
Oak Stand Management Activity Packet

Scenario

The Confederated Tribes of Siletz Indians (CTSI) recently acquired land that includes a 50-acre parcel containing a stand of native Oregon white oak that is being encroached upon by fir trees and other native and non-native vegetation. The Tribe would like to protect the oak trees and restore some of the original oak savannah habitat around them for restoration, cultural, and wildfire protection. Your group is a team of environmental consultants invited by the Tribe's Natural Resources Department to submit a bid to clear the parcel of undesirable vegetation. The Tribe is offering \$10,000 for the work.

INSTRUCTIONS

1. Review the list of conservation and restoration tools and their costs per acre in the "Appendix: Conservation and Restoration Tool Inventory and Price List" on page 3. Some tools are based on scientific knowledge and practices, and others come from the experience Native people have built up to best take care of the land. Each tool has benefits and drawbacks (listed as "Pros" and "Cons" in the table).
2. With your group, decide which tools would be most beneficial and economical for clearing the undesirable vegetation. Note that there is no single best answer. Any bid will need to balance the tradeoffs of each tool to stay within the budget while minimizing risks.
3. Use the "Oak Stand Protection Plan" worksheet on page 2 to explain why you chose each tool. In the project budget table, list which tools you will use, how much they will cost, and the total project budget.
4. Present your bid to the rest of the class. Ensure that each team member has a speaking part in the presentation.

Appendix. Conservation and Restoration Tool Inventory and Price List

| Activity or Tool | Cost per Unit | Pros | Cons |
|---|----------------|---|---|
| Prescribed burn | \$400 per acre | <ul style="list-style-type: none"> • Highly effective • Restores soil health and reinvigorates fire-dependent species • Encourages healthy acorn crop from oak trees | <ul style="list-style-type: none"> • Expensive • Can require advanced planning and coordination with local agencies • Potential complaints from neighbors |
| Manual weeding/clearing (using hand tools and selected small power tools such as string-trimmers) | \$100 per acre | <ul style="list-style-type: none"> • Targeted, selected removal of undesirable vegetation • Does not use toxic chemicals | <ul style="list-style-type: none"> • Does not nurture soil ecology or encourage regrowth of native species • Labor intensive and time consuming • Potential risk of pollution (if using gas-powered tools) |
| Mechanical weeding/clearing (using mowers/tractors) | \$91 per acre | <ul style="list-style-type: none"> • Efficient clearance of undesirable vegetation • Does not use toxic chemicals | <ul style="list-style-type: none"> • Does not support soil ecology or encourage regrowth of native species • Low-to-medium risk of pollution or damage to plants from large gas-powered machinery |
| Spot-spray herbicides | \$61 per acre | <ul style="list-style-type: none"> • Low cost • Targeted, selected application limits potential spread to larger environment | <ul style="list-style-type: none"> • Does not support soil ecology or encourage regrowth of native species • Uses toxic chemicals • May contaminate plants that Native people use for food |
| Broadcast-spray herbicides | \$55 per acre | <ul style="list-style-type: none"> • Lowest-cost method | <ul style="list-style-type: none"> • Does not support soil ecology or encourage regrowth of native species • Uses toxic chemicals that can impact many species • Likely to spread to larger environment beyond treated area • Likely to contaminate plants that Native people use for food and basketry materials |

Sources

Knapp, T. (2019). *6th grade wetlands curriculum*. Confederated Tribes of Siletz Indians. [https://
appliedeco.org/wp-content/uploads/Siletz-Wetlands-Book.pdf](https://appliedeco.org/wp-content/uploads/Siletz-Wetlands-Book.pdf)

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Cooperative-SAP-FINAL-3_2020-web.pdf](https://willamettepartnership.org/wp-content/uploads/2020/03/WV-Oak-and-Prairie-Cooperative-SAP-FINAL-3_2020-web.pdf)