RX-310, Introduction to Fire Effects

Pre-course Work

This sheet must be completed and returned to the course coordinator or lead instructor prior to attending the course. Where applicable, <u>responses should be in the students own words</u> to demonstrate understanding of the concepts.

I.   Fire Effects Information System (FEIS):

Use information found in [FEIS](#) to complete the following questions:

Choose one of the plant communities listed on the last page of this worksheet (for example Southwestern California Chaparral or Alaska's Boreal Forest & Tundra). Then choose one plant, one animal, and one pest from under the heading for your chosen plant community. Assume all of three of the species you chose occur within the area you would like to manage with fire, (use the search feature on the FEIS homepage to find each species) and answer the following questions.

1.   Read the information found on the "Index of Species Information" for the plant, animal, and pest in your chosen plant community. List two potential conflicts for a burn boss who is managing for your chosen plant community, and has to choose between burning in the spring and burning in the fall (if the spring and fall are not discussed choose winter and summer) based on the ecological characteristics of the plant, animal, and pest.

(1)

(2)

2.   Read the "Fire Effects/Fire Ecology" section for the plant, animal, and pest in your chosen plant community. List two potential conflicts for a burn boss who has to choose between burning every two years and every 25 years based on the fire effects information for the plant, animal, and pest.

(1)

(2)

3.   Given the above situation, propose a solution that benefits all three species and enables management to restore fire in this ecosystem.

4.   Provide a citation (not just the title) for 1 study related to the area you work in.

5.   Briefly describe in your own words the information that can be found in the Wildland Fire in Ecosystems Series (RMRS-GTR-42-vol. 1-6)?

II.   Interview Questions:

Locate a burn plan written within the last 5 years for your local area and interview the prescribed fire plan author.

Interview Questions:

Who provided input to the author when creating the prescribed fire plan? What types of input did they provide?

Briefly describe the process for creating the prescribed fire plan from the planning and data gathering to final approval.

Identify two specific objectives in a Prescribed Fire Burn Plan from your home unit. Who is responsible for determining if these objectives were met?

How you would manage the fire effects to meet those objectives?

Bring the prescribed fire plan and your interview responses to class for discussion.

III. Federal Wildland Fire Management Policy Module:

Review the [Federal Wildland Fire Management Policy](#) online course module, identify three items in this policy that relate to ecology and give a specific example of how it might affect fire management. This module is based on the [Guidance for Implementation of Federal Wildland Fire Management Policy](#) document.

1.

2.

3.

IV. Adaptive management

Adaptive management is a core theme that runs throughout this course. Read the article *Adaptive Management of Forests in British Columbia* at (https://www.for.gov.bc.ca/hfd/pubs/docs/sil/sil426-1.pdf) describing the concept of adaptive management, and answer the following question.

List and describe two adaptive management examples you can identify on your home unit?

Plant Communities

Midwest Tallgrass Prairie	Plants	Switchgrass (Panicum virgatum) Indiangrass (Sorghastrum nutans)
	Animals	Bison (Bison bison) Meadow vole (Microtus pennsylvanicus)
	Pests	Leafy spurge (Euphorbia esula) Smooth brome (Bromus inermis)
Ponderosa Pine in the Southwest and Intermountain West	Plants	Interior ponderosa pine (Pinus ponderosa var. arizonica) Mountain muhly (Muhlenbergia montana)
	Animals	Abert's squirrel (Sciurus aberti) Mexican spotted owl (Strix occidentalis lucida) Northern goshawk (Accipiter gentilis)
	Pests	Spotted knapweed (Centaurea maculosa) Diffuse knapweed (Centaurea diffusa) Dalmatian toadflax (Linaria dalmatica)
Lodgepole Pine Communities of the Rocky Mountains	Plants	Rocky Mountain lodgepole pine (Pinus contorta var. latifolia) Common beargrass (Xerophyllum tenax)
	Animals	Canada lynx (Lynx canadensis) Red squirrel (Tamiasciurus hudsonicus)
	Pests	Diffuse knapweed (Centaurea diffusa) Spotted knapweed (Centaurea maculosa)
Southern Pine Communities	Plants	Loblolly pine (Pinus taeda) Shortleaf pine (Pinus echinata) Longleaf pine (Pinus palustris)
	Animals	Red-cockaded woodpecker (Picoides borealis) Gopher tortoise (Gopherus polyphemus)
	Pests	Cogon grass (Imperata cylindrica) Kudzu (Pueraria montana var. lobata)
Big Sagebrush Communities	Plants	Big sagebrush (Artemisia tridentata) Little sagebrush (A. arbuscula) Black sagebrush (A. nova) Rabbitbrush (Chrysothamnus viscidiflorus, Ericameria nauseosa)
	Animals	Greater sage-grouse (Centrocercus urophasianus) Gunnison sage-grouse (Centrocercus minimus) Pygmy rabbit (Brachylagus idahoensis)
	Pests	Cheatgrass (Bromus tectorum) Medusahead (Taeniatherum caput-medusae) Juniper (Juniperus occidentalis, Juniperius osteosperma)

Jack Pine Communities of the Great Lakes Region	Plants	Jack pine (Pinus banksiana) Red pine (Pinus resinosa) Eastern white pine (Pinus strobus)
	Animals	Kirtland's warbler (Dendroica kirtlandii) Moose (Alces alces)
	Pests	Spotted knapweed (Centaurea maculosa) Common St. John's-wort (Hypericum perforatum) Canada bluegrass (Poa compressa)
Southwestern California Chaparral	Plants	Chamise (Adenostoma fasciculatum) Redshank (Adenostoma sparsifolium) Wedge-leaf ceanothus (Ceanothus cuneatus)
	Animals	Mountain lion (Puma concolor)
	Pests	Red brome (Bromus rubens) Soft chess (Bromus hordeaceus)
Alaska's Boreal Forest and Tundra	Plants	Black spruce (Picea mariana) White spruce (Picea glauca) Paper birch (Betula papyrifera)
	Animals	Caribou (Rangifer tarandus) Gray wolf (Canis lupus)
	Pests	Canada thistle (Cirsium arvense) Leafy spurge (Euphorbia esula)