# String Lined Decisions

**Grade: 6-8**
**Time: 1-2 class periods**

## Lesson #D2:

## How are forests managed?

**Overview:**
Teams of students make and map management decisions about a forest.

**Essential Questions:**
What are the trade-offs associated with the use of forests?

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**Source: Alaska Resource Education Forestry Module fm2 String Lined Decisions**

# String Lined Decisions

Grades 6-8
1-2 class period

**Overview:**
Teams of students make and map management decisions about a forest.

**Essential Questions:**
What are the trade-offs associated with the use of forests?

**Assessment**
Can students:
• decide how a given area of forest should be used?
• defend a point of view?

**Vocabulary**

- multiple use
- wilderness
- recreation
- subsistence
- timber harvest
- primitive use

**Alaska Standards** Addressed:

**Science GLEs**

**The student demonstrates an understanding -that interactions with the environment provide an opportunity for understanding scientific concepts by:** [8] SA3.1 conducting research to learn how the local environment is used by a variety of competing interests (e.g., competition for habitat/resources, tourism, oil and mining companies, hunting groups). (L)

**-of how to integrate scientific knowledge and technology to address problems by:** [7] SE1.1 describing how public policy affects the student's life. (e.g., public waste disposal). [8] SE1.1 describing how public policy affects their lives and participating diplomatically in evidence-based discussions relating to their community.

**Geography**

F3) analyze resource management practices to assess their impact on future environmental quality;

**Government and Citizenship**

F9) understand those features of the economy of the state that make it unique, including the importance of natural resources, government ownership and management of resources, Alaska Native regional corporations,

## Teacher Information and Procedure

### *Prior knowledge for students:* none

### *Materials needed:*

Copies of "String Lined Decisions" student page (or substitute ordinary graph paper)

Copies of “String Lined Decisions Points of View”
scissors
masking tape
7-10 different colors of yarn or string

## *What to do in advance:*

1. Copy both the “String Lined Decisions” and the “String Lined Point of View” student pages - 1 set per 4 students.
2. Different colored string can be made by painting it with tempera paint or coloring it with markers.

## *What to do during the lesson:*

### ***Gear up:***

1. Ask the students to list in 10 seconds all of the things they can do in a forest.
2. Discuss their answers.
3. Ask students if they owned a forest, how would they use it and why?
   a. Would they allow hunting and fishing, would they allow timber harvest, would they allow mining? Discuss students’ thoughts and points of view.

### ***Explore:***

1. Divide the class into teams of 4. Tell each team that they need to read the differing points of view for forest use based on the student sheet provided called “String Lined Decisions, Points of View”.
2. Pass out the student pages and tell the students to read the points of view and then discuss their ideas of forest use as a team.
3. Next pass out the grid sheet called “String Lined Decisions” page. Tape it to the table in the middle of the four students. Tell them this paper represents their forest.
4. Tell the 4 students to place a stream somewhere in their forest. Tell them they can add roads, a lake, or any other items that might be found in a forest.
5. After the students have designed their forest, tell them that each square represent a million acres of forest. They, as a managing group, must decide what areas of the forest will be used for what purposes (those listed on the Points of View student page). They may decide some areas can have multiple uses, while some may be more specific. It doesn’t really matter how they divide up their forest, as long as they come to some kind of agreement and they see that all the acres can’t be used for everything, but some can be used for more than one thing.
6. The string is used to mark the different areas, showing which area is to be used for what. Make sure students include some kind of key.

### ***Generalize:***

1. Each team shares their forest and why they divided it in the way they did including biological, economic, and recreational reasons.
2. Did the students provide a mix of uses? If a particular use is lacking or is allocated to only a small portion of the forest (be it timber harvest, wilderness, or some other use), ask the students how this might affect use demands on other forests in Alaska or the world.

## ***Assess:***

The generalize section can be used for your assessment.

## *Extensions, adaptations, and more resources:*

1. Have students make decisions about the forest use as a class, combining all of the teams' ideas into one.
2. After researching an area of forest near you, have students prepare a presentation regarding how they feel that part of the forest should be used.
3. Attend a public hearing regarding use decisions of a local forest.
4. See the "Land Graphs" activity, and use the background from this activity to make graphs of land use designations in the Tongass.

# Background

There are many different uses for forests in Alaska. Some areas are open to timber harvest and subsequent tree farming, some are open only to recreational activities and some are closed to anything but primitive use.

The main objective of managers is to achieve the maximum and wisest use from every acre. Depending on the land owner, whether they be an agency or a private entity, the maximum use may be connected with the land owner's objectives of conservation or with the land owner's desire to earn income from the property or a combination of both.

Sometimes timber harvest provides not only financial benefits, but access for recreational users by way of roads. It may also change the habitat of the area to provide more deer or moose hunting or to reduce the risk of wildfire through fuels management.

Some areas have been conserved as Wilderness. This means the land is set aside to be used in its primitive state to preserve it for the future. While those areas state that no campgrounds can be established or hunting allowed, it may hold some of the most pristine areas for wildlife viewing, hiking, or river rafting. Areas managed as wilderness are subject to catastrophic change from natural causes which may degrade use for such activities or its status as wilderness.

Throughout the 16.9 million acres on the Tongass National Forest, about 9.9 million acres are considered forested. The Forest Plan of the Tongass National Forest has zoned about 3.7 million acres to allow timber harvest on portions the forested land. Timber management activities will occur primarily on 676,000 acres within these zones. Other forested acres within these zones are generally not available for harvest because they are important for resource protection such as along streams and lakes, near caves, along the beaches and estuaries, on steep and unstable slopes, around wildlife nests and dens, and other sensitive areas.

The Tongass National Forest includes about 6.6 million acres in areas designated by Congress that generally do not allow development. These include Wildernesses, LUD II areas, and National Monuments. LUD II areas are similar to Wildernesses but are not as regulated as to types of activities that are allowed.

The Tongass National Forest has about 9.4 million acres outside of designated Wildernesses and LUD II areas that are in an undeveloped or roadless condition. These areas are being debated locally, regionally and nationally as how best to manage them, including allowing development activities like timber management. There are about 2.6 million acres of inventoried roadless areas within zones that allow timber harvest. About 296,000 acres of the 676,000 acres of forested lands available for timber harvest are located in roadless areas.

Commercial forests or commercially valuable land refers to forested land that has the potential to produce a continuous crop of timber or wood. Not all designated commercial forest lands are currently used for timber harvesting, many never will be as those lands lie within the boundaries of national parks, national wildlife refuges, or wilderness areas where timber harvesting is not permitted in the management plan. With the establishment of national forests in the U.S., and specifically Alaska, an attempt was begun to protect forested lands from private sector exploitation and allow for planning to dictate the regulated use of these forest resources in the future. These came about in a series of very stringent laws including the Best Management Practices Act, the Standards and Guidelines Act, and the Forest Resource Protection Act. These laws regulate the

forest including timber harvest mitigation for the protection of fish, wildlife, habitat, soil, and water, and ensuring a sustainable timber crop for future harvest.

In the Coastal forest, harvesting of timber is planned for on the Tongass National Forest, Chugach National Forest, Haines State Forest, tribal lands managed in trust by the Bureau of Land Management, university and mental health trust lands, and timber land owned by the private Native Corporations.

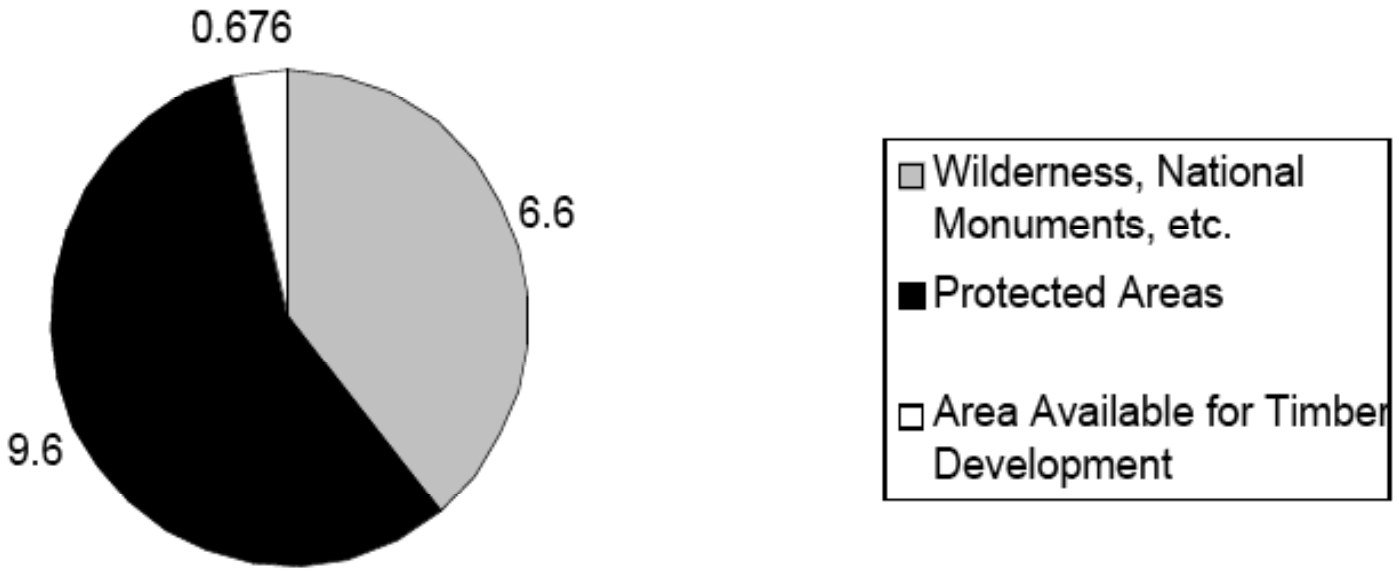
Private Native Corporations own approximately 16 million acres of the timber lands in Alaska. In the Interior forest, a limited amount of timber harvesting has been done from state forest lands and Native Corporation lands due to timber resources, available markets, and the distance to transportation ports.

At all levels of government as well as in the private sector, careful planning determines the management of forested lands in the U.S. and more specifically here in Alaska. Most managers of forested lands within Alaska have a management plan or are in the process of developing one. These plans take into consideration both the environmental and economic factors.

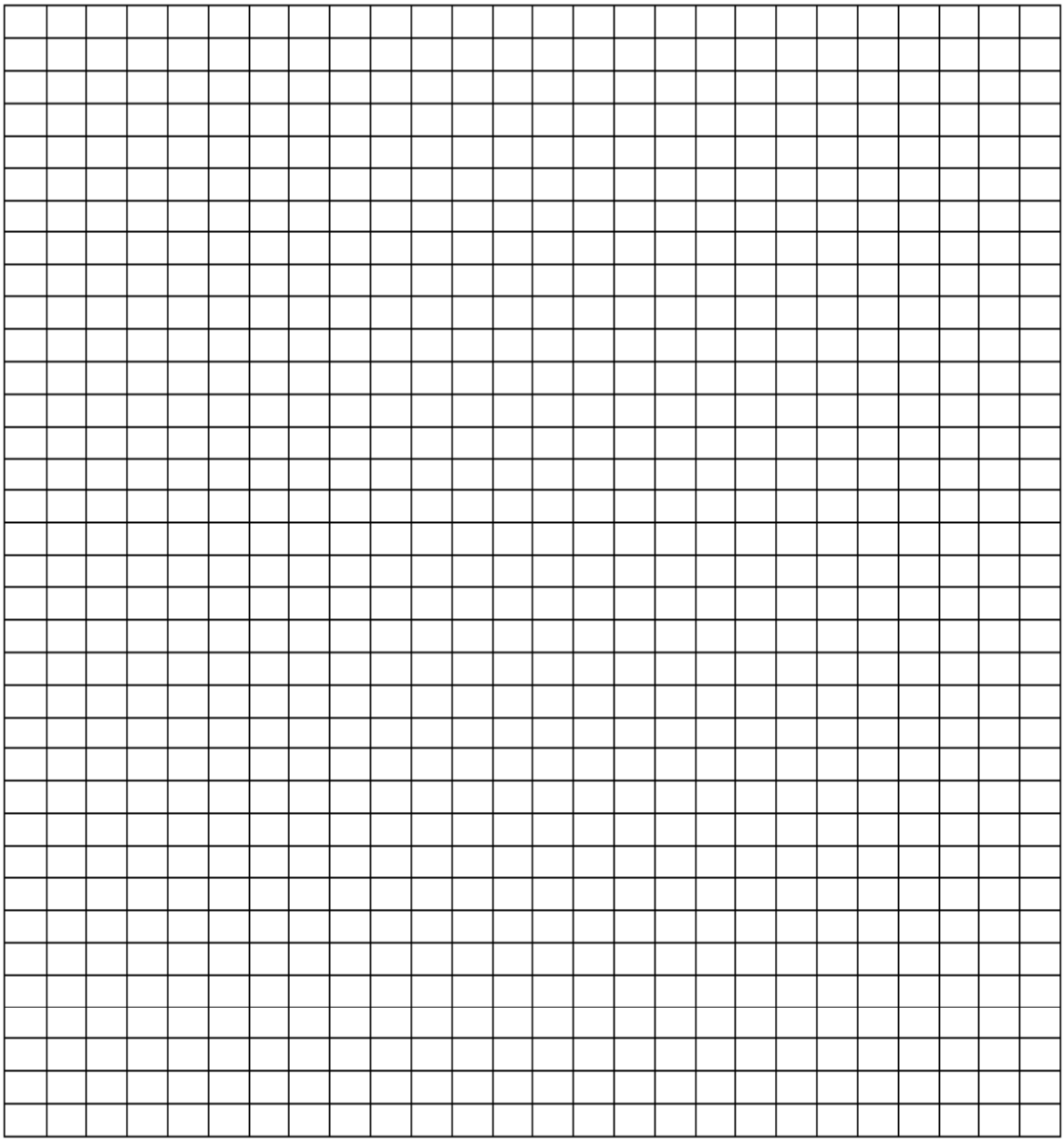
Adapted with permission from the Alaska Forest Association Fact Cards and
Great Green Forests, Alaska Women in Timber, 1987, pages 87-94.

## Uses of Tongass National Forests in Millions of Acres

**Source: Tongass National Forest Office, Ketchikan, Alaska**



# String Lined Decisions



# String Lined Decisions Points of View

| | |
|---|---|
| **Mining in the Area**<br>There is a tremendous amount of gold throughout the forest. Someone would have to remove the trees before mining could begin. There are several mining companies who would pay a large sum of money to be able to mine there. They would employ many local workers and pay taxes and royalties to the local community. | **Use for Timber Harvest**<br>Most of the trees in the forest are either Sitka spruce or western hemlock. Both have significant economic value. Two companies are interested in harvesting the area. They would like to harvest the trees, replant the forest, pay the community money (stumpage), and mill the logs into lumber and pulp. The company would employ local workers in the woods and the mill. |
| **Keep the Water Quality**<br>There are many people concerned about the water. They want to make sure the water quality and temperature for both salmon and trout are not impacted. | **Keep as Wilderness**<br>Many would like to see the forest stay as it is. |
| **Use for Hunting**<br>Many would like to see the area opened up to meadow land for better deer and moose hunting. | **Use for Camping and Hiking**<br>There are few campgrounds or hiking areas in the region. This forest could provide a lot of both. |
| **Use for Fishing**<br>The water quality is as important as the beauty of the area for those who would like to fish. | **ATV Use**<br>More roads are needed throughout the area to provide access for ATV, including getting to hunting and fishing areas. |
| **Other**<br>(In this space you can add another use if you like) | **Other**<br>(In this space you can add another use if you like) |