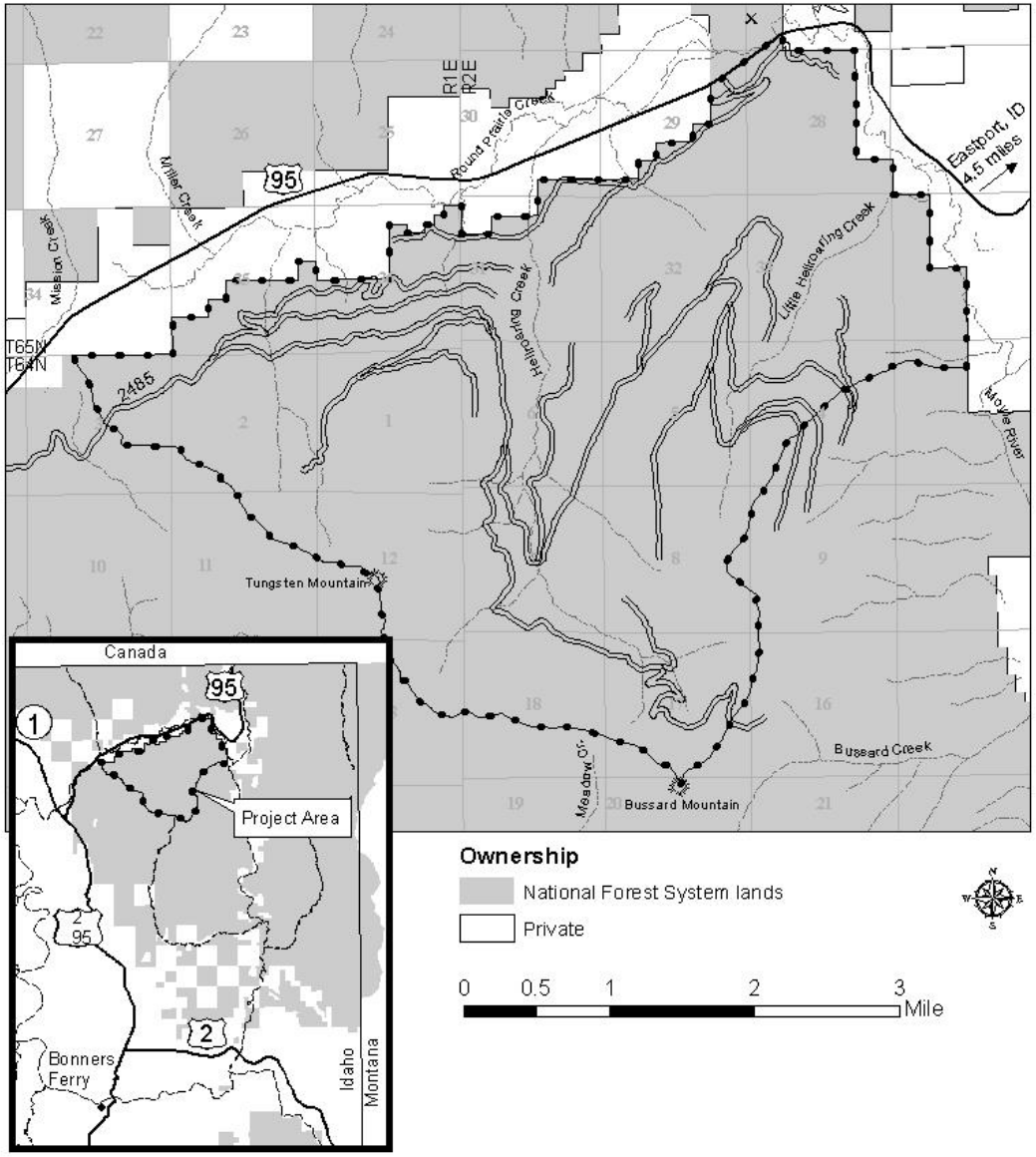
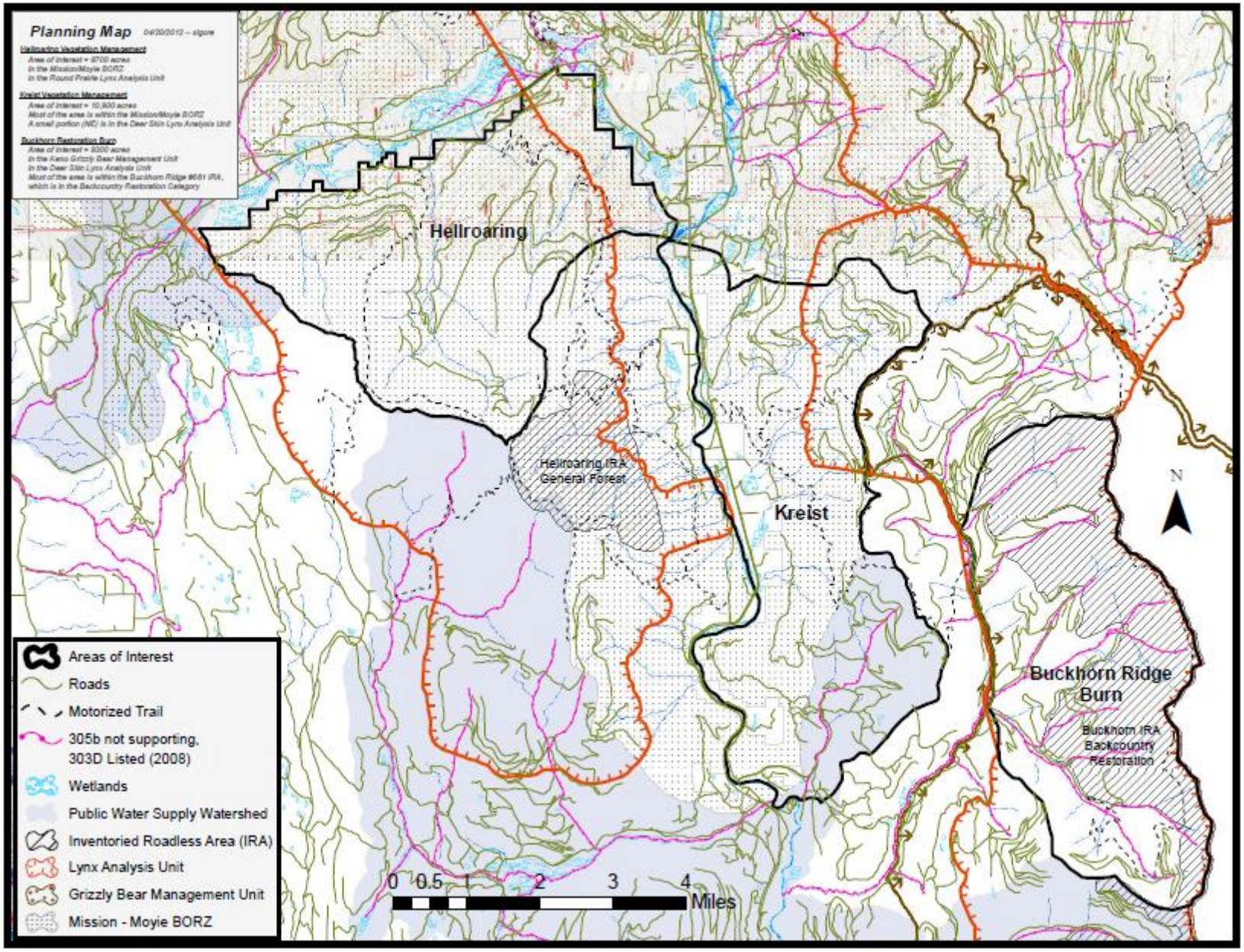
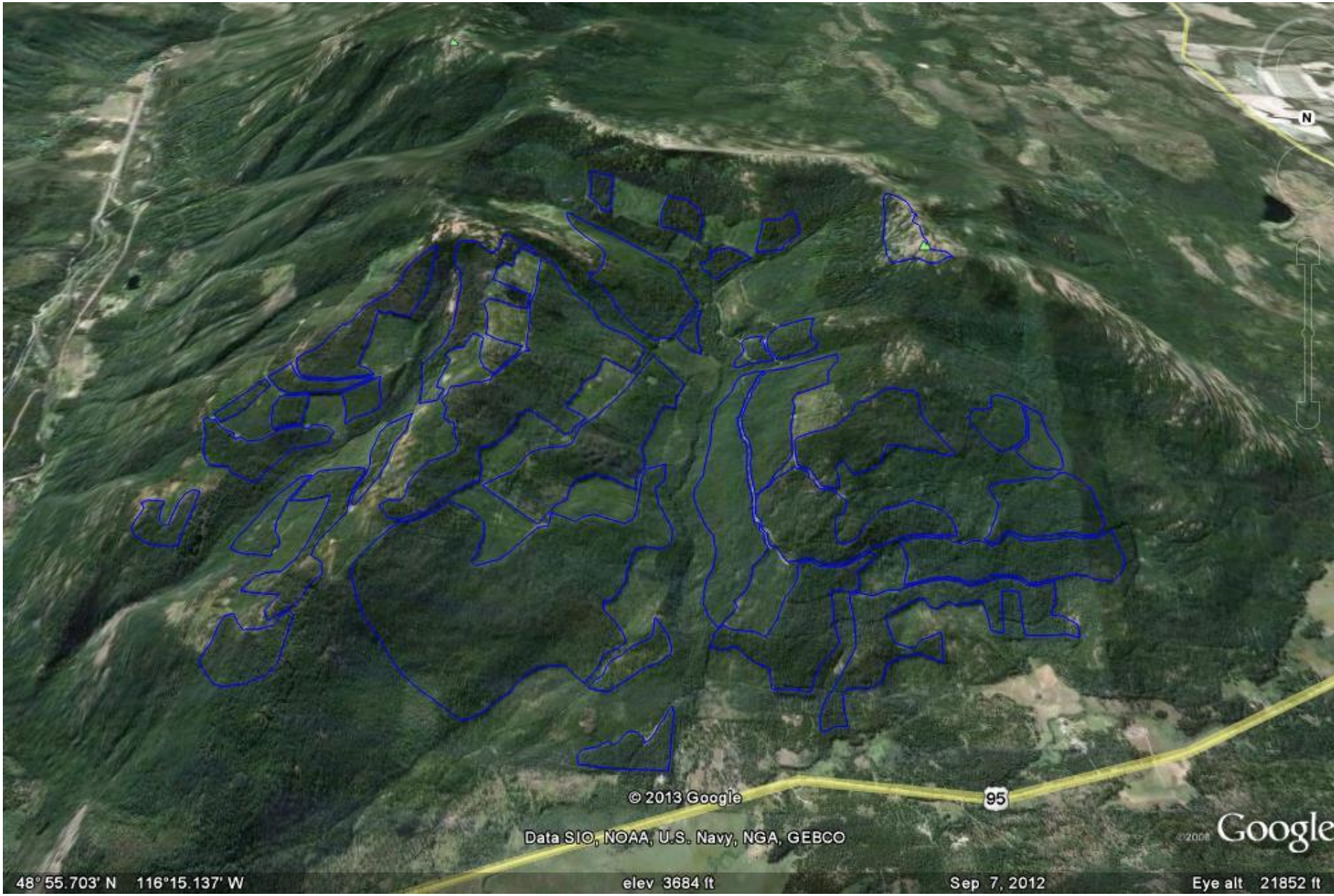
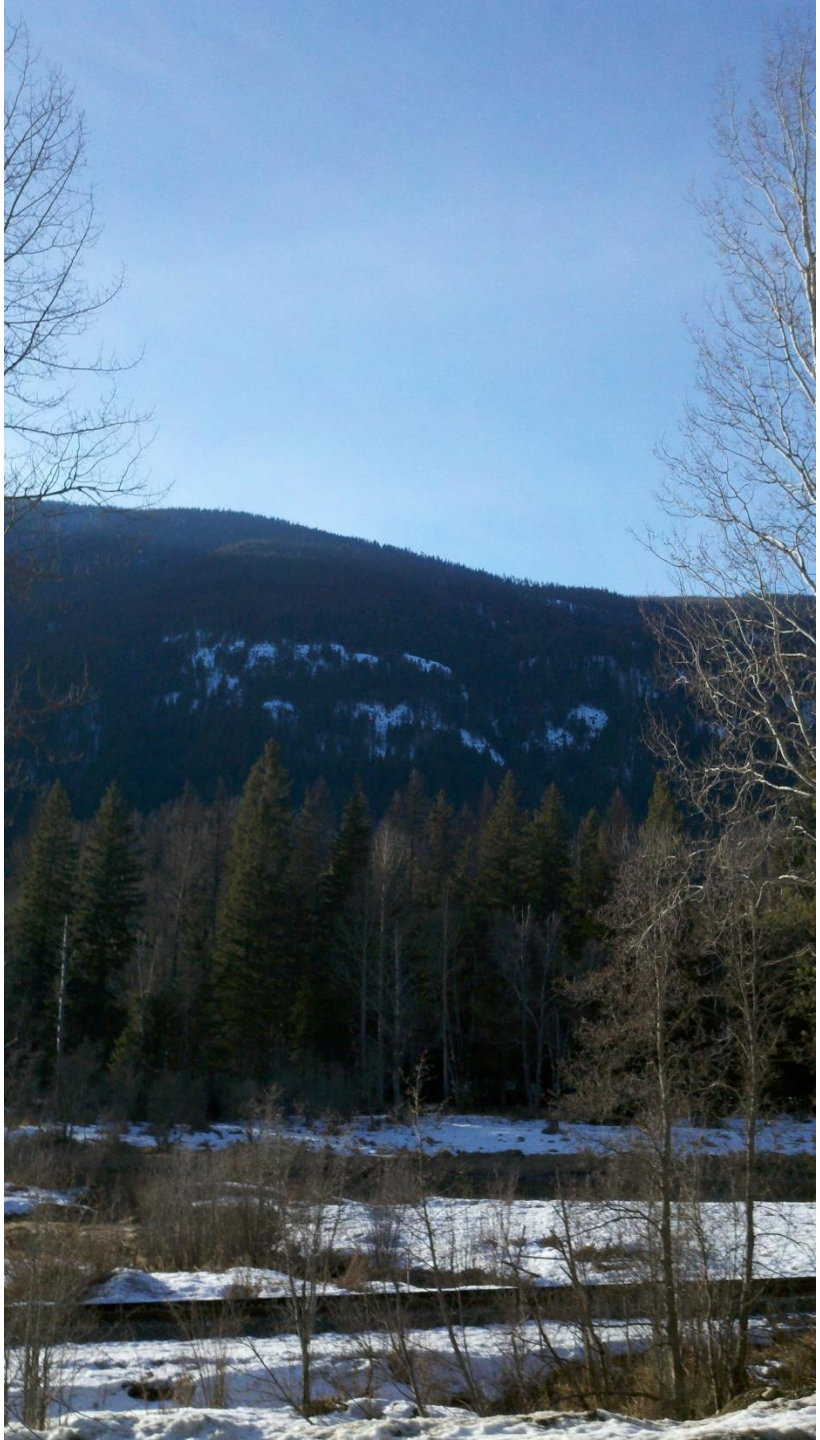
# Hellroaring Project
# Bonners Ferry Ranger District
# Idaho Panhandle National Forests




Planning Map
04/20/2012 – sigore
Hellroaring Vegetation Management
Area of Interest = 3700 acres
In the Mission/Moyie BORZ
In the Round Prairie Lynx Analysis Unit
Kreist Vegetation Management
Area of Interest = 10,900 acres
Most of the area is within the Mission/Moyie BORZ
A small portion (NE) is in the Deer Skin Lynx Analysis Unit
Buckhorn Restoration Burn
Area of Interest = 9200 acres
In the Kano Grizzly Bear Management Unit
In the Deer Skin Lynx Analysis Unit
Most of the area is within the Buckhorn Ridge #461 IRA, which is in the Backcountry Restoration Category
Hellroaring
Hellroaring IRA General Forest
Kreist
Buckhorn Ridge Burn
Buckhorn IRA Backcountry Restoration
N
Areas of Interest
Roads
Motorized Trail
305b not supporting, 303D Listed (2008)
Wetlands
Public Water Supply Watershed
Inventoried Roadless Area (IRA)
Lynx Analysis Unit
Grizzly Bear Management Unit
Mission - Moyie BORZ
0 0.5 1 2 3 4
Miles


N
95
© 2013 Google
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Google
48° 55.703' N 116°15.137' W
elev 3684 ft
Sep 7, 2012
Eye alt 21852 ft



**Changing Forest Vegetation to Improve Landscape Resiliency**

Forest vegetation in the Hellroaring project area has changed over time due to a combination of fire suppression, introduction of white pine blister rust and past management practices. Before the introduction of blister rust, white pine was a more significant component of the landscape. Larch forest types were also more prominent, as sunny openings from large fires helped their seedlings grow.

- Increase the acreage of stands where western white pine and western larch are significant components
- Regenerate, maintain and expand dispersed aspen clones where feasible
- Retain mature forests not scheduled for treatment so they have the potential to become old growth in the future
- Reduce the acreage of lodgepole pine at risk from bark beetle attacks

**Reducing Forest Fuels and Promoting Resilient Tree Species**

The lack of natural fire over the past century has created forests dominated by stands of similar size, age, density, species composition, and structure. This uniform landscape is at higher risk to large, severe fires, which can burn more easily through continuous stands of trees that have decades of accumulated dead branches and forest debris. More specifically, fuel reduction objectives are:

- Reduce surface fuels and crown densities to create a lower intensity and severity fire environment

- Develop and maintain stand compositions and structures associated with more fire-tolerant species (such as western larch) over fire-intolerant species (such as grand fir).

**Other Resource Objectives We Want to Accomplish**

**Controlling Invasive Plants** – Boundary County and other jurisdictions have partnered to manage and control noxious weeds across boundaries. In the Hellroaring project area, we want to contain or control existing noxious weed populations along road and trail systems, and minimize potential for new weed infestations.

**Improving Forage for Big Game** – More than 80 percent of the Hellroaring area consists of relatively closed canopy conifer stands, where forage for big game such as deer and elk is limited because there are few palatable shrubs or herbaceous species available. Another nearly 15 percent of the area is old harvest units, where forage has declined due to regenerating trees taking over and the remaining shrubs growing woody and unpalatable. Openings and prescribed burning would help improve forage for big game in the Hellroaring drainage.

**Improving Fish Passage in Hellroaring Creek** – Fish and aquatic habitat surveys indicate that streams in the project area are functioning properly and require very little restoration. However, one culvert passing Hellroaring Creek under Road 2266 was deemed a barrier to upstream fish passage. Replacing this culvert with a structure that will allow fish access to beneficial aquatic habitat upstream of this location would benefit all life stages of fish species in the project area.

**Providing Parking at Trailheads and Managing the Road System** – The Hellroaring project area contains trails popular with off-highway vehicle (OHV) users and horseback riders. The trailheads are currently brushed in and not large enough to accommodate vehicles with trailers. Improving these trailheads would provide safe and accessible areas for trail users. In addition, road 2485 is a brushed-in open road that currently receives OHV use because it connects to an existing motorized trail. Although we don't have funds to make this road drivable for full-sized vehicles, continue to manage it as an OHV trail.

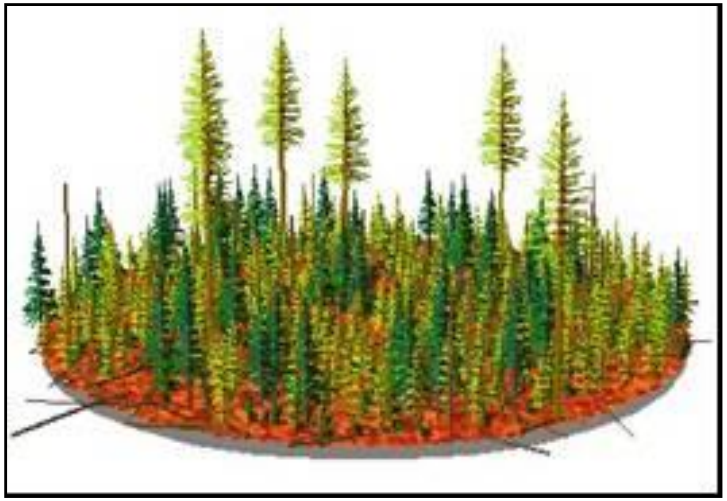
**Enhancing the Scenic Integrity of the Area** – About 1,400 acres of the project area was harvested in the 1980s, back when stands were cut with little consideration for how the result would appear when viewed at a distance. Natural vegetation patterns, which historically were shaped by events such as wildfire, are not typically so obvious and geometric. Burn patterns tend to result in irregular shaped openings and patches. As we complete our restoration work, we want to maintain and enhance the scenic integrity and sustainability of areas adjacent to Highway 95 to reflect healthy, resilient vegetation conditions.

**Contributing to the Local Economy**

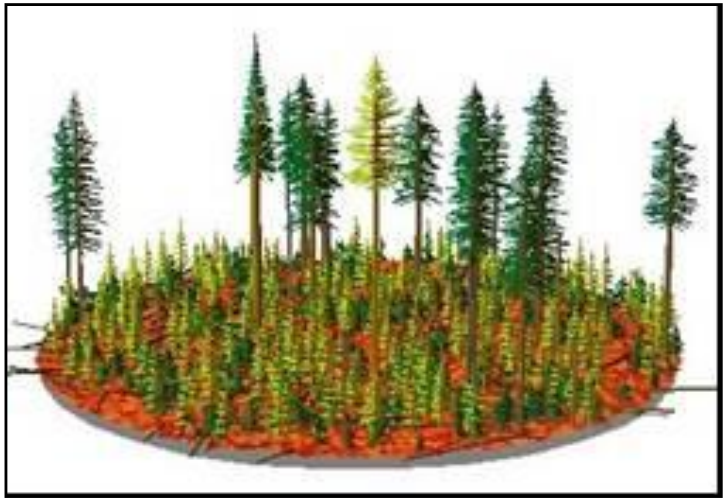
In addition to other landscape restoration work happening in the Lower Kootenai River Watershed, the Hellroaring Project can help contribute to local economic growth. In 2009, the unemployment rate in Boundary County was 16.2 percent, much higher than the national average of 9.3 percent, or the state average of 8 percent. Per capita income and average earnings per job in 2011 were also substantially lower in Boundary County than for the state of Idaho as a whole. In the Hellroaring project area, we want to use the various forest products produced from this this project to maintain and support natural resource related jobs thus strengthening the local economy.

| Vegetation Prescriptions | Acres |
|---|---|
| Group Selection | 127 |
| Shelterwood with Reserves | 530 |
| Seedtree with Reserves | 708 |
| Precommercial Thinning | 1,412 |
| Total | 2,777 |

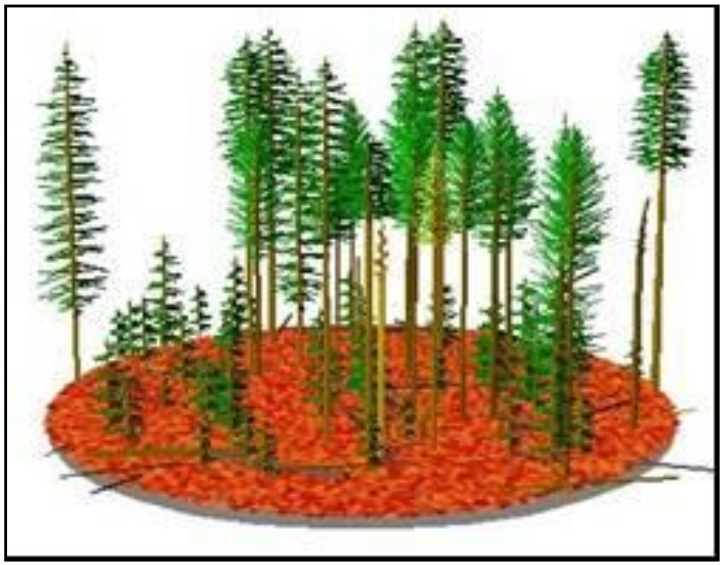
| | Acres |
|---|---|
| Helicopter | 266 |
| Tractor | 491 |
| Skyline | 436 |
| Combination Tractor and Skyline | 171 |
| Total | 1,364 |



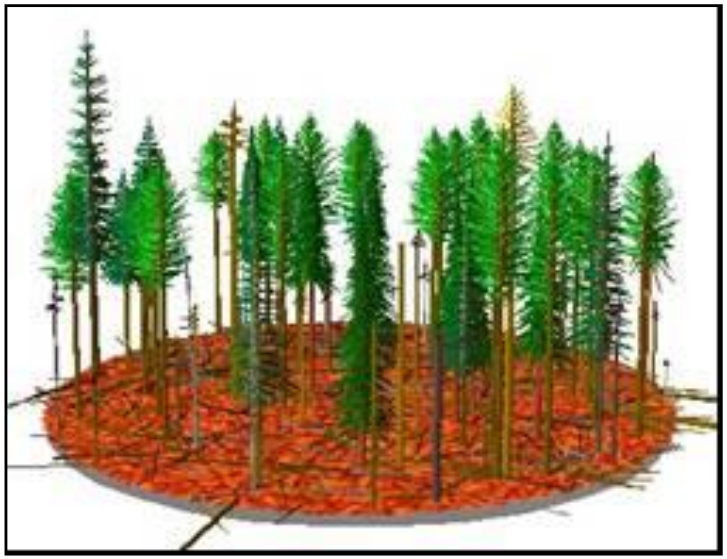
***Seedtree***



***Shelterwood***

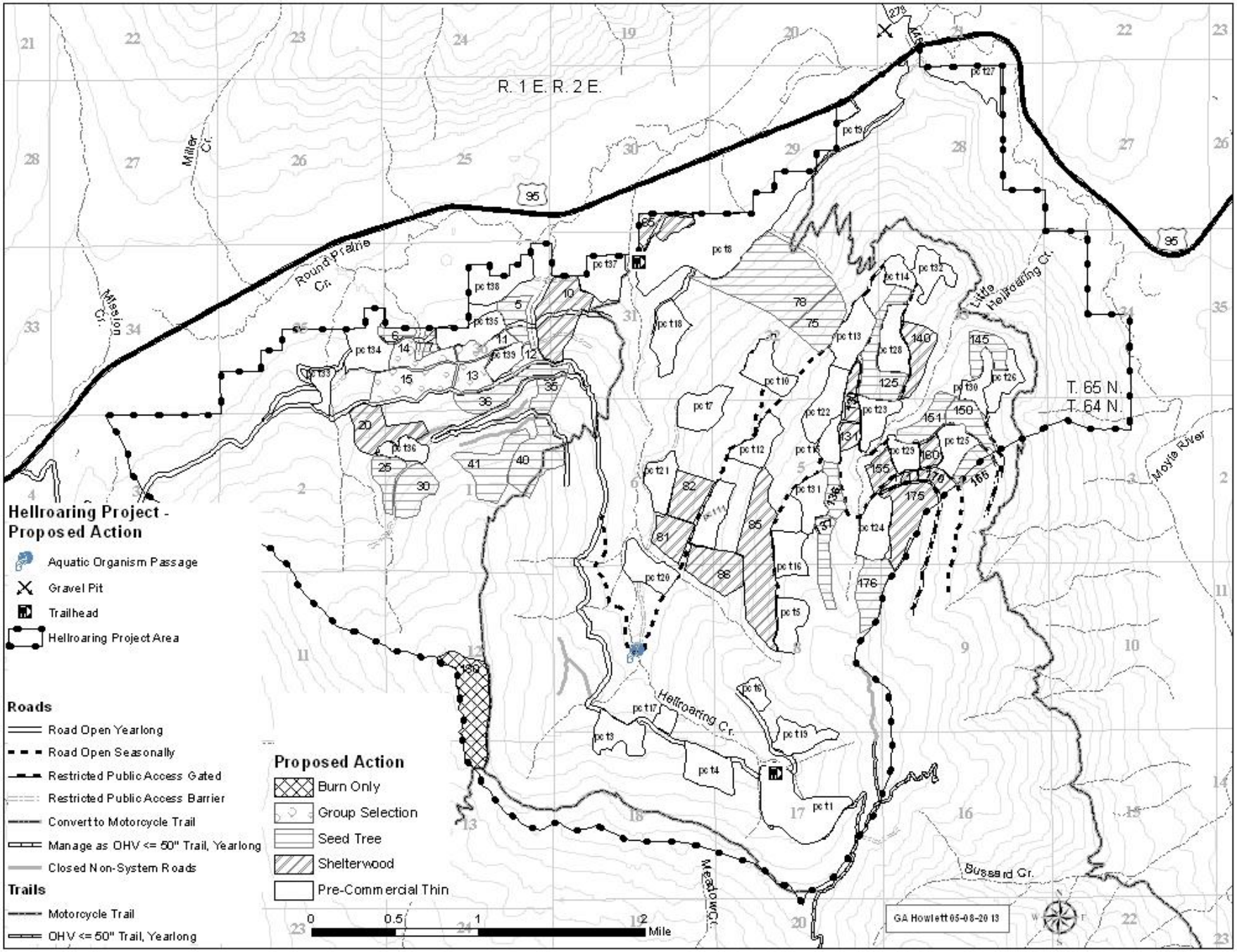


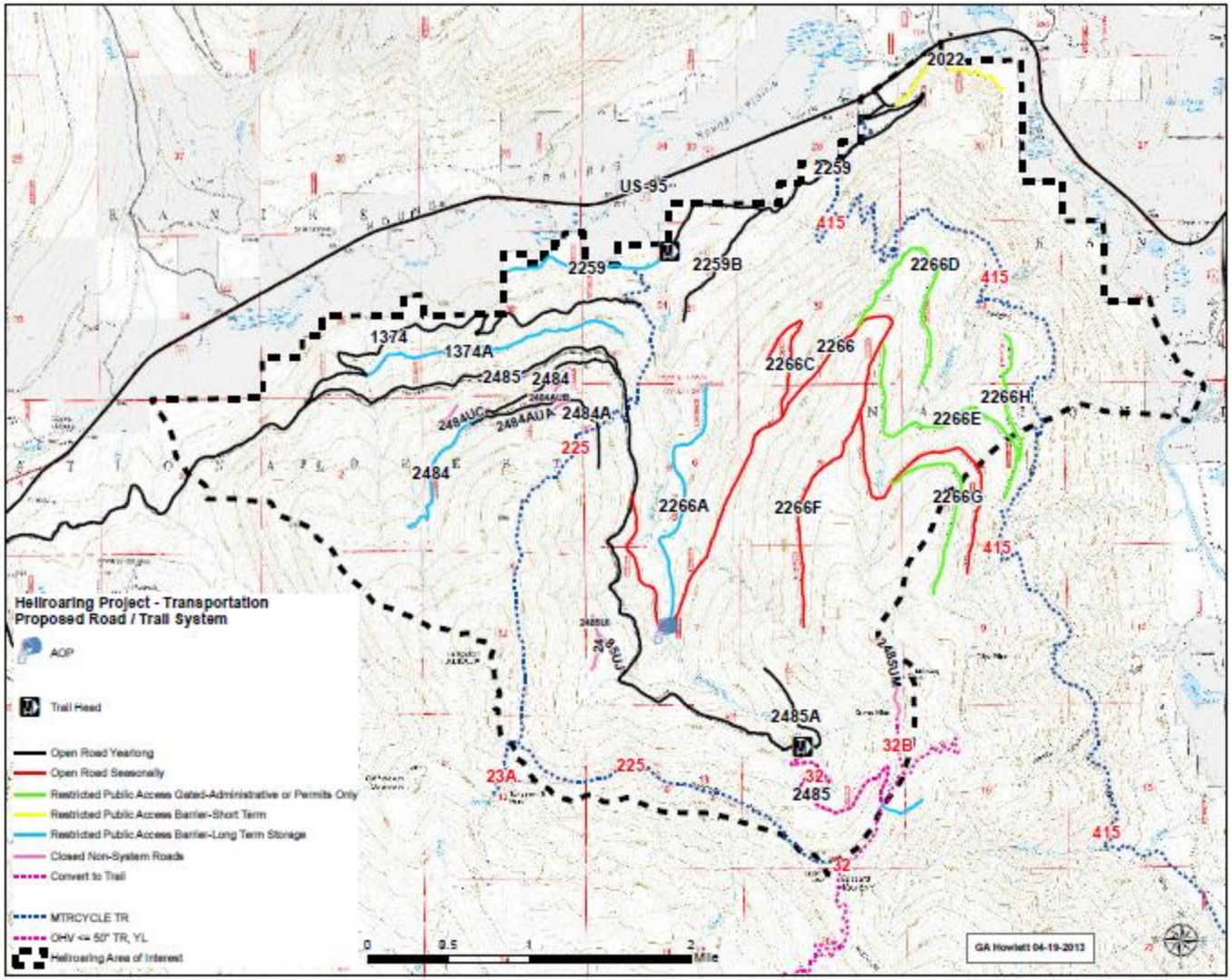
***Group selection***



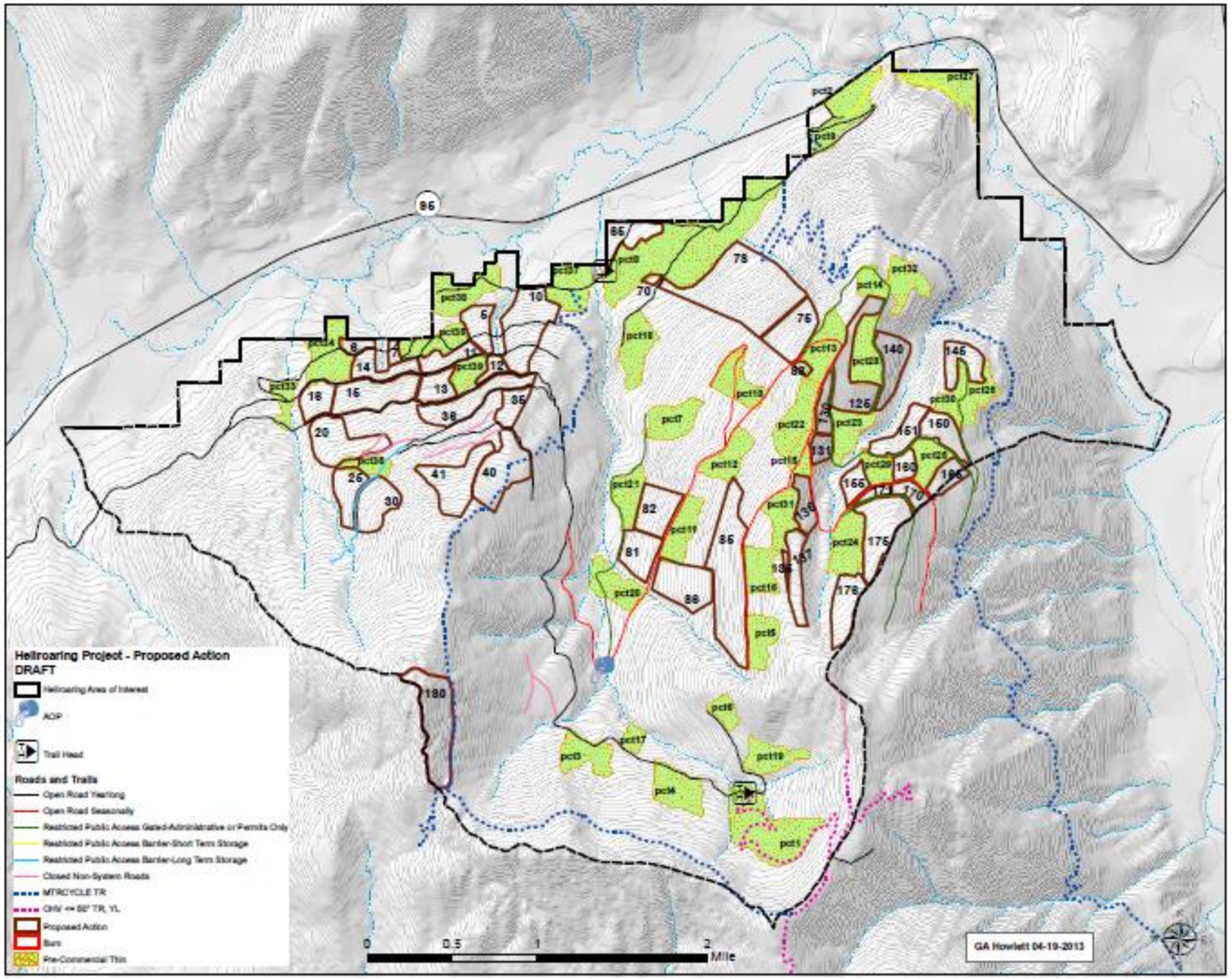
***Commercial thinning***

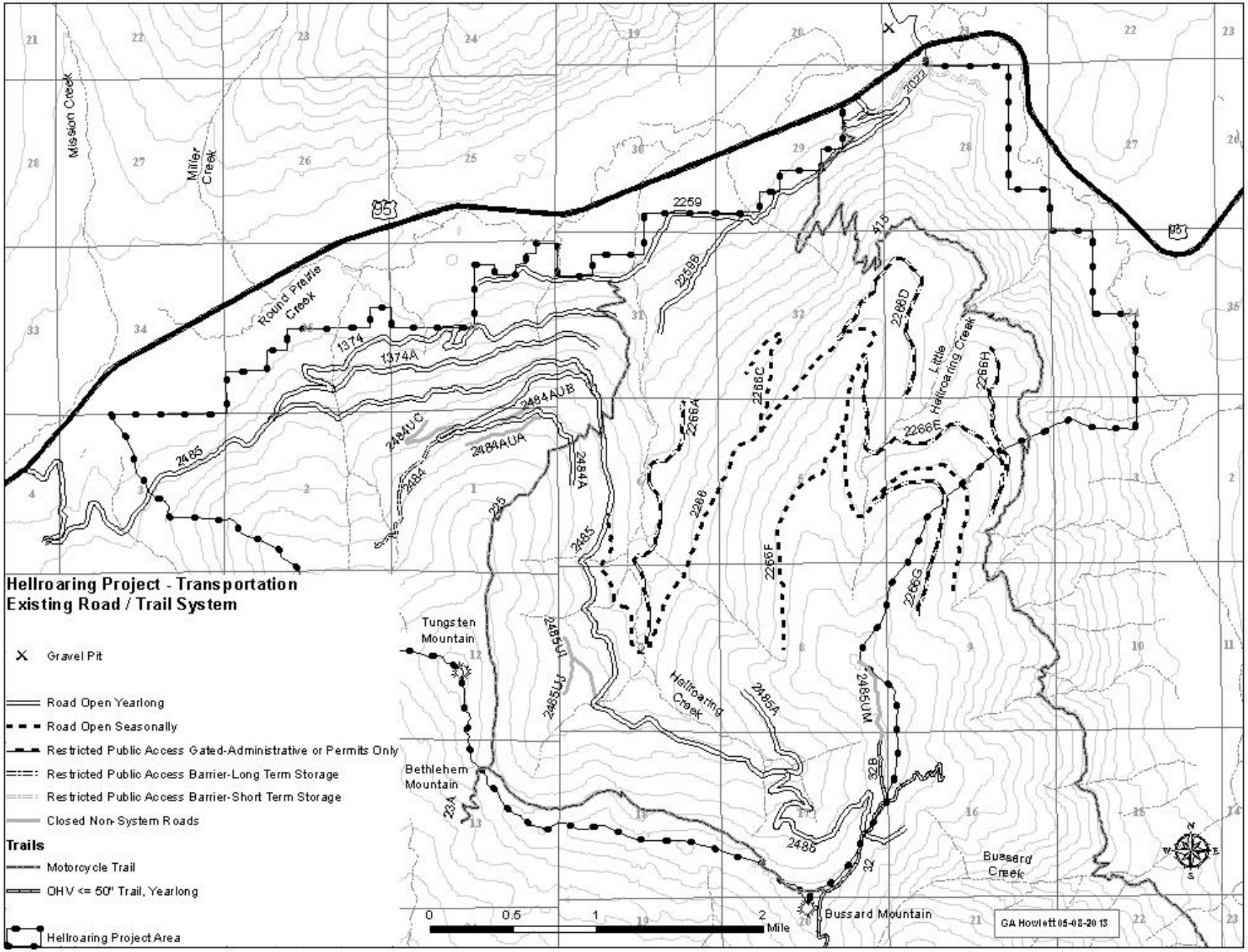
**Figure 1. Graphic simulations showing how different vegetation prescriptions would look**

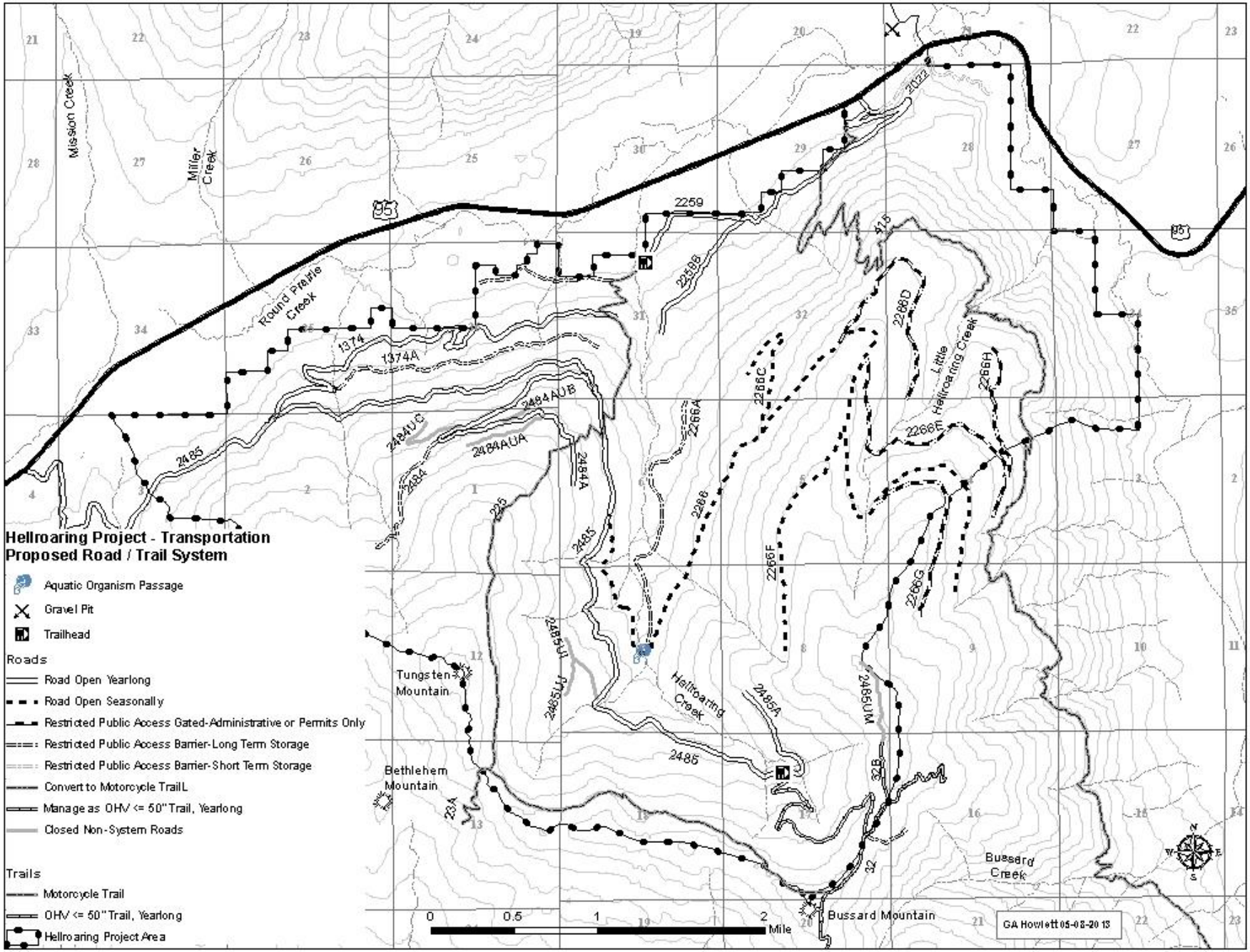

R. 1 E. R. 2 E.
T. 65 N.
T. 64 N.
Round Prairie Cr.
Miller Cr.
Mission Cr.
Little Hellroaring Cr.
Hellroaring Cr.
Moyie River
Buzzard Cr.
Meadow Cr.
95
Hellroaring Project - Proposed Action
Aquatic Organism Passage
Gravel Pit
Trailhead
Hellroaring Project Area
Roads
Road Open Yearlong
Road Open Seasonally
Restricted Public Access Gated
Restricted Public Access Barrier
Convert to Motorcycle Trail
Manage as OHV <= 50" Trail, Yearlong
Closed Non-System Roads
Trails
Motorcycle Trail
OHV <= 50" Trail, Yearlong
Proposed Action
Burn Only
Group Selection
Seed Tree
Shelterwood
Pre-Commercial Thin
0 0.5 1 2 Mile
GA Howlett 05-08-2013



Hellroaring Project - Transportation
Proposed Road / Trail System
AOP
Trail Head
Open Road Yearlong
Open Road Seasonally
Restricted Public Access Gated-Administrative or Permits Only
Restricted Public Access Barrier-Short Term
Restricted Public Access Barrier-Long Term Storage
Closed Non-System Roads
Convert to Trail
MTRCYCLE TR
OHV <= 50" TR, YL
Hellroaring Area of Interest
0
0.5
1
2
Mile
GA Howlett 04-19-2013
US-95
2022
2259
2259B
2266D
2266
2266C
2266H
2266E
2266G
2266F
2266A
1374
1374A
2485
2484
2484A
2484AUB
2484AUC
2484AUA
2485UJ
2485UM
2485A
2485
415
225
32
32B
23A


Hellroaring Project - Proposed Action
DRAFT
Hellroaring Area of Interest
AOP
Trail Head
Roads and Trails
Open Road Yearlong
Open Road Seasonally
Restricted Public Access Gated-Administrative or Permits Only
Restricted Public Access Barrier-Short Term Storage
Restricted Public Access Barrier-Long Term Storage
Closed Non-System Roads
MTRCYCLE TR
GMV <= 50" TR, YL
Proposed Action
Burn
Pre-Commercial Thin
0
0.5
1
2
Mile
GA Howlett 04-19-2013


Hellroaring Project - Transportation
Existing Road / Trail System
Gravel Pit
Road Open Yearlong
Road Open Seasonally
Restricted Public Access Gated-Administrative or Permits Only
Restricted Public Access Barrier-Long Term Storage
Restricted Public Access Barrier-Short Term Storage
Closed Non-System Roads
Trails
Motorcycle Trail
OHV <= 50" Trail, Yearlong
Hellroaring Project Area
Mission Creek
Miller Creek
Round Prairie Creek
Little Hellroaring Creek
Hellroaring Creek
Tungsten Mountain
Bethlehem Mountain
Bussard Mountain
Bussard Creek
95
2259
2258B
2266D
2266H
2266E
2266C
2266A
2266
2266F
2266G
2485A
2485UM
2485UJ
2485UI
2484A
2484AUA
2484AUB
2484UC
2484
2485
1374
1374A
2022
415
225
32B
32
23A
0
0.5
1
2
Mile
GA Howlett 05-08-2013


Hellroaring Project - Transportation
Proposed Road / Trail System
Aquatic Organism Passage
Gravel Pit
Trailhead
Roads
Road Open Yearlong
Road Open Seasonally
Restricted Public Access Gated-Administrative or Permits Only
Restricted Public Access Barrier-Long Term Storage
Restricted Public Access Barrier-Short Term Storage
Convert to Motorcycle TrailL
Manage as OHV <= 50" Trail, Yearlong
Closed Non-System Roads
Trails
Motorcycle Trail
OHV <= 50" Trail, Yearlong
Hellroaring Project Area
0
0.5
1
2
Mile
GA Howlett 05-08-2013
Mission Creek
Miller Creek
Round Prairie Creek
Little Hellroaring Creek
Hellroaring Creek
Tungsten Mountain
Bethlehem Mountain
Bussard Mountain
Bussard Creek
95
2259
2258B
2266D
2266C
2266A
2266H
2266E
2266
2266F
2266G
2485
2485A
2485UM
2485UJ
2485UI
2484
2484A
2484AUA
2484AUB
2484UC
1374
1374A
2022
415
32B
32
23A
225

| **Route status** | **Current (miles)** | **Post-implementation (miles)** |
|---|---|---|
| Open road | 21.8 | 17.4 |
| Seasonally open rd. | 8.7 | 8.7 |
| Closed yearlong rd.* | 7.4 | 5.6 |
| Motorized trail | 12.9 | 14.7 |
| **Total** motorized route miles available to public | **43.4** | **40.8** |

*Does not count toward **Total**

Doesn't include U-roads, 2022 (not drivable) or the last 0.4 miles of 2484 (also not drivable)

**Hellroaring Project Findings – 2800 acres - Field Season 2012**

**Arch**.: The areas of opportunity have been surveyed but the archeology crew did not find any cultural resources in their surveys.

**Fish**: There are fish present in both Hellroaring Creek and an unnamed creek. Both of these creeks will have a 300 ft. buffer. There are no fish in Little Hellroaring Creek so it will have a 150 ft. buffer.

**Hydro**: Road surveys are complete. Most of the roads are stable and durable. There is no prominent road failure risk.

**Rec**: They have grant money in this area to maintain motorized trails so it is an important area.

**Fuels**: Proposed prescribed burn on Tungsten ridge to maintain / enhance brush field.

**Silv**: Restore acres of larch and white pine. Old growth stand exams completed summer 2012.

**Wildlife**: One successful goshawk nest site has been found and will need a buffer. There is possibly another goshawk in the area. It will be a priority in the spring for the wildlife crew to survey for another nest site.

The project area is within a BORZ and a LAU. There is not much for lynx multi-story habitat within the areas of opportunity.

**Botany**: Several populations of *Botrychium spp.*

**Eng**.: The roads are stable but will likely need surface material.