

Ten Mile Watershed Collaborative Committee
Recommendations to City of Helena Commission

Submitted June 17, 2009



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FACILITATOR'S SUMMARY

The following documents comprise the work of the Ten Mile Watershed Collaborative Committee (TMWCC), created by City Commission resolution #19605. As facilitator, I worked with the appointees for approximately eight months to implement the resolution's charge to develop recommendations on interrelated issues of importance to the City.

The TMWCC determined it would operate by consensus, meaning all members had to agree for a recommendation to move forward. It made its decisions incrementally – no decisions were considered final until all had been approved. In short, the recommendations that follow are an interrelated “package” that the Committee recommends the City support. Should the Commission choose to support some recommendations, but not others, it is highly likely that the Committee consensus would dissolve.

It is important to note that recommendations include both policy and process, the latter being an ongoing community engagement process initially recommended by the Forest Service, which with the Montana Department of Fish, Wildlife and Parks, served in an advisory (non-voting) capacity to the Committee.

At the Committee's June 8 meeting consensus was made on the enclosed recommendations, an accomplishment made possible by member dedication. Members of the Joint Working Group (subcommittee) are especially deserving of commendation, due to their commitment to meet weekly for most of the eight-month period.

The following documents have been approved by the Committee and comprise their recommendations.

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June 17, 2009

BACKGROUND

The Ten Mile Watershed Collaborative Committee (TMWCC) was appointed by the Helena City Commission Resolution #19605 on September 8, 2008, with the charge to develop recommendations to address interrelated issues in this uniquely important watershed arising from the threat of uncontrolled wildfire, including the City's water supply infrastructure, the water quality that sustains it, and multiple watershed values. The Committee established a goal of completing its work by June, 2009.

A subcommittee, the Joint Working Group (JWG) met on a weekly basis to develop proposed goals, proposed actions and overarching principles. The TMWCC met monthly to gather information and consider/act on JWG recommendations.

The Forest Service and Montana Department of Fish, Wildlife and Parks, as well as city and county agencies, provided important advisory expertise to the Committee's work.

On May 11, 2009 the TMWCC approved six goals:

- Protect and Improve Water Quality and Quantity
- Protect City Water Delivery Infrastructure
- Protect and Improve Long-Term Quality of Wildlife Habitat
- Reduce Damage of Major Wildfire
- Promote Potential for Restoration in Watershed of a Viable Fishery and Wetlands
- Provide for Present and Future Public Safety

It approved multiple recommendations for action items under each goal. Among these were:

- Specific actions to protect the community of Rimini through community outreach and engagement, development of defensible and survivable space around structures, and the establishment of evacuation routes in the event of major fire;
- Actions to protect the City's water supply infrastructure, including the flume delivery system, by removal of vegetation in proximity to structures, and other measures, including recommending eventual modification/replacement of the fire-vulnerable parts of the flume with metal pipe, and to explore the development of a pre-sedimentation basin to minimize the effects of sediment on the Ten Mile water treatment facility.

At its final meeting, on June 8, the Committee adopted recommendations concerning two additional major issues – watershed road density and Landscape-Scale Treatment (LST) of the watershed. The JWG spent considerable time collecting information and developing its recommendations on these important questions.

Watershed Road Density:

With regard to roads, the Committee considered importance for fire suppression as well as impacts on recreation, fisheries and wildlife. It recommended an overall reduction in road density/miles of road, and a collaborative process to make specific recommendations to the Forest Service. Given timelines for Forest Service decisions, the Committee requested that the City, if it supports the recommendation, communicate promptly with the Forest Service on that issue.

Landscape Scale Treatment:

The Committee based its recommendations on the following:

- 1) The Forest Plan for the Helena National Forest requires the agency to attempt to suppress all wildfires in the watershed. Over decades, it has successfully done so. This has resulted in a build-up of vegetative fuels beyond what would be present had wildfires not been suppressed, creating increased risk of landscape-scale, intense fire.
- 2) As in much of the Rocky Mountain West, pine beetle infestation is moving through the watershed and there are no practical means of preventing this. When pine trees die, during the period “red” needles remain on the tree, risk of ignition is heightened. However, even live pine trees are easily ignitable.
- 3) If a Ten Mile wildfire ignites with warm temperatures, low moisture content in trees, high winds, suppression of the fire – “stopping it” --it will not be possible. Such a fire has the potential to pose significant risks to public safety, water quality, movement of soils, sedimentation/erosion, recreation and other important values.

Based on the above, the JWG and TMWCC assessed whether actions could be taken to reduce these impacts of an uncontrolled wildfire. Research conducted by the Missoula Fire Sciences Laboratory of the United States Forest Service indicates that advance treatment of portions of a landscape with prescribed fire (carefully planned, limited and controlled, and used under favorable conditions) can substantially alter the behavior of a wildfire that occurs in extreme conditions. Such treatments can modify wildfire behavior by altering the speed of its spread, the direction it burns, the intensity with which it burns. This, in turn, can “buy time”, potentially enabling weather or other conditions to change, enabling suppression or reducing the eventual scale of the burned area.

The TMWCC carefully assessed a range of questions before recommending Landscape-Scale prescribed fire treatment. It fully realizes that there are “no guarantees”, but rather the balancing of factors required by assessing risk and probabilities. It has concluded that the careful use of prescribed fire, including pre-fire fuels thinning where appropriate, represents the best strategy to minimize the risks of an uncontrollable fire in the Ten Mile watershed.

TEN MILE WATERSHED PRINCIPLES, GOALS, ISSUES AND ACTIONS

(Adopted by consensus May 11, 2009 by the Ten Mile Collaborative Watershed Committee)

The Committee did not establish prioritization of these Principles and Goals.

Principles to Guide Actions:

- Use an integrated interdisciplinary approach.
- Respect/protect private property rights.
- Maintain quality control and oversight of work.
- Minimize environmental damage.
- Don't lose sight of the big picture and purpose of the Ten Mile Collaborative Watershed Committee.
- Insure project designs meet Montana State Best Management Practices guidelines.
- Assess proposed actions for impacts on linkage zones, wildlife, recreation and watershed productivity.
- Secure adequate funding to assure implementation of all recommended action items.

Goal: PROTECT AND IMPROVE WATERSHED WATER QUALITY & QUANTITY

Issues:

- Customers at risk of loss
- Sedimentation/filtration: Treatability at plant
- Abandoned mine waste/contamination
- At risk from wildfire
- Failing septic systems (stream/wetlands impacts)
- City diversion affects quantity
- Impact on fishery

Action:

- Develop cooperative, interagency management agreement (*Utilize same approach/group as in Restoration Goal, below.*)
- Develop defensible space around inactive mine sites
- Identify sites at special risk due to wildfire.
- Develop mitigation strategies for such sites.

Goal: PROTECT CITY WATER DELIVERY INFRASTRUCTURE

Issues:

- At risk from wildland fire
- At risk from mine waste
- Limited funds for improvement Antiquated, vulnerable design
- Mixed land ownership
- Post-wildfire repair Vegetation close to flume (*see Dave Larsen proposal*)

Action:

- Implement flume proposal, as approved by the Ten Mile Watershed Committee
- Prioritize defensible/survivable space around city water supply infrastructure
- Obtain the needed funds
- The City should be part of fire suppression, prevention and response planning and implementation

Goal: PROMOTE POTENTIAL FOR RESTORATION IN WATERSHED OF A VIABLE FISHERY & WETLANDS

Issues:

- Water quality and quantity
- Lack of Management Agreements

Action:

- Develop Joint Management Agreement between DNRC, USFS, City of Helena, EPA, DEQ, FWP, etc. (JWG recommends same committee address Water Quality/Quantity.)

Goal: REDUCE DAMAGE OF MAJOR WILDFIRE

Issues:

- Rimini Safety
- Neighboring Communities Safety
- Damage from wildfire suppression efforts to multiple values
- Soils runoff
- Impact on aesthetic and recreation values
- Lots of fuel present
- Human starts (ignitions)

Actions:

- Thin fuels
- Evaluate potential projects
- Utilize spatial arrangement/location of treatments to modify wildfire behavior
- Develop defensible space around mine sites
- Develop defensible space around Rimini
- Develop defensible space within the community of Rimini.
- Utilize prescribed burning with proper site preparation and prescription
- Develop strategies for fire originating within Ten Mile, and those coming from

- outside
- Enhance local firefighting capability Mitigate power line risk
- Develop management agreement between agencies for mitigation strategy
- Implement fuel hazard reduction projects

Goal: PROTECT AND IMPROVE LONG-TERM QUALITY OF WILDLIFE HABITAT

Issues:

- Too many roads-(habitat fragmentation)
- Beetle caused loss of Lodgepole and Ponderosa pine habitat
- Beetle kill creates new habitat
- Loss of thermal hiding cover
- Significant wildlife corridor zone
- Natural ebb and flow of habitat
- Fragmented management
- Cumulative impacts of human activities
- Dollars for restoration
- Travel management

Action:

- Identify linkage zones and develop habitat conservation strategies
- If conflicts between fire mitigation and habitat conservation strategies develop, use interdisciplinary approach to resolve
- The USFS should coordinate planning/actions with FWP, and US Fish and Wildlife Service.

Goal: PROVIDE FOR PRESENT AND FUTURE PUBLIC SAFETY

Issues:

- Rimini residents at risk
- Area workers and users, firefighters at risk
- Lack of readiness/awareness of some people

Actions:

- Designate evacuation routes
- Develop evacuation plan and routes, including a maintenance agreement
- Implement an education program re safety
- Prioritize defensible space around human structures/assets, sensitive soils, and mine wastes ("Prioritize" when used in these goals, means to establish as a priority, in relation to other goals stated.) Make "survivable", not just defensible space-this involves an assessment of structural details **Pat McKelvey will provide definitions.*
- Utilize a community-led program involving local leaders
- The Tri-County Firesafe Working Group should take the lead on this issue and secure the needed funds

Note: The Ten Mile Collaborative Watershed Committee should make a presentation of its overall recommendations (not just safety) to the Rimini Community.

COMMITTEE RECOMMENDATIONS

Prevention Projects

Landscape-Scale Treatments

Road Density

Temporary Roads *(Adopted June 8, 2009)*

Flume Proposal *(Initially supported on March 13, 2009, with subsequent modifications.)*

Note: The following approvals are an interrelated “package” and only became final when all elements/sideboards were discussed and consensus reached.

Prevention Projects:

The JWG has identified the following prevention projects:

- 1) Ask the City to assess the potential of undergrounding power lines, which impacts fire hazard and road design issues.
- 2) USFS should cross-reference treatment projects with identified evacuation routes to achieve maximum synergy with treatments. Evacuation routes are identified in the Tri-County Regional Community Wildfire Planning Process as suggested by fire departments of jurisdiction.

Landscape Scale Fire Mitigation Treatment by Prescribed Fire:

- 1) Endorse Finney’s 20-40% of landscape treatment model; utilize the interdisciplinary team (IDT) approach to designate the areas and prescriptions for prescribed fire treatment envisioned by the model. IDT’s should include experts in soils, hydrology, road maintenance and design, silviculture, fire suppression and fire mitigation, fish and wildlife, including participation by MT FWP.

Final determination of the percentage to be treated should be left to the specialists on the IDT.

Such treatments are not guaranteed to succeed. It is important that in public outreach that the proposed treatment not be oversold—it is a question of probabilities and risk management. At the same time, the serious risks and consequences to multiple values posed by unmitigated wildfire in Ten Mile need to be understood.

- 2) The group endorses Finney’s view that all units treated require the use of prescribed fire as a component to achieve the desired impact. Based on IDT evaluation, some sites may require forest fuel modification and/or removal prior to burning. In roaded areas, use of heavy equipment is acceptable to achieve this purpose.
- 3) Treatment at this scale will require several years to implement.

- 4) The public is cautious/concerned about the use of prescribed fire, and developing public confidence is highly important. Toward that end, one or more initial on-the-ground testing/demonstration projects are important. The normal design/approval process should be accelerated, consistent with appropriate environmental review of the initial projects and overall project. Planning should involve the public; the initial project site(s) should be visible if possible and be located so as to begin the mitigation of the risk to Rimini.
- 5) IDT should work to maximize synergy between fire mitigation and wildlife values for treatment areas.
- 6) The direct participation of the Fire Sciences Lab and Mark Finney should be sought; Finney has communicated to the USFS his willingness to be involved.
- 7) There are to be no new permanent roads.
- 8) Ongoing community engagement is essential to maximize credibility, transparency, confidence and public support and to help assure that the Ten Mile Watershed Committee's recommendations are carried out as envisioned. The Forest Service initially suggested such a citizen/community group, and has indicated that the Stewardship Authority Model, as used on the Beaverhead-Deerlodge National Forest, is preferred, indicating that the existence of such a functioning group would help elevate the Ten Mile in USFS project prioritization. Under this model, the USFS signs an MOU with an umbrella organization comprised of interested groups. The JWG endorses this recommendation.

It is important that the group recognizes and communicates effectively with the existing Resource Advisory Committee.

The City of Helena's ongoing participation, formalized by signing MOU(s), had been suggested by City Manager Tim Burton. The JWG endorses this recommendation, and suggests that the City of Helena be a full participant and co-signer in the community engagement process, but not the "convener". Thus, the convener would be determined by the new "umbrella group".

Any appointments to the citizen engagement group should require as a condition that the person/organization appointed supports the goals, principles and the proposed actions adopted by the Ten Mile Watershed Collaborative Committee.

Not yet determined: How appointments are made and by whom. Or do groups volunteer and name their representative? Should the City appoint more than one representative (such as staff, HCC...)?

- 9) Roadless/Roaded Areas of Ten Mile

- a) Prescribed fire treatments will be used in both roadless and roaded areas of the watershed.
- b) These distinct zones of the watershed need different “sideboards” defining acceptable approaches to treatment. No new roads, temporary or otherwise, will be constructed in the Inventories Roadless Area of Ten Mile. However, non-road firebreaks may be constructed if needed.
- c) The potential use of mechanized equipment for Roadless Area treatment has not yet been resolved by the TMWCC. Therefore, one or more initial treatments shall be applied in the Roaded area, with the results being assessed by the IDT and community engagement group. Roadless area prescriptions will be then designed by the IDT process, as per 1), page one of “Landscape Scale Fire Mitigation Treatment...” and, prior to any roadless area application, presented to the community group for review and approval.

Temporary Roads:

- a. Temporary roads can only be used in implementing the Finney matrix when;
 - i. a) an equal distance of existing system and non-system road needs to have been decommissioned in follow up to the Travel Planning process or by other means, in advance of the construction of the temporary road, and a legally binding mechanism is used to assure timely removal.
 - ii. b) The IDT determines, and Community Engagement Group (CEG) concurs that:
 - 1. relocating the specific treatment area, as per Finney’s suggested flexibility of site specific locations, is not feasible in this specific case, and
 - 2. machine trail/forwarding removal of fuels, by themselves, are not practical to achieve the prescription.

Road Density:

The Ten Mile Watershed is a landscape of unique importance to the City of Helena and people of the city and surrounding communities. Its multiple values include exceptional water quality, wildlife habitat and corridors, public recreation, among others. Reflecting this, key goals identified by the Committee include fire mitigation, water quality protection, fish and wildlife habitat conservation and enhancement, reduction of the threat of unmitigated wildfire. Species in the Ten Mile include moose, elk, white-tail and mule deer, wolf, lynx, wolverine, black bear, grizzly bear, among others.

The watershed is the site of numerous activities which have had, and will continue to have, a cumulative impact on these multiple values. These activities include a history of fire suppression, road construction, mining and a multi-year EPA mine

waste mitigation effort, as well as a range of prospective activities, including paving of the Rimini road, increased recreational development and use, and possible National Guard activities.

The presence of roads has been identified by the Committee as a highly important issue, relevant to multiple values, including but not limited to fire suppression, fisheries and wildlife habitat conservation and connectivity, and public recreation.

At first glance, the desire of wildlife/hunting advocates for some decommissioning of roads in the watershed, and the view of fire mitigation/suppression professionals that existing roads are important for these purposes, seemed incompatible. However, the group gave careful thought to these issues, and the importance of finding common ground. It recommends the following course of action:

The Helena National Forest is in the process of revising its Travel Plan, a critical component of which is the issue of road density and location. The location of many roads is not optimal in terms of fish and wildlife habitat, meaning that in specific locations roads reduce such habitat, below optimal levels.

To address this issue, the Committee endorses the goal of reducing road density. It recommends that as a part of the proposed, ongoing “Ten Mile Community Involvement Process” (referred to elsewhere in its recommendations) that a Road Density Subcommittee be formed to develop specific road recommendations for inclusion/adoption in the revised Forest Service Travel Plan to achieve this goal.

To assure a thorough and balanced assessment, the Road Density subcommittee should be comprised of fire suppression/mitigation specialists, conservation and community interests, and be advised by state and federal agency biologists. Members would, as with the broader Community Involvement Process, need to endorse the fish and wildlife habitat enhancement/road density reduction goal toward which the group is working. The group would carefully assess roads for importance for fire suppression and effects on fish and wildlife habitat and water quality, developing specific recommendations for roads to remain open, those to be gated, and those to be decommissioned to achieve the habitat enhancement goal.

The success of the Community Engagement Process will in part depend on substantial progress being made in a timely manner toward reducing total road density (miles of road).

Flume Proposal:

(The Ten Mile flume project was initially supported on March 13, 2009, with subsequent modifications.)

Proposal:

Cut and remove, or pile and burn, or mulch and spread, conifers that are 200 feet below portions of the flume that is on wooden trestle, and 75 feet above areas of wooden trestle. Cut and remove conifers that are within 200 feet on the uphill side of the flume where it has been excavated. Pile and burn existing down woody debris that is on the uphill side of the ditch portions of the flume. Wind firm species would be left but thinned out to 30 foot spacing between crowns. Some contour felling and staking would be performed on the uphill side of areas that have been ditched. The distances suggested above are subject to change upon further study or recommendations from other specialists. Proposed mitigation work along the flume would be accomplished using the same prescription regardless of ownership (private land or Forest Service)

Desired Future Condition:

Manage the forested vegetation within 300 feet of the flume such that future fire intensity during peak summer conditions is reduced from a stand replacing, high intensity fire down to a low intensity surface fire with flame lengths less than 3 feet.

The mitigation work proposed will increase the effectiveness of fixed wing retardant drops or rotor wing bucket drops used during fire suppression operations along the flume in the event of a wildfire. Suppression crews with hand tools would be successful and could safely engage the fire.

Location:

Immediate adjacent to the flume

Present Forest Composition:

Mostly a mature lodgepole pine forest with a fully closed canopy. Some minor inclusions of subalpine fir, spruce, and Douglas fir.

Methods of Tree/Fuels Removal:

Use existing road access where it exists coupled with log forwarders and if feasible, helicopters. Consider floating shorter logs.

Expected Season of Work:

Any season when the impacts are acceptable. Not during spring break-up.

Maintenance Over Time:

Keep regeneration to less than about 6 feet tall.

Specific Safety Concerns:

None.

Flume Buffer: 231 acres

Summary of Modifications Adopted to the Flume Proposal:

At the 3/19 Joint Working Group meeting, the flume proposal was supported, with the following points added by consensus:

- *Post-project roads will not be improved or their width expanded*
- *Treatment methods are be designed to cause the least soil disturbance possible and to minimize spread of noxious weeds.*
- *Confirmed/Supported DL's proposal to conserve wind-firm species.*
- *Targeted fuels removal should minimize vegetative cover disturbance.*
- *Contour felling will be practiced to reduce sediment delivered from above mitigation zone.*

At the 3/27 meeting, the following additions were adopted:

- *On the ditch portion of the flume, where the risk of erosion/sedimentation is high due to steep slopes or other factors, tree removal may be inappropriate.*
- *To minimize long-term risk to the flume and trestle, replacing the entire flume with metal pipe is recommended. This recommendation is not intended to delay implementation of the current mitigation project.*

On April 13, the TMWCC adopted the flume proposal with the following clarifications:

- *Use existing road access coupled with log forwarders, and if feasible, helicopters. At the conclusion of the flume project, roads will not be improved or their width expanded, with the exception of improvements designed to improve water quality.*
- *At the June 3 JWG meeting, the following suggestion of Don Clark was adopted, and approved at the June 8 meeting of the TMWCC:*
- *Explore the development of a pre-sedimentation basin to minimize the effects of sediment on the Ten Mile Treatment facility.*

Timing:

All Ten Mile Watershed Committee recommendations are being forwarded to the City of Helena for its consideration.

In relation to the habitat enhancement/road density issue, the Helena National Forest's Travel Plan revision, currently underway, requires timely action. Therefore, if the City supports these road density reduction recommendations, the Committee proposes that the City communicate in a timely manner its support for these recommendations to the Helena National Forest.