Bean Creek Working Group
Meeting Notes
BLM Dillon Field Office
February 23, 2006
Thursday 1-4pm

Steve Arminger, BLM Hydrologist
Kipper Blotkamp, BLM Fire and Fuels Specialist
Tim Bozorth, BLM Field Manager
Joe Casey, BLM Forester
David Cronenwett – Montana Wilderness Association
Kim Davitt – American Wildlands
David Early, BLM
Steve Flynn – Sun Mountain forester
Pat Fosse, BLM
Bart Howells, BLM Range Manager
Paul Hutchinson, BLM Fisheries Biologist
Craig Kenworthy – Greater Yellowstone Coalition
Nathan Korb – The Nature Conservancy
Chuck Maddox – DNRC Range Specialist
Dick Moore – DNRC Unit Manager
Dick Oswald – MT FWP Fisheries Biologist
Aly Piwowar, BLM Forester
Mark Sant, BLM

Also consulted before or after the workshop:
Bob Brannon, MT Fish Wildlife and Parks Biologist
Jerry Scheid, Owner of the Scheid Ranch
Ray Marxer, Matador Ranch Manager

- Historical structure and fire regimes (Nathan Korb)
    - Historically, large fires every ~35 years with high variability; all fire every ~5 years
    - Local increases in tree density from historic conditions
    - Most dramatic changes at lower elevations
    - Loss of landscape diversity; more homogeneous today
    - Change in fire severity associated with change in forest structure; severe patches larger and greater proportion of burned area
    - Wildfire similar to Winslow Fire in Bean and Bear Cr would likely extirpate or severely impact west-slope cutthroat trout (WSCT) populations
- Centennial watershed analysis and goals for fire management (Kipper Blotkamp)
    - Implement a Fire Use Plan for Centennial Mountains WSA

    - Prescribed burns and timber units to facilitate natural fire use
    - Burn perimeters are based on topographical features – entire unit will not be black
    - Will burn based on objectives for stand type
- Objectives and prescriptions for Bean Creek Forest Projects (Aly Piwowar)
    - Restore historic density, structure, and species composition of forest and woodland habitats
    - Improve forest health and resiliency to insects, disease, drought and wildland fire
    - Enhance existing aspen and whitebark pine stands and promote successful regeneration
    - Allow fires to burn more naturally across Centennial Mountains WSA
    - Aspen: remove conifers and follow with prescribed fire
    - Lodgepole: remove live infested trees, 80% dead trees, and patch cuts (<5ac) of green trees leaving 10-25 trees where possible
    - Douglas-fir: Cut all live infested trees and 90% of dead/dying trees <19”dbh. Leave all DF snags >20” unless they present a safety hazard. Thin DF from below to average 100ft2/acres including subalpine fir, Engelmann spruce (except in SMZ’s) and lodgepole pine.
- West-slope Cutthroat Trout issues in Bean Creek (Dick Oswald and Paul Hutchinson)
    - Population robust (i.e. high fecundity of large fish) in early 1990’s and considered for brood population but then declined during recent years of drought. Stresses associated with reduced water, productivity, density, and can result in diseases such as kidney bacterial infections.
    - WSCT primarily reside in lower reach below road
    - Summary of effects of Winslow Fire (2003) on Curry Creek
        - West Fork: high road density, steep slopes, slumping, and deep soils contributed to abundant sedimentation
        - East Fork: gravelly substrates, more gradual slopes, and possibly lower severity resulted in less dramatic sediment input
        - No viable fisheries in Curry Cr., but fisheries in Winslow Cr. severely impacted by Winslow Fire
        - Ultimate effects include increased solar radiation (e.g. some of these mountain streams are actually too cold for fish!), increased water yield, increased nutrients (positive), and increased productivity
    - Need to walk stream to identify specific concerns, SMZ boundaries, and restoration needs
    - Prescribed fire prescriptions will need to balance the benefits of increased flows and reduced potential for high-severity and the impacts of producing excessive volumes of sediment
- Bean Cr, Bear Cr, - 100% pure strains; remnants in Odell Cr; Tom Cr and Hellroaring not tested yet; Curry Cr. potential for reintroduction, single reach in Price Creek potentially pure
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Objectives for Bean Creek Watershed (in order of priority/consensus)

- Expand range of WSCT population in Bean Creek and increase fecundity of that population
- Restore degraded habitat, sources of sedimentation, and barriers to fish migration
    - Install an over-sized, flat-bottom culvert at road crossing which is currently a source of sedimentation and a barrier to fish movement
    - Mitigate erosion from existing roads and associated slumps
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- Restore natural ecological processes, specifically fire, in an appropriate way based on historical forest composition and structure
- Retain coarse woody debris for fishery habitat
- Preserve wilderness values of Centennial Mountains WSA (and non-WSA BLM) including clean water, recreational values, and connectivity for wildlife, most importantly predators

Concerns regarding treatments in Bean Creek Watershed

- New road network
- Prescriptions should
- Restoration objectives should be based forest types that have dramatically changed since pre-Euro-American settlement and prescriptions based on historical reference conditions
    - Insects were a native, natural component of forest ecology
    - Thinning in lodgepole, subalpine fir, and spruce inappropriate restoration or "healthy forest" practice
    - Avoid uniformity in marking harvest (i.e. tree farm appearance)
- Maintain ecological processes
- Corridors
- Primitive recreation
- Watersheds
- Stewardship in timber processes
- Expand/maintain range of WCT while allowing for timber and fire activities
- Project result in potential to increase productivity; provide more solar insolation
- Address existing road situation
- Slumping of roads and headcutting is a major concern in the valley
- Increase in water yield (documented in Curry Ck)
- Maintain ability to recruit woody material into drainages (major factor in forming habitat)

- Dick – would like to take time this summer to look at conditions on the ground; could make recommendations on hot spots where we don't want to have fire
- Differences in aftermath of Winslow Fire: West fork of Curry – lots of sediment (old road network is a factor); drainage is steep and smoothly sloped; soils are deep adjacent to stream (lots of fine material). East fork of Curry – not much sediment
- Concern over new roads – amount and location
- Reclamation possibilities for existing road
- WCT population in Bean and Bear Cr. – was very robust and abundant in early 90s; considered as brood sources; drought has reduced populations – not capable of serving as brood source now. Will likely recover if drought conditions are alleviated
- Stress from any source can trigger outbreak of diseases in WCT – stress enhanced by drought
- Increase in base flows would be a good thing for WCT
- Culvert limiting access to suitable habitat – fish friendly culvert would help distribution throughout drainage
- Robust population is primarily in lower timber unit – 90%+ of fish in stream live in timber unit and downstream from there
- Did not find WCT in stretches below timber line – Partners for Fish and Wildlife looking at restoration activities on private land
- No connectivity between Bean Cr. and Red Rock lake – has maintained purity of WCT
- Under heavy canopy, stream temperature may be too low for fish habitat
- Restoration or expansion of WCT while ensuring no direct effects from logging activities
- Wildlife connectivity and security – ensure project allows for this
- Allow Centennials to function on its own
- Land health
- State issues and goals similar to BLM – try to cooperate and coordinate with BLM
- State section – beetles there; earliest for management activities would be 3-5 years; have more pressing concerns than in Bean Cr.
- Old harvest units and old road networks – people are driving on roads illegally during hunting season
- Forest health
- Potential for stewardship
- Provide timber resource
- Return fire frequencies/interval to historic range
- Loss of aspen
- Expanding grizzly bear populations
- Ecological processes to maintain a healthy ecosystem
- Bean Cr road – how to maintain, deal with sediment
- WCT – do something soon or will disappear from landscape
- Implement project without decimating WCT population

- Opportunity for long term monitoring to determine effects of these types of projects
    - Flow monitoring
    - Thermal effects
    - FWP could get in next year and get population numbers
- Burn more likely to contribute sediment than harvest
    - How to mitigate sediment?
    - Don't have control over weather, but have control over when we burn
    - Won't be a broadcast burn with uniform conditions
    - Within WSA, areas with heavy timber – how to control fire in those conditions?
    - Going from low elevation Fuel Model 2 to higher elevation Fuel Model 10
    - Upper Horse Prairie Rx burn in September 05 was similar – expand open areas, then fire lies down
    - Select areas to burn – expand on openings, some stands will be consumed
- Treatment within SMZs
    - SMZ buffer can be expanded if needed
    - May want to open some areas to increase solar infiltration
- Culvert where road crosses is a barrier – perched culvert.
    - Replace with oversized culvert
        - Probably won't see much expansion of WCT into upper reaches (Paul H.) – more a factor of environmental conditions
    - Bridge?
    - Hardened ford
        - Need to assess traffic – may have too much to be feasible
- Options for dealing with Bean Cr road
    - Large size wood chips – temporary stabilization (5-10 years estimate)
        - BLM bought a chipper; lots of biomass on site
        - Put filter fabric down 1st
        - Safety concerns?
        - Better if mixed with dirt?
        - Cost of producing and transporting may be better used going towards gravel
        - Issues when wood chips get wet
    - Gravel – obtaining gravel is an issue; knapweed in Centennial gravel pits
        - Need to assess feasibility
    - Stone Cr. road – road mix worked well and eliminated sediment issues
- Road going onto State
    - Closed on travel management plan - Gate it?
    - Need to figure out where and how – coordinate with State
- How units were designed
    - Timber units within base acres – mechanical OK
    - Blocks of treatment that would pull fire out of crown and onto ground
    - Re-establishing DF savannah
    - Bring aspen back

    - Effective barriers to have more flexibility in prescribed burning
- Restoration of old road network with slumps? Add into project?
    - Over 40 years old - Most are grassed over – not active sources of sediment
    - Do benefits outweigh costs of moving dirt?
    - Tim – would prefer to block off roads and only have main road accessible
- Any known point sources of sedimentation?
    - None other than main culvert
- New temp roads
    - After use - May be recontoured if needed, or may be physically closed and seeded – depends on resource issues
- Wish list for Bean Cr.
    - Extend habitat – headwater sources are limited; if capable of extending, most likely towards valley floor
        - Work being done on private land (Scheid) – stream restoration , willow planting etc.
    - Connecting Bean Cr. and Bear Cr.?
        - Nope – populations have been separate for a long time

Notes from people who couldn't be here:

- Bob Brannon – elk habitat, calving, thermal cover
- Jerry Scheid – clearcuts in 60s produced a lot of sediment in Bean Cr.; concerned about future timber management and sediment production. Currently involved in downstream Bean Creek restoration project.
- Ray Marxer – concerned with prescribed fire on BLM burning onto adjacent private forests; harvest merchantable timber on private before BLM burns. Opportunity to use helicopter to avoid road building in Bear Creek (other WSCT fishery) while equipment is working in Bean.