

## Draft Presentation Notes

Presentation Hosted by the Kootenai Valley Resource Initiative & the Forestry Committee  
September 20, 2012 – 7:00 p.m., University of Idaho – Boundary County Extension Office  
Bonners Ferry, Idaho

### **Committee Members in Attendance:**

Ron Abraham, (alt.) Kootenai Tribe of Idaho & KVRI Co-Chair  
David Anderson, City of Bonners Ferry & KVRI Co-Chair  
Linda McFaddan, (alt.) U.S. Forest Service – Idaho Panhandle National Forest  
Kennon McClintock, (alt.) Conservationist/Environmentalist  
Ed Atkins, Jr., Corporate Agriculture/Landowner  
Bob Blanford, Business/Industry  
Mac Lefebvre, (alt.) Landowner (Industrial)

Patty Perry, KVRI Facilitator, Kootenai Tribe of Idaho  
Janet Satchwell, KVRI Recording Secretary, Kootenai Tribe of Idaho

### **Agency/Others in Attendance:**

Doug Nishek, U.S. Forest Service  
Kevin Greenleaf, Kootenai Tribe of Idaho  
Ken Homils, Idaho Department of Lands  
John Lefebvre, Business Owner  
Bob Graham, Private Citizen  
Jennifer Anderson, U.S. Forest Service  
Larry Kaiser, Bureau of Land Management  
Pat Behrens, U.S. Forest Service  
Michell Behrens, Private Citizen

Patty welcomed those attending to a non-official meeting of the KVRI and Forestry Committee. The meeting purpose was to host Dr. Penny Morgan, Professor of Natural Resources, University of Idaho, and Dr. Russ Graham, Research Forester, with the Rocky Mountain Research Station, to present information on forest fires -- *Defining and Understanding Mixed Severity Fire Regime Forests*.

Attachment 1 follows with a list of documents that Dr. Graham shared with KVRI.

### **Presentation:**

Dr. Penny Morgan's PowerPoint presentation - Idaho Forest Fire Ecology, and Dr. Russ Graham's presentation – Dry and Moist Mixed Conifer Forests of Idaho, are available on the Kootenai Tribe of Idaho, KVRI website. [http://www.kootenai.org/kvri\\_docs.html](http://www.kootenai.org/kvri_docs.html)

## **Questions and Answers:**

Q: What do you consider a 'little patch' on the landscape? (Mixed severity fire)

PM: Most of the patches are less than 40 acres and many are smaller than that.

Q: In reference to a chart showing severity of fires it illustrated the warmer than average springs and warmer and drier than average summers – what area was that for?

PM: Forests of Idaho and the area west of the Continental Divide in Montana. You can't just look at warm springs as a fire predictor. What if there is a "new normal" climate?

Q: What does all this information mean to the masses, how do we best use this info?

PM: The only thing for sure about the future is that it is going to be different than it is now. How are we going to manage for that? We will need to create a lot of flexibility for the future by being diverse, learning and adapting, and using information that is available.

RG: There are no easy answers – so we have to figure out what is going to work, and determine what has value to us.

Dr. Morgan and Dr. Graham were thanked for making their presentation available to us.

The presentation ended at 8:45 p.m.

If you are unable to access the presentation programs at <http://www.kootenai.org/kvri.html> please let us know and we can make them available to you.

Janet at 208-267-3519, ext. 567, or [janet@kootenai.org](mailto:janet@kootenai.org)

## Attachment 1

Dr. Graham provided KVRI with electronic copies of the following documents:

### Fire Fuels

1. Basic Principles of Forest Fuel Reduction Treatments; *Agee and Skinner*
2. Fire Ecology of Pacific Northwest Forests; *Agee*
3. Behave: Fire Behavior Prediction and Fuel Modeling System – Part 1; *Andrews*
4. BehavePlus Fire Modeling System – Variables; *Andrews*
5. Fuels Management – How to Measure Success: Portland, OR, Conference Proceedings; *USDA*
6. The Wildland Fire Challenge; *Aplet, Wilmer*
7. The Post-Fire Measurement of Fire Severity and Intensity in the Christmas 2001 Sydney Wildfires; *Chafer, Noonan, MacNaught*
8. Synthesis of Knowledge on the Effects of Fire and Thinning Treatments on Understory Vegetation in U.S. Dry Forests; *Bartuszevige, Kennedy*
9. Fuels for Schools: Case Study in Darby, Montana; *Bergman, Maker*
10. The Contribution of Biomass in the Future Global Energy supply: A Review of 17 Studies; *Berndes, Hoogwijk, van den Broek*
11. Effects of Invasive Alien Plants on Fire Regimes; *Brooks, D'Antonio, Richardson,...*
12. Collaborative Capacity, Problem Framing, and Mutual Trust in Addressing the Wildland Fire Social Problem; *Brooks, Bujak, Champ, Williams*
13. Coarse Woody Debris: Managing Benefits and Fire Hazard in the Recovering Forest; *Brown, Reinhardt, Kramer*
14. Handbook for Inventorying Downed Woody Material; *Brown*
15. Handbook for Predicting Slash Weight of Western Conifers; *Brown, Snell, Bunnell*
16. Fish and Stream Habitat Risks from Uncharacteristic Wildfire: Observations from 17 years of fire-related Disturbances on the Boise National Forest, Idaho; *Burton*
17. Modifying WildFire Behavior – The Effectiveness of Fuel Treatments; *Carey, Schumann*
18. Preventing Disaster, Home Ignitability in the Wildland-Urban Interface; *Cohen*
19. Fire Whirls...why, when, and where; *Countryman*
20. This Humidity Business: what it is all about and its use in fire control; *Countryman*
21. Climate Change and Forest Disturbances; *Dale, Joyce, McNulty,...*
22. The True Cost of Wildfire in the Western U.S.; *Western Forestry Leadership Coalition*
23. Post-Wildfire Logging Hinders Regeneration and Increases Fire Risk; *Donato, Fontaine, Campbell,...*
24. Proceedings of the 29<sup>th</sup> Council on Forest Engineering Conference; *Chung, Han*
25. Perspectives on Forest Operations Engineering and Management; *Heinemann*
26. An Examination of Fire Spread Thresholds in Discontinuous Fuel Beds; *Finney, Cohen, Grenfell,...*
27. An Overview of FlamMap Fire Modeling Capabilities; *Finney*
28. In the Know – FRFTP
29. Pezizalean Mycorrhizas and Sporocarps in Ponderosa Pine after Prescribed Fires in Eastern Oregon; *Fujimura, Smith, Horton,...*
30. Wildland Fires, Forest Service and BLM Need Better Information and a Systematic approach for Assessing the Risks of Environmental Effects; *GAO*
31. Cumulative Watershed Effects of Fuel Management in the Western U.S.; *Graham, Jain, Matthews*

32. The Effects of Thinning and Similar Stand Treatments on Fire Behavior in Western Forests; *Graham, Harvey, Jain,...*
33. Fire Management Today, Vol 65
34. Silvicultural Tools Applicable in Forests Burned by a Mixed Severity Fire Regime; *Graham, Jain*
35. Influence of Forest Structure on Wildfire Behavior and the Severity of its Effects; *USDA*
36. Science Basis for Changing Forest Structure to Modify Wildlife Behavior and Severity; *Graham, McCaffrey, Jain*
37. Fuel Treatments, Fire Suppression, and their Interactions with Wildfire and its Effects; *Graham, Jain, Loseke*
38. Combining ASTER Multispectral Imagery Analysis and Support Vector Machines for Rapid and Cost-effective Post-fire Assessment: A Case Study from the Greek Wildland Fires of 2007; *Petropoulos, Knorr, Scholze,...*
39. The Myth of "Catastrophic" Wildfire: A New Ecological Paradigm of Forest Health; *Hanson*
40. Fire Danger Rating in the U.S.A.: An Evolution since 1916; *Hardy, Hardy*
41. Healthy Forests Report
42. Fire Ecology and Management of the Major Ecosystems of Southern Utah; *Hood, Miller*
43. A Comprehensive Guide to Fuels Treatment Practices for Ponderosa Pine in the Black Hills, Colorado Front Range, and Southwest; *Hunter, Shepperd, Lintile,...*
44. How to Predict the Spread and Intensity of Forest and Range Fires; *Rothermel*
45. Forest Descriptions and Photographs of Forested Areas Along the Breaks of the Missouri River in Eastern Montana, USA; *Jain, Juillerant, Sandquist,...*
46. Photographic Handbook for Comparing Burned and Unburned Sites within a Dry Forested and Grassland Mosaic: A Tool for Communication, Calibration, and Monitoring Post-Fire Effects; *Jain, Juillerat, Sandquist,...*
47. The Relation between Tree Burn Severity and Forest Structure in the Rocky Mountains; *Jain, Graham*
48. Tongue-Confused Meanings for Common Fire Terminology can lead to Fuels Mismanagement; *Jain*
49. Is Forest Structure Related to Fire Severity? Yes, No, and Maybe: Methods and Insights in Quantifying the Answer; *Jain, Graham*
50. Restoration of Northern Rocky Mountain Moist Forests: Integrating Fuel Treatments from the Site to the Landscape; *Jain, Graham, Sandquist,...*
51. The Relation between Forest Structure and Soil Burn Severity; *Jain, Graham, Pilliod*
52. A Soil Burn Severity Index for Understanding Soil-fire Relations in Tropical Forests; *Jain, Gould, Graham,...*
53. 2008 Annual Report, The National Fire Plan in Idaho; *Kimball*
54. Influence of Forest Litter on Run-off, Percolation, and Erosion; *Lowdermilk*
55. Collaborative Stewardship to Prevent Wildfires; *Lenart*
56. Lessons Learned from Rapid Response research on Wildland Fires; *Lintile, Morgan, Hardy,...*
57. Forest Products: Uses for Small-Diameter Trees
58. Testing a Basic Assumption of Shrubland Fire Management: How Important is Fuel Age?; *Moritz, Keeley, Johnson,...*
59. Fire Effects on Belowground Sustainability: A Review and Synthesis; *Neary, Klopatek, DeBano,...*
60. Fire Suppression and Fuels Treatment Effects on Mixed-Conifer Carbon Stocks and Emissions; *North, Hurteau, Innes*

61. Fire, Fuel Treatments, and Ecological Restoration: Conference Proceedings 2002; *USDA*
62. Effects of Timber Harvest Following Wildfire in Western North America; *Peterson, Agee, Aplet,...*
63. Fire and Vegetation History during the last 3800 Years in Northwestern Montana; *Power, Whitlock, Bartlein,...*
64. Primer on Wood Biomass for Energy; *Bergman, Zerbe*
65. Impacts of Prescribed Burning on the Survival of Douglas-fir and Ponderosa Pine in the Boise National Forest; *Progar, Jackson, Geier-Hayes,...*
66. The Wildland-Urban Interface in the United States; *Radeloff, Hammer, Stewart,...*
67. Fuel Treatments Alter the Effect of Wildfire in a Mixed-Evergreen forest, Oregon, USA; *Raymond, Peterson*
68. Evaluating the Effectiveness of Postfire Rehabilitation Treatments; *Robichaud, Beyers, Neary*
69. The LANDFIRE Prototype Project: Nationally Consistent and Locally Relevant Geospatial Data for Wildland Fire Management; *USDA*
70. Recent Forest Insect Outbreaks and Fire Risk in Colorado Forests: A Brief Synthesis of Relevant Research; *Romme, Clement, Hicke,...*
71. A Strategic Assessment of Forest Biomass and Fuel Reduction Treatments in Western States; *USDA, Western Forestry Leadership Coalition*
72. Human Role in Russian Wild Fires; *Nature*
73. Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model; *Scott, Burgan*
74. Assessing Crown Fire Potential by Linking Models of Surface and Crown Fire Behavior; *Scott, Reinhardt*
75. Short-term Effects of Seasonal Prescribed Burning on the Ectomycorrhizal Fungal Community and Fine Root Biomass in Ponderosa Pine Stands in the Blue Mountains of Oregon; *Smith, McKay, Niwa,...*
76. Early Impacts of Forest Restoration Treatments on the Ectomycorrhizal Fungal Community and Fine Root Biomass in a Mixed Conifer Forest; *Smith, McKay, Brenner,...*
77. Forest Fuels and Landscape-Level Fire Risk Assessment of the Ozark Highlands, Missouri; *Stambaugh, Guyette, Dey*
78. Federal Forest-Fire Policy in the U.S.; *Stephens, Ruth*
79. Guidebook on LANDFIRE Fuels Data Acquisition, Critique, Modifications, Maintenance, and Model Calibration; *Stratton*
80. Re-burn Severity in Managed and Unmanaged Vegetation in a Large Wildfire; *Thompson, Spies, Ganio*
81. Estimating Canopy Water Content of Chaparral Shrubs Using Optical Methods; *Ustin, Roberts, Pinzon,...*
82. Climatic and Human Influences on Fire Regimes in Ponderosa Pine Forests in the Colorado Front Range; *Veblen, Kitzberger, Donnegan*
83. Long-term Relations among Fire, Fuel, and Climate in the North-Western US Based on Lake-Sediment Studies; *Whitlock, Marlon, Briles,...*
84. Assessing Fuel Treatment Effectiveness using Satellite Imagery and Spatial Statistics; *Wimberly, Cochrane, Baer,...*

## **Fuel Synthesis**

### **Economics**

85. My Fuel Treatment Planner: A User Guide; *Biesecker, Fight*
86. Financial Analysis of Fuel Treatments; *Fight, Barbour*
87. Users Guide for FRCS: Fuel Reduction Cost Simulator Software; *Fight, Hartsough, Noordijk*

### **Environmental Consequences**

88. Wildlife and Invertebrate Response to Fuel Reduction Treatments in Dry Coniferous Forests of the Western United States: A Synthesis; *USDA*
89. Root Diseases in Coniferous Forests of the Inland West: Potential Implications of Fuels Treatments; *USDA*

### **Fact Sheets**

90. Fuels Planning: Science Synthesis and Integration, Economic Uses, Fact Sheets 1-9; *USDA RN-20*
91. Fuels Planning: Science Synthesis and Integration, Social Issues, Fact Sheets 1-18; *USDA RN-21*
92. Fuels Planning: Science Synthesis and Integration, Forest Structure and Fire Hazard; Fact Sheets 1-6, *USDA RN-22*
93. Fuels Planning: Science Synthesis and Integration, Environmental Consequences; Fact Sheets 1-15, *USDA RN-23*
94. Fuels Planning: Science Synthesis and Integration, Fact Sheet Overview, *USDA RN-19*

### **Fuel Structure**

95. Guide to Fuel Treatments in Dry Forests of the Western United States: Assessing Forest Structure and Fire Hazard GTR686 a-d; *Johnson, Peterson, Raymond*
96. Forest Structure and Fire Hazard in Dry Forests of the Western United States GTR628; *Peterson, Johnson, Agee,...*

### **Journal of Forestry**

97. Partnering with Planners to Develop Tools for Financial Analysis of Fuel Treatments; *Barbour, Flight*
98. Delivering the Science Synthesis: Fuels Tools; *Black, Perin*
99. Social Science Informing Forest Management – Bringing New Knowledge to Fuels Managers; *Jakes*
100. Managing Forest Structure and Fire Hazard – A Tool for Planners; *Johnson, Peterson, Raymond*
101. Science information for Informing Forest Fuel Management in the Dry Forests of the Western United States; *McCaffrey, Graham*

### **Social**

102. Social Science to Improve Fuels Management: A Synthesis of Research Relevant to Communicating with Homeowners about Fuels Management NC267; *USDA*
103. Social Science to Improve Fuels Management: A Synthesis of Research on Aesthetics and Fuels Management NC261; *USDA*
104. Social Science to Improve Fuels Management: A Synthesis of Research on Collaboration NC257; *USDA*

## **Publications Available and Additional Information**

<http://www.fs.fed.us/pnw/publications/>

<http://www.fs.fed.us/rm/publications/>

<http://www.fs.fed.us/rmrs/>

## **Restoration**

105. Evaluating Ponderosa Pine regeneration rates following ecological Restoration Treatments in Northern Arizona, USA; *Bailey, Covington*
106. Toward Reference Conditions: Wildfire Effects on Flora in an Old-Growth Ponderosa Pine Forest; *Laughlin, Bakker, Stoddard...*
107. Reference Conditions and Ecological Restoration: A Southwestern Ponderosa Pine Perspective; *Moore, Covington, Fule*
108. Restoration of Pre-Settlement Age Structure of an Arizona Ponderosa Pine Forest; *Mast, Fule, Moore,...*
109. Determining Reference Conditions for Ecosystem Management of Southwestern Ponderosa Pine Forests; *Fule, Covington, Moore*
110. Comparing Ecological Restoration alternatives: Grand Canyon, AZ; *Fule, Covington, Smith,...*
111. Pine-Oak Forest Dynamics Five Years after Ecological Restoration treatments, Arizona, USA; *Fule, Laughlin, Covington*
112. Restoring Dry and Moist Forests of the Inland Northwestern US; *Jain, Graham*
113. Restoration Treatment Effects on the Understory of Ponderosa Pine/Douglas-Fir Forests in Western Montana, USA; *Metlen, Fiedler*
114. A Spline Model of Climate for the Western United States; *Rehfeldt*

## **Silvicultural**

115. Silvicultural Systems Handbook for British Columbia; British Columbia
116. Silviculture of Ponderosa Pine in the Black Hills: The Status of Our Knowledge; *Boldt, Van Deusen*
117. Ecological Restoration Calls for a New Kind of Language; *Collins, Brown*
118. Distribution of Fine Roots of Ponderosa Pine and Douglas-Fir in a Central Idaho Forest; *Dumm, Fins, Graham,...*
119. Forest Service Nurseries: 100 Years of Ecosystem Restoration; *Dumroese, Landis, Barnett,...*
120. Invasive Plant Responses to Silvicultural Practices in the South; *Evans, Moorhead, Bargeron,...*
121. Past, Present, and Future Role of Silviculture in Forest Management; *Graham, Jain*
122. Free Selection: A Silvicultural Option; *Graham, Jain, Sandquist*
123. Silviculture for the 21<sup>st</sup> Century-Objective and Subjective Standards to Guide Successful Practice; *Guldin, Graham*
124. Productivity of Western Forests: A Forest Products Focus; USDA
125. Linkage between Riparian Buffer Features and Regeneration, Benthic Communities, and Water Temperature in Headwater Streams, Western Oregon; *Newton, Cole*
126. Assessing and Managing Stands to Meet Quality Objectives; *Briggs*
127. Death of an Ecosystem: Perspectives on Western White Pine Ecosystems of North America at the End of the Twentieth Century; *Harvey, Byler, McDonald,...*
128. A Modified Tree Classification for use in Growth Studies and Timber Marking in Black Hills Ponderosa Pine; *Hornibrook*
129. User's Guide to the Stand Prognosis Model; *Wykoff, Crookston, Stage*

130. The Relation Between Tree Burn Severity and Forest Structure in the Rocky Mountains; *Jain, Graham*
131. Western White Pine Growth Relative to Forest Openings; *Jain, Graham, Morgan*
132. Western White Pine Development in Relation to Biophysical Characteristics Across Different Spatial scales in the Coeur d'Alene River Basin in Northern Idaho, USA; *Jain, Graham, Morgan*
133. Ponderosa Pine Tree Classes Redefined; *Keen*
134. Indirect measures for Characterizing Light Along a Gradient of Mixed-Hardwood Riparian Forest Canopy Structures; *Lhotka, Loewenstein*
135. The Influence of Soil Scarification on Oak Reproduction: Review and Management Considerations; *Lhotka, Zaczek, Graham*
136. A Practical Approach to Density Management; *Long*
137. Man and Nature; or Physical Geography as Modified by Human Action; *Marsh*
138. Whitebark Pine Planting Guidelines; *McCaughey, Scott, Izlar*
139. The West-Wide Ponderosa Pine Levels-of-Growing-Stock Study at Age 40; *Oliver*
140. Suggested Stocking Levels for Forest Stands in Northeastern Oregon and Southeastern Washington: An Implementation Guide for the Umatilla National Forest; *Powell*
141. Proceedings of the Symposium on Ponderosa Pine: Issues, Trends, and Management; *USDA*
142. Cumulative Watershed Effects of Fuel Management in the Western United States; *USDA*
143. Manual of Forestry: Silviculture; *Schlich*
144. Manual of Forestry: Forest Management; *Schlich*
145. Manual of Forestry: Forest Protection; *Schlich, Fisher*
146. Manual of Forestry: Forest Utilization; *Schlich, Fisher*
147. Application of Stand Density Index to Irregularly Structured Stands; *Shaw*
148. Sustaining Aspen in Western Landscapes: Symposium Proceedings; *USDA*
149. Ecology, Silviculture, and Management of Black Hills Ponderosa Pine; *Shepperd, Battaglia*
150. The YNF-Index: an Indicator to compare Silvicultural Practices at the Forest or Forest Estate Level; *Sjivsgaard*
151. Prognosis Model for Stand Development; *Stage*
152. Using Lidar and Effective LAI data to Evaluate IKONOS and Landsat 7 ETM+ Vegetation Cover Estimates in a Ponderosa Pine Forest; *Chen, Vierling, Rowell,...*
153. Western White Pine Management Programs Realigned on Northern Rocky Mountain National Forests; *Ketcham, Wellner, Evans, Jr.*

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