects (setbacks, vegetation removal, riparian corridors, etc.) •Conduct survey of potential problem areas for restoration/management targets •Conduct routine “tours” of new developments
Monitoring Needs	<ul style="list-style-type: none"> •Monitor implementation of stormwater plans •Track and document status of new development (yearly) •Continued water quality monitoring (expanded) •Conduct regular stream corridor surveys for modified/disturbed conditions identification
Possible Recommendations to County	<ul style="list-style-type: none"> •Conduct baseline survey of potential problem areas (pursue funding) •Conduct baseline and continued stream assessment (pursue funding) •Request more rigorous enforcement of existing standards •Establish and fund permanent oversight entity to carry forward multiple efforts

Possible Actions – Development/Habitat Loss/Degradation

Additional Information Needs	
Education Program Components	Public – increase public understanding of critical habitat in the watershed – BROCHURE IN DEVELOPMENT
Possible Management Plan Components	<ul style="list-style-type: none"> •Convene workshop/discussion on development and habitat with key entities (USFS, DFG, private land cos., conservation groups, etc.) •Conduct survey to identify & map priority lands/habitat for protection
Monitoring Needs	<ul style="list-style-type: none"> •Conduct routine monitoring of special habitat condition
Possible Recommendations to County	<ul style="list-style-type: none"> •Reconsider based on workshop/discussions (For example: Require that cumulative impacts on Tehama Deer Herd be addressed in individual development plans) •Conduct survey and support monitoring (pursue funding)

Possible Actions – Development/Traffic

Additional Information Needs	<ul style="list-style-type: none"> •Review most recent transportation planning documents & knowledge
Education Program Components	
Possible Management Plan Components	<ul style="list-style-type: none"> •Conduct transportation condition/visioning study considering development plans (possibly as part of larger infrastructure planning effort)
Monitoring Needs	
Possible Recommendations to County	<ul style="list-style-type: none"> •Direct Planning Department to comment on unacceptable Level of Service areas on Hwy 36 in Dyer Mountain RDEIR •Conduct transportation/infrastructure study (allocate or pursue funding)

Possible Actions – Lake Recreation

Additional Information Needs	<ul style="list-style-type: none"> •Issues and policies at other high use/high value lakes
Education Program Components	<ul style="list-style-type: none"> •Public – fuel and waste contamination prevention practices •Service providers – Proper practices, facility considerations, maintenance requirements
Possible Management Plan Components	<ul style="list-style-type: none"> •Prepare & implement management plan for lake recreation •Improve/increase public access facilities
Monitoring Needs	<ul style="list-style-type: none"> •Continued monitoring of high use areas (bacteria) •Conduct regular monitoring of organics in high use areas
Possible Recommendations to County	<ul style="list-style-type: none"> •Support development of lake recreation management plan

Possible Actions – Timber Management

Additional Information Needs	<ul style="list-style-type: none"> •Clarify common conditions/monitoring/reporting aspects of current harvest plans •Track plans for major harvests •Condition of active and inactive private harvest roads
Education Program Components	
Possible Management Plan Components	<ul style="list-style-type: none"> •Develop watershed-wide timber management cooperative program •Institutionalize regular road/trail assessments
Monitoring Needs	<ul style="list-style-type: none"> •Conduct regular stream corridor surveys for modified/disturbed conditions identification
Possible Recommendations to County	<ul style="list-style-type: none"> •Conduct baseline and continued stream assessment (allocate or pursue funding)

Possible Actions – ORV Use

Additional Information Needs	<ul style="list-style-type: none"> •More complete information on current conditions and use trends •Clarify evolving policy of USFS, PG&E and Private Landowners
Education Program Components	<ul style="list-style-type: none"> •Public – ORV/erosion issues, proper management •Dealers – ORV/erosion issues, proper management, access issues
Possible Management Plan Components	<ul style="list-style-type: none"> •Conduct survey of engineered and non-engineered routes •Prepare integrated ORV management plan for watershed
Monitoring Needs	<ul style="list-style-type: none"> •Baseline and regular ORV route condition
Possible Recommendations to County	<ul style="list-style-type: none"> •Conduct ORV route survey (allocate or pursue funding) •Support development and enforcement of ORV management plan •Establish alternative ORV areas to relieve pressure on sensitive areas

Selected Program-wide Needs

- Coordinated Watershed Monitoring Program
 - Including:
 - Water quality
 - Lake (continuing from historic)
 - Tributaries
 - Groundwater
 - Land use conditions
- Regular Comprehensive Documentation/ Reporting Program
- More Comprehensive Groundwater Understanding
- Sustained Watershed Coordination (with Staff and Funding)