



# Tribal Spaceports: Opening Access to Outer Space\*

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## Abstract

The goal of this research is to provide insights and identify potential challenges that may affect the participation of Indian tribes in the commercial space industry by utilizing their claimed lands for tribal spaceports. Specifically, the research will examine the laws and regulations related to the use of tribal land for spaceport development and licensing. It will also analyze potential business models and infrastructure needs, focusing on modifications to current Native American (NA) airports to meet the unique requirements of spaceports. The advantages and disadvantages of tribal spaceports will be assessed, taking into account their economic, socio-cultural, financial, and environmental impacts. The research results will offer understanding regarding the distinct circumstances of American Indian (AI) cultures, the importance of collaboration with state and federal administrations for economic growth, and the revisions possibly required in current laws that affect American Indians (AI) either directly or indirectly.

## Introduction

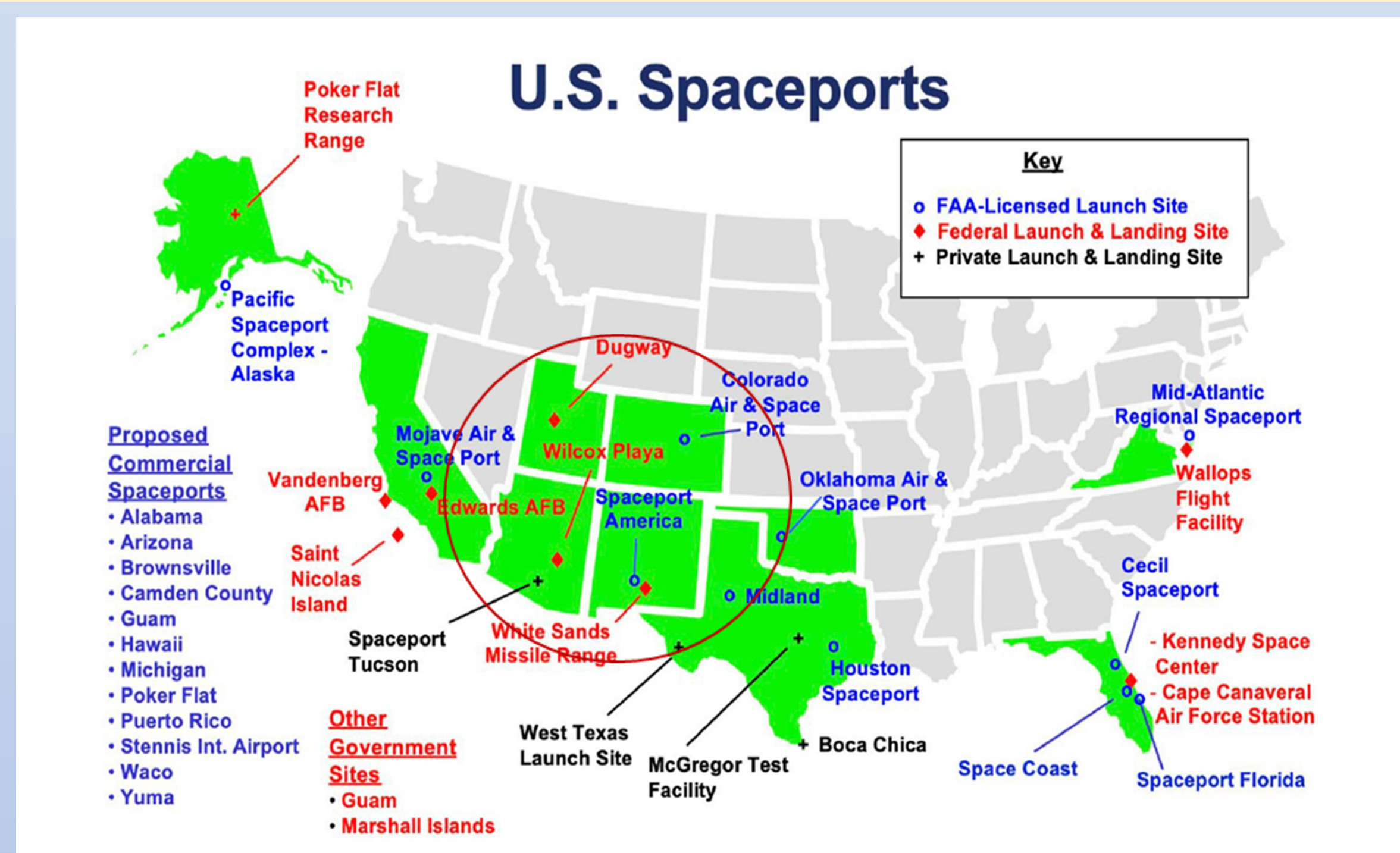


Figure 1. Current & Proposed U.S. Spaceports

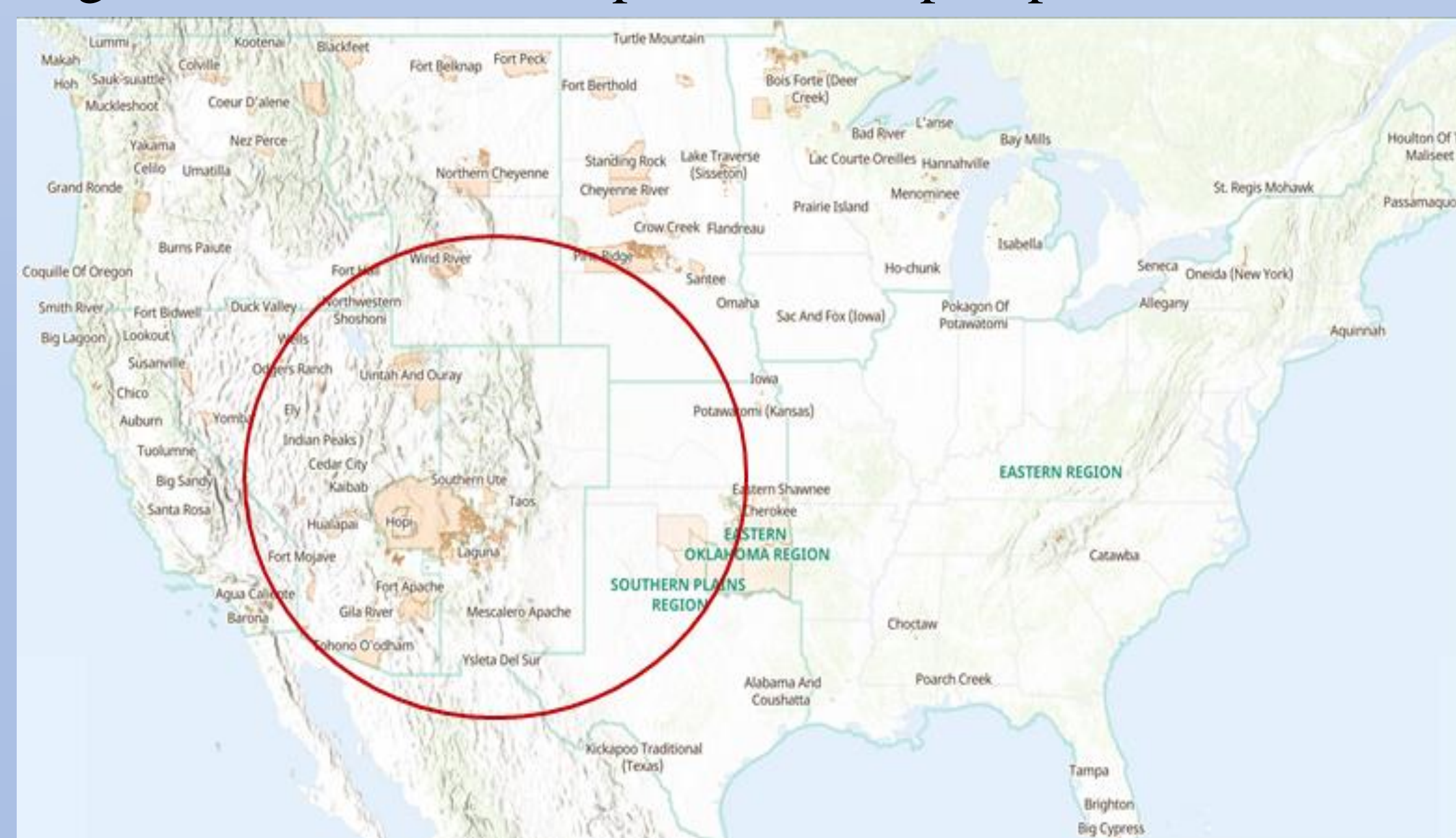


Figure 2. Map of federally recognized AI tribes in U.S.

## Background

- People are unknowledgeable of the foundational principles that play a role in American Indian affairs.
- Leading majority of the populace tend to believe American Indian (AI) tribes are insufficient to be self-reliant or self-governed.
- A way tribal nations can support the space economy is by developing and operating licensed spaceports, contributing to the national spaceport network.
- Notion of tribal spaceports in the U.S. brings to the forefront a unique and complex context that involves land trusts and Congressional power, investment and risk, conflicting cultures and values, and historical injustice and distrust.
- 573 sovereign tribal nations in the U.S with 229 in Alaska and the remainder spread across 35 other states.
- U.S. Government holds ~58M acres of tribal land in trust
- Use of tribal lands for spaceports brings a distinctive setting with challenges.

## Methodology

- Review of NPIAS to assess Native American airports as possible spaceports
- Personal experience and informal discussions with American Indian representatives

## Results

- 23 NA airports
  - None has air traffic control towers; Most facilities unattended.
  - Many lack hangars and other needed infrastructure.
  - Majority support small general aviation (GA) aircraft.
  - Runways in terms of number, composition, integrity, and size vary.
  - Whether land is in trust or owned by tribe and what that may mean for spaceport use is still under investigation.
- NA airports at a disadvantage compared to other non-NA GA airports that have received site operator licenses.

## Importance and Relationship of Land to American Indians

- It is the centerfold for natural resources.
- The land is seen as gifts of life from their creators or higher power.
- Everything living is seen to have a soul and/or spirit.
- The significance of the land and living beings hold a greater purpose that very much contribute today to AI tribes.
  - Traditions
  - Customs

## Conclusion

- Congress was integral for implementation of the Indian Gaming Regulatory Act; this may be the case for tribal spaceports.
- Business model analyses based on unique context
- Deeper exploration by AI & NA to understand obstacles, risks, and benefits.
- Industry, state and Federal government trust-filled partnerships and assistance.
- Changes to current laws that directly or indirectly impact AI tribe advancements in the space economy.



Figure 3. American Indian Marking for Recognition

## Future Work

- Deepen knowledge of U.S/ Federal Indian Law & Regulations
- Implement tribal survey to continue research of tribal socio-cultural backgrounds
- Throughout this process, continue to share and communicate discoveries with the research community and tribal communities

## References/Acknowledgements

See author for references.

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