



Yellow Belly Ponderosa

## The Yellow Belly Ponderosa Project

### ACTIVITY 1

Questions to consider and pose before viewing the play  
and to discuss after the performance

#### **Specific question with answers explicit in play:**

What are the characteristics of healthy forests, and benefits of maintaining them?

#### **Possible answers found in the play:**

- Spacious, open areas in forest with native grasses/wildflowers, historic conditions, how typical forests were in the past
- Clumps of trees, but not overcrowded
- Fewer, older trees have thick protective bark (adapted to low intensity surface fires)
- Native animal and plant diversity, not invasive
- Small surface fires can help to renew and maintain the forest structure and improve soil conditions, allowing for healthy wildlife populations, functioning landscapes, and improved water cycle conditions - Maintained balance in the forest
- Prevention of crown fire (intense fires that destroy forests)
- Allows for natural flow of water throughout the watershed
- Protects quality and quantity of drinking water
- Soil erosion prevention
- Cleaner air

#### **Other General Questions to guide discussion on characteristics and benefits:**

How do you use the forest?

What do you value about the forest?

What resources does the forest provide?

How does wildlife use the forest?

How does the forest contribute to the water cycle?

How does the forest contribute to the life cycle?

How does fire behave in a healthy forest?

**Specific question with answers explicit in play:**

What factors have caused forests to become unhealthy, or what happened in the past to make our forests “sick”?

**Possible answers found in the play:**

- Increase in human population
- More intensive uses of the forests’ resources
- Expansion, human population encroaching forest habitats
- Logging using the wrong practices historically (cutting too many large trees at the same time)
- Fire suppression plus lack of thinning smaller trees causing overgrowth of forest conditions, and a thick-forest structure
- Many young trees close together competing with each other for water, space, and other resources such as minerals and nutrients in the soil.
- Invasive plant and animal species outcompeting natives
- Air pollution, smoke, smog
- Exploiting the land, livestock overgrazing the native grasses; therefore, surface fires did not have fuels to burn on the forest floor, which leads to overgrowth of small trees.
- Land managers began to see fire as a threat to structures and suppressed surfaces fires from burning
- Suppression of natural ground fires

**Other General Questions to guide discussion on what impacts forest health:**

What do you consider misuse or poor treatment of our forests?

How do humans impact forests or other wildlife habitats?

Is it possible to use too much of a natural resource?

How do our actions effect natural resources?

**Specific question with answers explicit in play:**

What are the effects of having unhealthy forests?

**Possible answers found in the play:**

- Not enough water getting to the ground (crowded trees do not allow snow to accumulate on the forest ground). More water lost in evaporation and evapotranspiration by plants.
- Not enough water getting into the ground, the trees use it all; therefore, less water infiltrating as ground water and running off into waterways of the watersheds
- Not enough water for all plant, animal and human uses
- Increased chance of crown fire destroying vegetation and baking soil
- Fire destroying wildlife habitat
- Water contamination as a result of soil erosion after crown fires
- Floods and physical and chemical impacts to downstream habitats and communities as a result of vegetation loss, increased sedimentation, and toxic input after fires
- Invasive plants
- Poor air quality
- Unhealthy animal populations
- Impacts on human usage and enjoyment (hunting, recreation, etc.)

**Other General Questions to guide discussion on the effects of having unhealthy forests:**

What happens to plants in an unhealthy forest?

What happens to animals?

What happens to natural resources such as water supplies?

How do unhealthy forests impact downstream communities?

**Specific question with answers explicit in play:**

What can we do to help restore our forests to a healthy condition and maintain healthy characteristics?

**Possible answers found in the play:**

- Educating ourselves and others about forest health
- Thin overgrown forests, removing small diameter trees
- Creating more natural (historic) conditions
- Remove invasive plants
- Promoting/reintroducing native plants
- Allowing small natural (or prescribed) surface fires to burn
- Controlled burns prescribed by people who are educated/trained scientists/professionals
- Help ponderosa pines to regenerate by allowing small surface fires to burn and then the ponderosa pines release seeds from their cones
- Forest managers, ecologists, teachers, and students, work together to restore our forests for future generations.

**Other General Questions to guide discussion on forest restoration:**

Why do we need healthy forests?

What do you value about healthy forests and wildlife habitats?

What can you do to help restore forests or other natural habitats?