

# Cartographic Display of Indigenous Lands in Apple Maps

Bradley Herried<sup>a,\*</sup>, Kate Chanba<sup>a</sup>, James Irwin<sup>a</sup>

<sup>a</sup> Apple, Inc., [bherried@apple.com](mailto:bherried@apple.com), [kchanba@apple.com](mailto:kchanba@apple.com), [james\\_irwin@apple.com](mailto:james_irwin@apple.com)

\* Corresponding author

**Keywords:** Indigenous Lands, Map Design, Multi-Scale Mapping, Digital Mapping

## Abstract:

Apple Maps offers a rich basemap representing both the physical and political world. Our terrain and physical environment, human settlement and connection, and administrative layers strive to be inclusive of all communities and local expectations. To that end, we brought Indigenous Lands to the Apple Maps product which required new data, new technical approaches, and thoughtful design.

We worked directly with indigenous cartographers, local experts, and tribal nations to respectfully and inclusively represent these lands. As of May 2025, Apple Maps has launched Indigenous Lands in the United States, Canada, Australia, and New Zealand.



Figure 1. Examples of Apple Maps' cartographic treatment for Inuit Owned Lands, Nunavut, Canada (left) and Ahupua'a on Oahu, Hawaii, United States (right)

For boundary display of various Indigenous Lands (including United States Federal Reservations, Canada First Nations, Australia Aboriginal Lands, etc.), we employ *tint bands*, a cartographic technique to show a thin, bolder border along with a thicker, semi-transparent inner border. The benefits of this approach allowed us to avoid border ambiguity for “checkerboard” and irregularly shaped polygons (common in the United States west) and allow our terrain and land cover basemap to not be occluded.

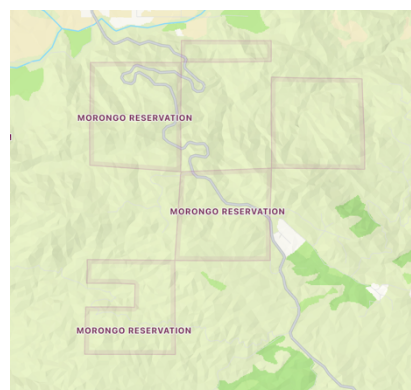


Figure 2. “Checkerboard” pattern land parcels of the Morongo Reservation in California, United States

For Indigenous Lands which have uncertain historical or contemporary boundaries (including Moku in Hawaii, Rohe in New Zealand, Traditional Country in Australia, etc.), we present a label-only approach with appropriate zoom levels to best represent the area.

Moreover, we present detailed data curation for label placement, label styles, custom place card content, and inclusion of native syllabaries.

### **Acknowledgements**

We gratefully acknowledge the Indigenous Peoples on whose ancestral homelands we live and work, as well as the diverse and vibrant Indigenous Communities who make their home here today.

We also acknowledge the support of Apple Inc., across many organizations, for enabling the Indigenous Lands project.