

History of Chewaucan Biophysical Monitoring Effort

Lake County – Timber, Ranching

1980's – 4 Sawmills

1996 – 1 Sawmill

few contractors employing themselves

1998 – Formation of LSG

2001 – Reauthorization of Unit as Lakeview
Federal Stewardship Unit (LSFU)

2001 – Formation of Lake County Resources
Initiative (LCRI)

2002 – Beginning of Chewaucan Biophysical
Monitoring Team (CBMT)

Lakeview Federal Stewardship Unit

- This long-range strategy is part of a unique, collaborative effort to help restore the ecological health of the 500,000-acre Lakeview Federal Stewardship Unit in the Fremont-Winema National Forest and provide economic and social benefits for the local community. The strategy is based on a common vision and set of goals and objectives developed by the Lakeview Stewardship Group and adopted by the U.S. Forest Service. The Lakeview Stewardship Group includes conservationists, timber workers, local government officials, and other civic leaders working in cooperation with the Forest Service.
- The Lakeview Federal Stewardship Unit was originally established in 1950 as the Lakeview Federal Sustained Yield Unit for the purpose of supplying timber to local mills in the communities of Lakeview and Paisley in Lake County. In 2001, the Chief of the Forest Service re-authorized the Unit with a revised policy statement that established new goals and updated its name to the Lakeview Federal Stewardship Unit. The goals of the Stewardship Unit are as follows:

Vision Statement

- Sustain and restore a healthy, diverse, and resilient forest ecosystem that can accommodate human and natural disturbances.
- Sustain and restore the land's capacity to absorb, store, and distribute quality water.
- Provide opportunities for people to realize their material, spiritual, and recreational values and relationships with the forest.

CBMT Vision

- The Chewaucan Biophysical Monitoring Team (CBMT) was created in 2002 to find answers to questions the Lakeview Stewardship Group (LSG) was asking concerning the current condition of the Chewaucan watershed and the effects of management in the watershed. Permanent transects are established at each site and include soil characteristics, soil chemistry, canopy characteristics, vegetation analysis and photo-points.

Place Based Education

- Traina and Darley-Hill (1995) extend "locale" to include "bioregional education," encouraging students and teachers to know their place and to consider the impact of lifestyles on the resources of that bioregion. Similarly, Orr's (1994) call for "ecoliteracy" presents principles for rethinking education that clearly relate place-based education to outdoor education: (1) students should understand the effects of this knowledge on real people and their communities; and (2) learning through direct experiences outside the classroom is as important as the content of particular courses.

Types of Studies

- Representative
- Trend
- Pre / Post
- Matched Pair

Choosing a Base Area

Dynamic: A base area or individual transect which possesses ecological factors or elements that are unique in combination and/or rapidity of change.

Representative: A base area or transect which contains ecological factors or elements which represent a significantly larger area than the particular vicinity of a certain base area.

Unique: A base area or transect which contains one or more ecological factors or elements that are one-of-a-kind or at least extremely rare in occurrence for the watershed.

Managed: A base area or transect which has been, is being, or will be managed in some way (e.g. - restoration, treatment, and/or logging).

Site Comparisons

- Slope
- Aspect
- Soil type
- Habitat type
- Stand Density
- Stand Age
- Species Composition

Characteristics Measured

- Soils: temperature, moisture, depth, rhizome depth, litter duff, compaction, chemistry; ammonia, nitrate, nitrite, phosphorus, potassium, pH.
- Canopy: stand inventory, stand stocking, stand health, canopy succession, canopy map, snags, downed woody debris and orientation, invasive weeds and location.
- Plot/Canopy map: shows locations and orientations of trees, woody debris, shrubs, boulders, disturbances, and sites of samples.
- Vegetation: 30m line intercept for all vegetation, cover, density, dominance, frequency, importance, percent noxious weeds, quadrant surveys for species diversity and abundance.
- Photo-points: All sites contain established photo-points of the tenth acre permanent plot, a 360° panorama, and all quadrats.
- Location: Each location is hand mapped with a map and compass from semi-permanent landmarks. GPS coordinates are also taken for each transect.
- Stream Characteristics: Rosgen, water quality, macro-invertebrate, velocity / volume, cut bank ratios, noxious weeds, culvert size, etc.

Studies include

- comparisons of harvest with no harvest in 6 catastrophic wildfires;
- effects of juniper treatments on soil, water availability, plant communities and erosion;
- impacts of slashbusting on soil compaction, plant communities and canopy species release;
- analysis and validation of carbon sequestering models for south-east Oregon forests;
- effects of prescribed burning on soil chemistry, and vegetation response;
- effects of treatments on compaction, soil chemistry, vegetation, and canopy species release;
- impact of conifer removal on aspen stand;
- factors affecting Mt. Pine beetle infestations
- effects of Mt. Pine beetle on old growth
- comparing recovery of roads decommissioned by sub-soiling, scarification and blockage, and
- effects of culvert replacements on stream characteristics and fish migration.
- effects of grazing on soil compaction
- impacts of grazing on plant diversity

Quotes

- Tynan Granberg, a freshman at Yale, comments, "It's kind of special to be out here doing meaningful work in the same locations that I played around in my childhood."
- Luke Dary, a senior at Oregon State University, adds, "When you start getting involved in the area around where you live...living in place becomes more of a desire."
- Neal Richards replied, "It makes me feel more responsible for the forest and what goes on here...in the community."
- Grant Morrison summed it up, "If we do have an impact on this forest, I'll probably be around in my old age to see it...and I'll remember the places we went and the things we did. It's neat to think that I can have a positive impact and that I'll be able to see that change."

Management Impacts

- Subsoiling
- Road Decommissioning
- McComb Old Growth
- Harvest Following Wildfire
- Beetle Treatments
- Wildfire / Beetles Kill / Soil Impacts
- Future?
 - Management of Old Growth

Lake County Resources Initiative

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