## **Instructions:**

Please read the following information for background information for Skill Checks 1-4.

## PINKY-PURPLE AZAX BACKGROUND INFORMATION

The Pinky-Purple Azax (PPAZ) is a tiny herbivorous ungulate that stands 19-22 inches tall at the shoulders. It has a unique grizzly grayish-purple hue to its coat, with a striking bright pink to salmon pattern (pinky designs) on its face and across the upper portions of its neck, shoulders, and hindquarters.

PPAZ has just been listed as a federally Threatened species, and the U.S. Fish and Wildlife Service (USFWS) is responsible for management and recovery of the PPAZ. USFWS has determined that the species exists within 3 known distinct population segments, and has designated critical habitat within the state-owned



Emerald Forest. The species occurs mostly within that critical habitat, but may also roam elsewhere in the Emerald Forest and on surrounding private lands. The USFWS, in collaboration with State and private landowners, will determine recovery actions to be implemented over the next 10 to 20 years.

Preliminary research on PPAZ movement ecology indicates that they avoid degraded forest habitat (i.e., < 40% tree canopy). Extant PPAZ populations suffered at least one persistent population bottleneck as a result of the 18th and 19th century fur trade, when they were harvested to near extinction. Historical harvest pressure and limited connectivity have resulted in low genetic variability. Experts are concerned that without genetic exchange, the 3 small populations of PPAZ may become susceptible to the effects of inbreeding depression.

Experts are uncertain about the most important causes of population decline. Some believe that predation by the snowkitcat (SKAT), a feline introduced to the Emerald Forest region, is a primary cause of decline due to reduced survival of all age classes. Other experts hypothesize that logging operations are preventing recovery due to genetic and demographic effects of low dispersal due to habitat fragmentation. Reduced recruitment is also a concern, but less is known about this. There is anecdotal evidence that anthropogenic disturbance, such as logging operations, may cause females to abandon fawns, lowering the recruitment rate.

The USFWS and the State agency are both undergoing budget cuts, so costs are a concern when planning management actions. The State agency that manages the Emerald Forest is mandated to provide for multiple uses of the forest, including recreation and economic uses. Local people and tourists enjoy hunting, and the State's annual hunt on SKAT provides revenue for the state management agency. Local people would also like to resume traditional harvest opportunities for PPAZ. Although not currently allowed, the State agency has a long-term goal to restore those opportunities once the PPAZ population has been sufficiently restored. The local economy depends in large part on revenue derived from timber, and local business leaders are concerned that PPAZ recovery actions will prevent a viable timber industry and hurt the economy.

## **Instructions:**

Please read the background information on the pinky-purple azax (PPAZ) and answer the eight questions that follow.

## **Answer the following questions:**

[2] What triggered this decision?

[3] What are the legal context and constraints?

[4] Who is the decision maker?

[5] What is the decision timing and frequency; are other decisions linked to this one?

[6] What is the scope of the problem (how broad or complicated is it)?
[7] What makes this decision hard (what is the primary impediment to the decision)?
[8] How could 'framing', or how you define the decision problem, affect the outcome in this example?