

How all of the Alternatives were built for Alaska Roadless.

Jacqueline Foss, with help from Christal Higdon, built the spatial data for the alternatives of Alaska Roadless Rulemaking process. Robert Nichols worked closely with both of us to help incorporate data provided by district rangers and Tongass Timber Staff.

General process:

1. Unioned (GIS process) the 2001 Roadless areas with 2016 Tongass Land Use Designation (LUD), Mineral LUD overlay, Value Comparison Unit (VCU) which holds the Tongass-77 (T-77) watersheds, and TNC-Audubon conservation areas
2. Identified (GIS Process) roaded roadless data from 2016 Tongass forest plan
3. Noted that there was missing roaded roadless information from the version used in the 2016 forest plan, buffered all roads and harvest units accordingly and intersected them with 2001 roadless area. Found an additional 6,000 acres of roaded roadless
4. Added info from the 2001-2016 Tetra tech roadless rule changes from forest plan
5. Heads up digitized areas to remove from roadless for alt 3 and 3' using HUC 14 lines
6. Added small islands greater than 1 acre as new roadless areas in alternative 2 and 3
7. Attributed polygons from union and subsequent layers to meet the 4 new roadless categories

Alternative 1.

Alternative 1 is the same as what is in the Tongass, Regional, and National GIS libraries. It has been updated to reflect post 2001 land exchanges and small geospatial errors. Data used to correct: Tongass Ownership GIS data, Wilderness GIS data

Alternative 2.

Alternative 2 removes roaded roadless from the 2001 Roadless areas. After review, it became apparent that the feature class used for the 2016 forest plan omitted roaded roadless areas. All roads built and approved then built during the exemption were buffered to 1,200 feet and all associated timber harvest was buffered to 600 feet. This data was then intersected with the library copy of the 2001 Roadless Areas. Small areas, i.e. doughnut holes created in the buffering process, were incorporated into these roaded roadless areas to maintain roadless areas greater than 5000 acres.

The 2001 inventoried roadless areas did not include any islands less than about 100 acres. All islands adjacent to roadless areas greater than 1 acre were added back into alternatives 2 and 3. The Tongass ownership GIS data was used to identify islands. Small areas were added back into Roadless areas that were never harvested (these were grandfathered out of roadless and do not have an existing infrastructure).

LUD Types and Conservation areas	Roadless priority type
LUD II	LUD II Roadless Priority
Roaded Roadless and small expansions	Dropped from Roadless
Lands in T-77 and/or TNC-Audubon Areas	Watershed priority areas
All other lands currently in 2001 Roadless Areas.	Roadless priority area

Alternative 3.

Alternative 3 expanded on alternative 2. It involved the most input from individuals. It includes all of the small islands greater than 1 acre and it expanded on the roaded roadless areas in development LUDs that could be suitable under the forest plan. Roadless was removed from LUD II areas.

All of the Ranger districts identifies priority areas for timber harvest. This data was captured during a meeting in October 2018. Most of the feedback consisted of "remove roadless on development LUDs." The team considered this the logical extension of the road network alternative. The team added areas near existing roads and roaded roadless areas using watershed boundaries while avoiding T-77 VCU/watersheds and TNC-Audubon conservation areas. The current IRAs are polygons with buffers erased from them. Bringing these boundaries to a watershed divide seems rational so these roaded roadless areas and roaded areas were expanded to the nearest watershed (HUC 14) boundaries in Timber Production and Modified Landscape LUDs. We tried to keep large roadless areas intact and maintain connectivity between valleys, where possible. A 2016 Tongass forest plan timber suitability run from summer of 2018 was used to make sure that any areas captured by alternative 3 include mostly suitable acres.

How areas were added:

A model was built in GIS that identified areas that were:

- In Timber Production or Modified Landscape 2016 Tongass LUDs
- Outside of any T-77 or TNC/Audubon areas
- Adjunct to existing roads

We then moved through these areas and identified areas to include in alt 3 prime. We used the watershed boundaries (HUC-14) to make this determination. We did not leave isolated roadless area islands.

LUD Types and Conservation areas	Roadless priority type
LUD II	Dropped from Roadless
Roaded Roadless, extensions of existing transportation network in Timber Production LUD, Modified Landscape LUDS to HUC14	Dropped from Roadless
All other lands in 2001 roadless areas	Roadless priority

Alternative 4.

Alternative 4 includes all of the areas removed from the 2001 Roadless areas as alternative 3. Further, was only a GIS exercise where roadless was removed on roaded roadless and some small adjacent areas. Then all roadless areas on Timber Production and Modified Landscape LUDs that did not intersect with Tongass-77 VCU/watersheds and TNC-Audubon areas were made into Timber Production areas. All other lands in the 2001 Roadless Inventory became Roadless priority areas

LUD Types and Conservation areas	Roadless priority type
LUD II	LUD II Roadless Priority
Timber Production, modified landscape	Timber Priority areas
Timber Production or Modified landscape + T-77	Roadless Priority area

Comment [PS-F1]: Are the small adjacent areas the 'logical extensions'? or something else?

Comment [FJV-2]: Yes they are "logical extensions" from the old alt 3

Comment [PS-F3]: Can you give me the approx.

Comment [FJV-4]: Approximate what?

Comment [PS-F5]: Need more information on where the changes from alt 3 (above) and alt 4 are.

What lands were removed from roadless?

Comment [FJV-6]: Only lands that were in the original alt 3 were removed from roadless. Most of these areas are Timber Priority Areas in Alt 4.

and/or TNC- audubon <u>Audubon</u> areas; scenic viewshed, non development LUDs currently in 2001 Roadless Areas	
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Alternative 5.

All roadless areas removed from all lands

Alternative 6

Alternative 6 came from the State of Alaska. It removes roadless on all development LUDs (Timber Production, Modified Landscape, Scenic Viewshed) and mineral overlay LUDs regardless of T-77 or TNC-Audubon status.

LUD Types and Conservation areas	Roadless priority type
LUD II	LUD II Roadless Priority
Development LUD, Mineral Overlay LUD	Remove Roadless
Non-development LUD currently in 2001 Roadless areas	Roadless Priority Areas.