

Alaska D1 Lands Key Stats

- **183** Alaska Native villages are within 50 miles of a D1 land area, with an additional **26** villages within 100 miles of a D1 land area. In total, **209** Alaska Native villages are within 100 miles of D1 lands.^{1,2}
- **586,289** people residing in incorporated & unincorporated areas of Alaska live within 50 miles of D1 lands per the last 2020 U.S. Census. An additional **107,920** people residing in incorporated & unincorporated areas of Alaska live within 100 miles of D1 lands. In total, **694,209** Alaska residents within incorporated & unincorporated areas are within 100 miles of D1 lands per the 2020 U.S. Census.^{1,3,4}
- Approximately **21,139,400** acres of D1 lands are designated as priority Federal Subsistence Lands (equivalent to **74%** of D1 lands). The Federal Subsistence Management Program provides a preference for take of fish and wildlife resources for subsistence uses on Federal public lands and waters in Alaska. The term “subsistence uses” means the customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation or for other specified purposes.¹
- Approximately **6,700** miles of anadromous water ways reside within or directly adjacent to the boundaries of D1 lands. Of those, approximately **2,422** miles are used by species for spawning habitat (**36%**) and **3,277** miles are used by species for rearing habitat (**49%**). Considering a 100 ft. buffer, this equates to an additional **161,290** acres of riparian habitat. With a 200 ft. buffer, this equates to an additional **315,540** acres of riparian habitat.^{1, 5}
- In total, approximately **14,734,102** acres of D1 lands (about half of all D1 lands) are within the range of the Western Arctic Caribou herd.^{1,6}
 - Calving Range – 387,281 acres
 - Migratory Range – 1,621,542 acres
 - Peripheral Range – 2,276,030 acres
 - Summer Range – 1,723,638 acres
 - Winter Range – 8,725,611 acres
- On average, D1 lands contain approximately **1,255,777,251** tons of manageable carbon, which is equivalent to **4,604,516,587** tons of CO₂. Manageable carbon is defined as areas where carbon loss is driven by direct land-use conversion which could be halted or because climate change impacts affecting the area can potentially be directly mitigated through adaptive management (Noon et al., 2021).^{1,7}
- On average, D1 lands contain approximately **164,299,103** tons of “irrecoverable carbon”, which is equivalent to **602,430,048** tons of CO₂. “Irrecoverable carbon” refers to the vast stores of carbon in nature that are vulnerable to release from human activity and, if lost, could not be restored by 2050 — when the world must reach net-zero emissions to avoid the worst impacts of climate change (Noon et al., 2021).^{1,7}

- **See <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator> to obtain equivalence examples. Select ‘Emissions Data’ in Step 1 and then paste in metric tons of carbon from the above bullets to convert data to CO₂ equivalencies.
- A maximum of 228 species [amphibians, birds, mammals, reptiles] and a mean of 138 species have ranges that overlap with D1 lands according to the latest species richness data from the IUCN Red List (2023). Of those, a maximum of 16 species are classified as threatened (average of 6).^{1,8}
- As a vital component of 30 by 30 goals, 11,119, 337 acres (≈ 40%) of BLM D1 lands contain acres with conservation value in the top 10% of all USFS and BLM lands in Alaska, based on a Composite Model in Alaska which incorporates a set of six ecological and environmental indicators [Climate Resiliency, Climate Stability, Total Carbon, Ecological Connectivity, Ecological Intactness, Species Richness] that provide a comprehensive assessment of conservation value (Conservation Science Partners. 2021). Furthermore, ≈ 3,307,662 acres of BLM D1 lands contain acres with conservation value in the top 5% of all USFS and BLM lands in Alaska. High values of the composite model indicate important locations across a range of conservation objectives.^{1,9}

Citations

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2. U.S. Bureau of Land Management (BLM), 2022, Geospatial Platform. BLM AK Conveyed Lands. Downloadable Data Collection: BLM. <https://gbp-blm-egis.hub.arcgis.com/maps/053b95ef42764373b6b1ccccf2ffb160d/about>
3. U.S. Census Bureau. (2020). Total Population, 2020 Census. U.S. Department of Commerce. <https://data.census.gov/>.
4. U.S. Geological Survey, National Geospatial Technical Operations Center, 2023, USGS National Boundary Dataset (NBD) Downloadable Data Collection: U.S. Geological Survey.
5. Giefer, J., and S. Graziano. 2024. Catalog of waters important for spawning, rearing, or migration of anadromous fishes – Arctic Region, effective June 2024, Alaska Department of Fish and Game, Special Publication No. 24-01, Anchorage.
6. Western Arctic Caribou Herd Working Group. 2019. Western Arctic Caribou Herd Cooperative Management Plan - December 2019. 54 pp. Copies are available online (<https://westernarcticcaribou.net/>)
7. Noon, M.L., Goldstein, A., Ledezma, J.C. et al. Mapping the irrecoverable carbon in Earth’s ecosystems (spatial data). Nat Sustain (2021). <https://doi.org/10.5281/zenodo.4091029>.
8. IUCN (International Union for Conservation of Nature) 2023. Species Richness and Rarity-Weighted Richness (spatial data). The IUCN Red List of Threatened Species 2023(1). <https://www.iucnredlist.org/resources/other-spatial-downloads>.
9. Conservation Science Partners. 2021. Informing the identification and protection of public lands to help mitigate the impacts of climate change and biodiversity loss in the United States. Technical Report. Truckee, CA. <https://www.theclimateatlas.org/>.