

Nevada Division of Forestry

Forest Resource Assessment Project

Presented to the Inter Tribal Environmental Managers Meeting

January 8th, 2009



Why is NDF here?

- Discuss Forestry Services we can offer to private land owners and tribal lands
- Input for our State Wide Forest Resource Assessment

Forest Stewardship

- Forest Stewardship Program Goals
 - Provide assistance to private landowners and tribes to enhance multi-resource stewardship planning and implementation
 - When available, cost-share to non-industrial private forest landowners with the implementation of resource management practices

Forest Stewardship

- There are eleven eligible practices approved for this program in Nevada.
 - Forest Stewardship Plan Development
 - Afforestation (new forest) and Reforestation (replant)
 - Forest Stand Improvement
 - Agroforestry
 - Water Quality Improvement/Watershed Protection
 - Fish and Wildlife Habitat
 - Forest Health and Protection
 - Invasive Species Control
 - Fire and Catastrophic Risk Reduction
 - Fire Catastrophic Event Rehabilitation
 - Special Practices

Service Forestry

- Nursery and Seed bank
 - NDF operates 2 state tree nurseries-Washoe Valley and Las Vegas
 - Manages Trees on Wheels program
 - Grows native plants
 - Sell native seed and seed mixes to help mitigate the expansion of cheatgrass
 - Sell seed and seed mix to help establish vegetation after a wildfire

State-wide Forest Resource Assessment (FRAP)

- Mandated by 2008 Farm Bill
- Required to be done by 2010-with updates every 5 years
- Required for future funding from the US Forest Service
- Creates a closer working relationship with NRCS

State-wide Forest Resource Assessment (FRAP)

- A geographic information system (GIS) analysis of spatial data to identify areas of concern
- GIS analysis is the first step in the state-wide assessment process
- Analysis of present and expected future forest conditions and threats

State-wide Forest Resource Assessment (FRAP)

- Identify forest related threats, benefits and services consistent with the State and Private Forestry redesign themes
- Delineate priority rural and urban forest landscape areas
- Work with neighboring States to identify any multi-state areas that could be a regional priority

Guidance from U.S. Forest Service

- Coordinate with the State Forest Stewardship Coordinating Committee, NRCS State Technical Committee, Nevada Department of Wildlife, Federal land management agencies and State Urban Forestry Council
- Involve other key partners, such as tribes, natural resource and related entities in Nevada to ensure the state's assessment and strategy integrate, build upon, and compliment other state natural resource plans (i.e. State Wildlife plan)

Guidance from U.S. Forest Service

- Data used should be at a scale of 1:100,000 or better and overlay analysis should be conducted 30 meter cell resolution or finer
- Include a description of all spatial analysis methods and logic
- One or more maps that identify priority forest landscape areas.
- Identify information gaps as part of the assessment

Guidance from U.S. Forest Service

- Core Data layer themes
 - Development Risk
 - Forest Fragmentation
 - Wildfire Risk
 - Forest Health Risk
 - Fish and Wildlife Habitat
 - Water Quality and Supply
 - Economical Potential
 - Green Infrastructure

Guidance from U.S. Forest Service

- Other Recommended layers
 - Surface Water features
 - Forest Cover
 - Ownerships (public, private, tribal)
 - Protected Lands
 - Priority Watersheds
 - Impervious surface
 - Canopy cover
 - Wildland-urban interface

USFS requests and NDF layers

- USFS Data layers
 - Development Risk
 - Forest Fragmentation
 - Wildfire Risk
 - Forest Health Risk
 - Fish and Wildlife Habitat
 - Water Quality and Supply
 - Economical Potential
 - Green Infrastructure
- NDF Layers
 - Future population growth
 - Forest Fragmentation (SAP)
 - Landfire Fire regime data (SAP)
 - Forest Health Data
 - T & E Species (SAP)
 - EPA 303d Watersheds
 - Biomass layer
 - Green Infrastructure

Processing of GIS Data

Development Risk-Future Population Growth

- NDF decided to use a change in population values between 2000 and 2030 to identify where the greatest population growth would occur.
- Values of 6 or higher were used because these values show the greatest change in population growth.

Processing of GIS Data (cont.)

Water Quality and Supply

- Used USGS 1:2 million HUC data set
- Selected streams and water bodies that were classified by EPA as 303d
- Extracted river basins of all the 303d streams and water bodies
- Included all major basins in Nevada-Carson, Truckee, Walker, Humboldt and Colorado

Processing of GIS Data (cont.)

Economic Potential- Biomass

- Biomass data set was created using a 50 mile buffer around existing biomass facilities- This falls under the economical potential layer and is mentioned in the guidelines
- Identifies potential fuel source areas that would be economically feasible to access and transport as a fuel supply for co-generation plants
- A USFS identified alternative could be a soils layer

Processing of GIS Data (cont.)

Green Infrastructure

- The U.S. Forest Service defined Green Infrastructure as a data layer to emphasizing interconnected green space network or identify areas for “regreening” projects
- The green infrastructure was developed using golf courses, parks, athletic fields, state parks and state wildlife management areas

Processing of GIS Data (cont.)

Impervious Surface

- Impervious surface data set was created using roads, waterbodies, streams, elevations greater than 9500 feet and, several landcover values such as urban and barren

Processing of GIS Data (cont.)

Invasive Grasses/Weeds-Cheatgrass

- Used Nevada's Natural Heritage program's annual grass data
- Values between 25 and 50 percent coverage were chosen because it could make the biggest impact in mitigating the expansion of the annual grasses.

Processing of GIS Data (cont.)

Urban Layers

- Areas of Urban are in 4 different data layers; Community Wildfire Protection Plans, Wildland Urban Interface (high, medium, low intermix) and Green Infrastructure (Parks, Golf Courses, Athletic Fields) and Canopy cover less than 30%

Processing of GIS Data (cont.)

Riparian and Vegetation Layers

- A riparian data set was created using a 300 foot buffer on the main rivers and 100 foot buffer on all tributaries, streams and creeks that were perennial
- Vegetation data set was created from the 2000 National Land Cover Data set extracting values for Deciduous Forest, Evergreen Forest and Mixed Forest

Planning Process

- NDF identified over 60 different Geographic Information System (GIS) data sets that could be used
- Data sets used for Stewardship Spatial Analysis Plan (SAP) were also used for this assessment.
- NDF Resource and Fire program staff (8) identified the top twenty data sets that related to their projects or projects within each program. The results of the poll identified 26 data sets.

Analysis Results-1st Attempt

- The 26 data sets for the first analysis was given an equal weight. The results showed a maximum value was 18, which means 18 datasets of the 26 used overlaid each other.
- The results were plotted and discussed within NDF. The group decided to eliminate several data sets and to break other data sets up into different data sets.

Analysis Results-2nd Attempt

- NDF did another analysis with 27 data sets with the same parameters used in the first analysis. The results favored the urban areas much more than any of the forests in Nevada
- It was determined that 5 data sets were urban in nature; these data sets were removed and the data sets were reduced to 21

Analysis Results-3rd Attempt

- A third analysis was done using the same parameters from the first 2 analysis. The maximum value of any cell was 13, which means out of 21 layers 13 of them laid on top of the others.
- The group decided it was a great starting point for discussions and input for the review process.

Preliminary Findings

- The results validated that current NDF projects are in the places that work needs to be done
- The areas of interest are the Sierra Front, I-80 and US 93 corridors and Mount Charleston area.
- Surprises- Around Winnemucca, Spring Creek and the Mountain areas South of Wells

Findings

- Areas of expected growth came up as a high value
- Areas of high values coincided with Forest Legacy Areas, which have been identified as the Sierra Front, Schell Creek Mountains, Jarbidge, Mt. Charleston and Muddy River Areas

What's Next in the Process

- Start the review process with cooperators and partner agencies for input and comments
- Review any additional assessments that have been completed or are in draft status
- Develop a format for public comments (i.e. web survey or print)

What's Next in the Process

- Set up meetings with NDF program staff and management to brief them on the other state assessments and what we can do improve our assessment

What's Next in the Process

- Redo any GIS analysis based on input from the review process
- Written report addressing issues related to priority forest landscapes in Nevada

Stakeholders Input

- Presented to the Nevada Shade Tree Council on September 26th
- Presented to the Nevada Forest Stewardship Committee on October 8th
- Presented to the Nevada Association of Conservation Districts on October 21st
- Presented to the NRCS National Forestry Group on November 4th

Public Review- Nevada Shade Tree Council (Urban Forestry)

- Presented to the Nevada Shade Tree Council on September 26, 2008
- Suggestions
 - Biomass data- discuss with other state agencies about the data that they might have
 - Needed clarification on the definition of green infrastructure- the participants thought that using the urban boundary would encompass everything urban- golf courses, athletic fields, parks and street trees
 - Consider addressing urban issues – such as recreational use (hiking) vs. ATV's in assessment
 - Expressed that this should be presented to every county commissioner meeting
 - See if Eastern Nevada Lands Bill data can or should be part of the assessment process

Public Review Forest Stewardship Committee (Service Forestry)

- Presented to the Forest Stewardship Committee on October 8th
- Suggestions
 - Make sure look to other agencies for information, such as NDOW, NRCS, US Fish and Wildlife
 - Add the noxious weed layer from Natural Heritage
 - Presentation on FRAP to the Conservation Districts annual meeting in Jackpot, if NDF can get on the agenda
 - Presentation to the Tribal environmental managers at their next meeting
 - A table display of the FRAP map at the Inter-Tribal council conference

Public Review Forest Stewardship Committee (Service Forestry)

- Suggestions-continued
 - Use more current vegetation data such as SWReGAP land cover data
 - Several representatives mentioned they would like copies of the methodology and maps to review and give input
 - Review regional resource planning documents, such as Washoe County's open space plan for other ideas
 - Once the data layers get finalized to hold one day workshops, especially for GIS users, on how the data layers were collected, manipulated and process for the state wide assessment.

Public Review Conservation Districts

(Resource Agencies and Private Land Owners)

- Presented to the Nevada Conservation Districts Annual meeting on October 22
- Comments-Suggestions
 - Was a good tie into the presentation NRCS made regarding the 2008 Farm Bill
 - Presentation on FRAP to the Nevada Cattleman's Association Annual Convention
 - Discuss FRAP with local Conservation Districts
 - Conservation Districts interested in the use of GIS to help them do some possible assessments
 - The use of a Soil data layer-but select certain soil types that would be the most beneficial for growing

GIS Analysis-Round 4+

- Layers to incorporate or replace for the final analysis
 - Use Stewardship Potential data set instead of stewardship projects
 - Incorporate a new vegetation layer
 - Any additional layers mentioned during the review process, such as Noxious Weeds, Public Water Supply Wells, and Soils
 - Any additional layers that are mentioned in the final guidance documents
 - Assign weights to all the layers

Written Report Guidelines

State–Wide Forest Resource Strategy should address:

- Long term strategies for addressing priorities identified in the FRAP analysis
- Describe how NDF proposes to invest federal funding, along with other resources, to address state, regional and national forest management plans
- Include a long-term timeline for project and program implementation

Written Report Guidelines

- Identify partner and stakeholder involvement
- Identify strategies for monitoring outcomes
- Describe how proposed activities will accomplish National, State and Private forestry redesign objectives and respond to specified performance measures and indicators

Written Report Format

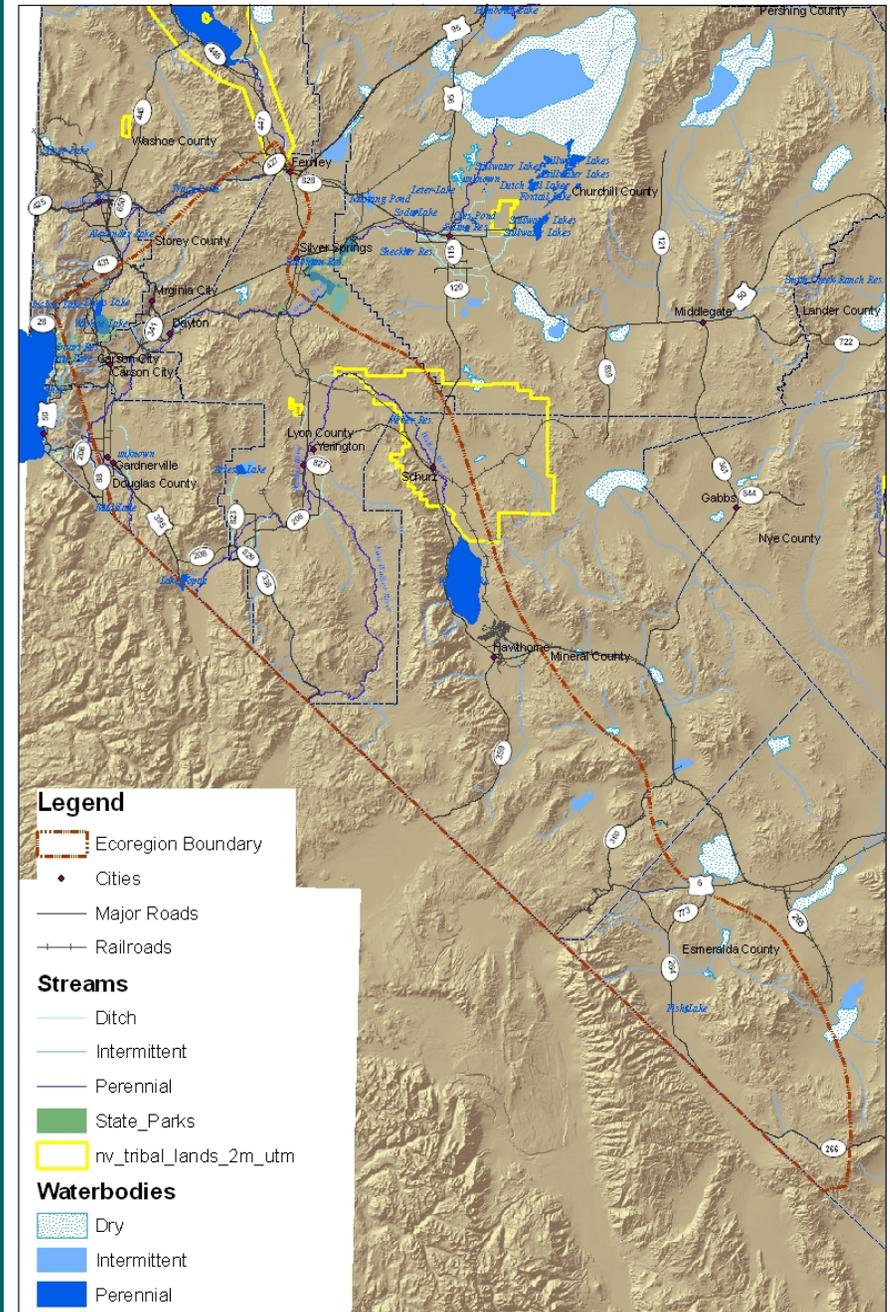
- Report will consist of:
 - Executive Summary section highlighting findings and recommendations
 - Study areas (Ecoregion). This will address specific issues, and current and planned projects in each ecoregion of the state
 - Appendix - which includes all surveys and methodologies

Mono Ecoregion

Prototype Table of Contents:

- Overview of Mono Ecoregion
- Natural Resource Issues and projects in the Mono Ecoregion
- Fire Management Issue and projects in the Mono Ecoregion
- Long Term strategies for the Mono Ecoregion

Mono Section Ecoregion



Feedback

We are looking for the following feedback:

- Any additional GIS layers or information you feel should be included in our analysis?
- Any resource plans developed that may provide cross references for our assessment?
- What environmental issues or problems is your tribe facing in Nevada?
- Based on your review, do you concur with the forestry focus areas identified on the map?

Feedback

Any Questions, Comments or Input to the Assessment is welcome and needed

Email any questions or comments to
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775-684-2530

Thank you