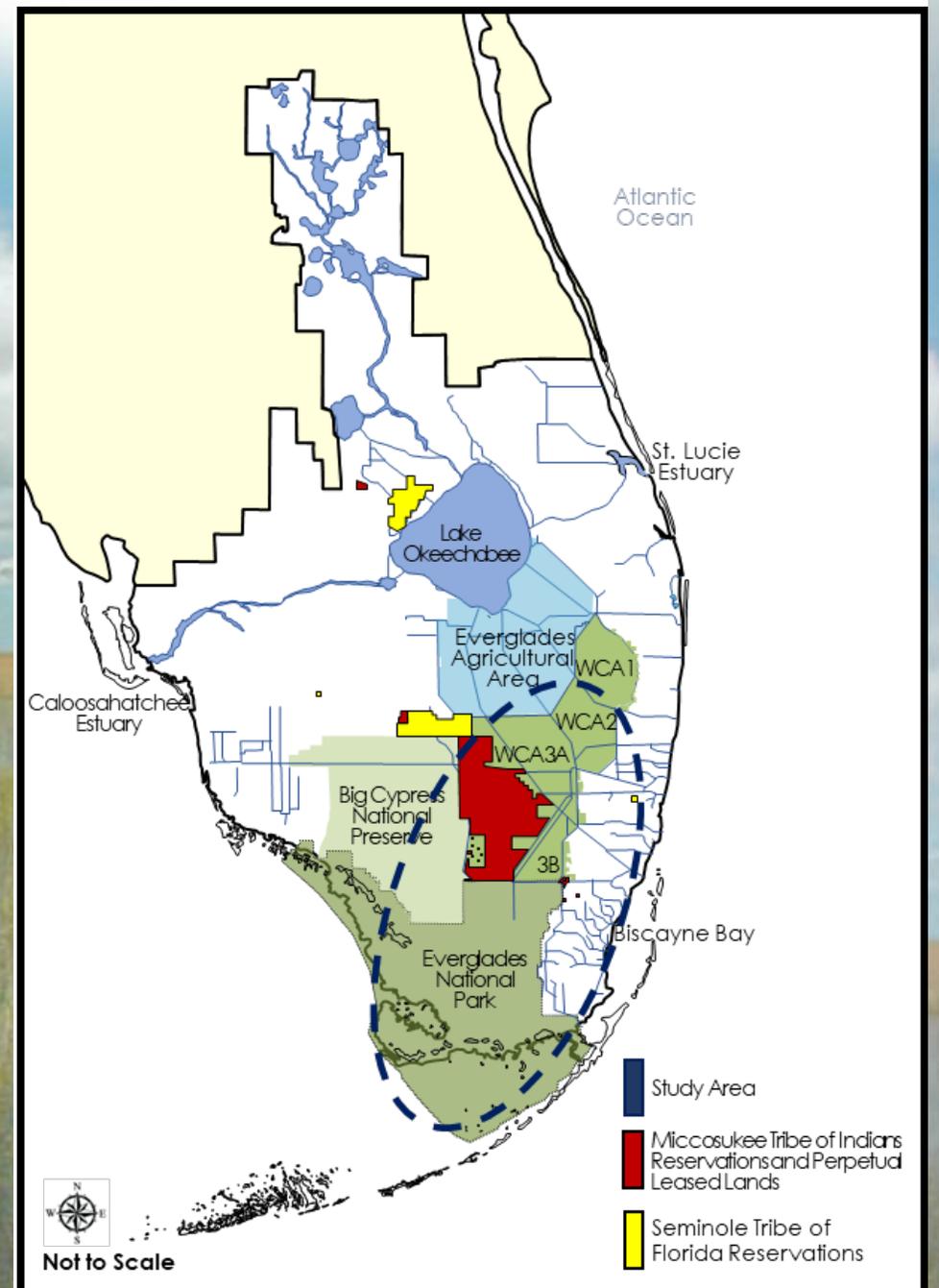


CENTRAL EVERGLADES PLANNING PROJECT (CEPP) OPERATIONAL PLAN

INCORPORATION OF MICCOSUKEE TRIBE OF
INDIANS' INDIGENEOUS KNOWLEDGE IN PLANNING

CEPP OPERATIONAL PLAN CASE STUDY





ACKNOWLEDGEMENTS

Thank you to the Miccosukee Tribe of Indians' Everglades Advisory Committee (knowledge keepers). The Everglades Advisory Committee is appointed by the Chairman and their counsel constitutes the consensus opinions of many different clans, age groups, and affiliations.

- Wayne Billie (Bird Clan)
- Michael Frank (Otter Clan)
- Betty Osceola (Panther Clan)
- Rev. Houston Cypress (Otter Clan)

Tribal staff: Kevin Cunniff, Marcel Bozas, Edward Ornstein

USACE staff: Chris Altes





AGENDA

- What is Indigenous Knowledge (IK)?
- Communication of IK
- What we've heard from the Miccosukee Tribe of Indians
- Incorporation of IK into Operational Planning
- Next Steps



Photo credit: Ron Magill



WHAT IS INDIGENOUS KNOWLEDGE (IK)?



A systematic way of thinking applied to phenomena across biological, physical, cultural and spiritual systems. It includes insights based on evidence acquired through direct and long-term experiences and extensive and multi-generational observations, lessons, and skills. It has developed over millennia and is still developing in a living process, including knowledge acquired today and in the future, and it is passed on from generation to generation

~Inuit Circumpolar Council

The Miccosukee Tribe of Indians' Everglades Advisory Committee have shared IK for the purposes of its integration into Everglades restoration planning



INDIGENOUS KNOWLEDGE COMMUNICATION

Process to communicate Miccosukee Tribe of Indians' IK as documented by Ornstein 2024:

- Tribal leadership organized the Everglades Advisory Committee (EAC), a body of Tribal citizens from different clans and age groups who represent the consensus view of the Tribal on environmental matters.
- Interviews conducted to document EAC's traditional knowledge documented in a report
- Chairman issued letters to agencies summarizing portions of report (report is confidential for the preservation of the Tribe's cultural knowledge and its continued stewardship by the community)

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[University of Miami Law Review](#)

Indigenous Knowledge as Evidence in Federal Rule-Making

[Edward Randall Ornstein](#), *Miccosukee Tribe of Indians of Florida*

Abstract

Recent and historic federal guidance instructs agencies to consider Indigenous Knowledge in decision-making where it is available. However, tribal advocates are faced with many hurdles, in the form of "information quality" criteria, which requires the collection and dissemination of Indigenous Knowledge to conform to a complex set of procedural rules before agencies may be willing to consider it as evidence for rule-making. This Article seeks to define Indigenous Knowledge, highlight the hurdles to its implementation by federal agencies, and equip tribal advocates and officials with strategies and a demonstrative example of best practices for the packaging and presentation of Indigenous Knowledge in a manner which will give that knowledge the greatest chance of inclusion as evidence in agency decision-making.

Recommended Citation

Edward Randall Ornstein, *Indigenous Knowledge as Evidence in Federal Rule-Making*, 78 U. Mia. L. Rev. 409 (2024)
Available at: <https://repository.law.miami.edu/umlr/vol78/iss2/5>



STATEMENTS OF INDIGIENOUS KNOWLEDGE

The Miccosukee Tribe has shared two Indigenous Knowledge documents:

- Statement of ITEK Regarding S-12 A and S-12 B Structure Operations (28 March 2023)
- Statement of ITEK Regarding Historic Miccosukee WCA 3A Conditions (25 Jan 2024)



Photo Credit: National Park Service, Big Cypress National Preserve



Photo Credit: USACE



Miccosukee Tribe of Indians of Florida

Business Council Members
Talbert Cypress, Chairman

Lucas K. Osceola, Assistant Chairman
Kenneth H. Cypress, Treasurer

William J. Osceola, Secretary
Pete Osceola, Jr., Lawmaker

January 25th, 2024

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SUBJECT: Statement of Indigenous Traditional Ecological Knowledge Regarding S-12 A and S-12 B Structure Operations

The Miccosukee American Tribe, based in the Central and Western Everglades, is a federally-recognized sovereign Native American Tribe. The Miccosukee people have lived in the Everglades for thousands of years and have a deep understanding of the ecosystem. The statement of Indigenous Traditional Ecological Knowledge (ITEK) regarding the S-12 A and S-12 B structure operations is a vital part of our cultural heritage and provides valuable information for the management of the Everglades. We have shared this knowledge with you in the hope that it will be used to inform and improve the management of the Everglades and to support the recovery of the Cape Sable Seaside Sparrow subpopulation.



Miccosukee Tribe of Indians of Florida

Business Council Members
Talbert Cypress, Chairman

Lucas K. Osceola, Assistant Chairman
Kenneth H. Cypress, Treasurer

William J. Osceola, Secretary
Pete Osceola, Jr., Lawmaker

March 28th, 2023

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SUBJECT: Statement of Indigenous Traditional Ecological Knowledge Regarding S-12 A and S-12 B Structure Operations

The Miccosukee Tribe of Indians of Florida is a federally-recognized sovereign Native American Tribe, based in the Central and Western Everglades. The Everglades, and the Miccosukee people that live within it, have suffered from water mismanagement. Artificial features have created radically variable water levels, impounded water flow, worsened water quality, and destroyed wildlife and their habitats, all the while severing the Miccosukee people's ability to exercise our federally guaranteed hunting, fishing, use, and occupancy rights in Tribal, State, and Federal lands throughout the Greater Everglades. The detention of water along the Tamiami Trail by the seasonal closure of the S-12 A and S-12 B gates as a consequence of single-species protections required by the USFWS for the Cape Sable Seaside Sparrow Subpopulation A particularly exemplifies a disconnection of water managers from the holistic management of the Everglades. Rather than approaching operations holistically, water managers are managing for a single sink subpopulation, to the detriment of the interconnected ecosystem and its ecology. The Tribe continues to advocate for a reevaluation of this single-species management practice, as it has since the 1980s, and calls for an end to the seasonal closure of the S-12 A and S-12 B gates and a focus on supporting the reproductively viable eastern subpopulations of the sparrow.



STATEMENT OF INDIGIENOUS KNOWLEDGE

- Prior to the 1950s/60s, southern WCA-3A used to dry out periodically enough for the Tribe to walk to tree islands by foot over land which is now inundated.
- High Ground, the highest tree island that never went underwater even during the highest floods, is now inundated by flood waters.
- Both plant and animal species that elders remember from their youth have declined or vanished from the tree islands due to higher waters north of the Tamiami Trail.

“My family was forced to relocate from our family’s prior island home to one of the highest tree islands in the water conservation area called “High Ground” (High Island). When a family friend showed my ancestor Jesse Willie the island he described it as an island that never went under water even in the highest floods. Today it is inundated by engineered flood waters. ”

~ Miccosukee Tribe of Indians January 25, 2024



STATEMENT OF INDIGIENOUS KNOWLEDGE

- “In the days before manipulation, the wet season was generally wet and the dry season was generally dry... only the deepest sloughs had water in the dry season”
- Tribal members used to be able to navigate the sloughs south of S12 A&B gates by canoe. Many villages south of Tamiami Trail where Miccosukee lived are no longer accessible as tree islands have dried out and then burnt to the ground.



Photo Credit: Andrew West, The News-Press

“Historic wading bird colonies that flocked here in such magnitudes are gone, except when hurricanes and highwater force water managers to open these gates and allow the water to flow where the Creator intended.”



State Archives of Florida

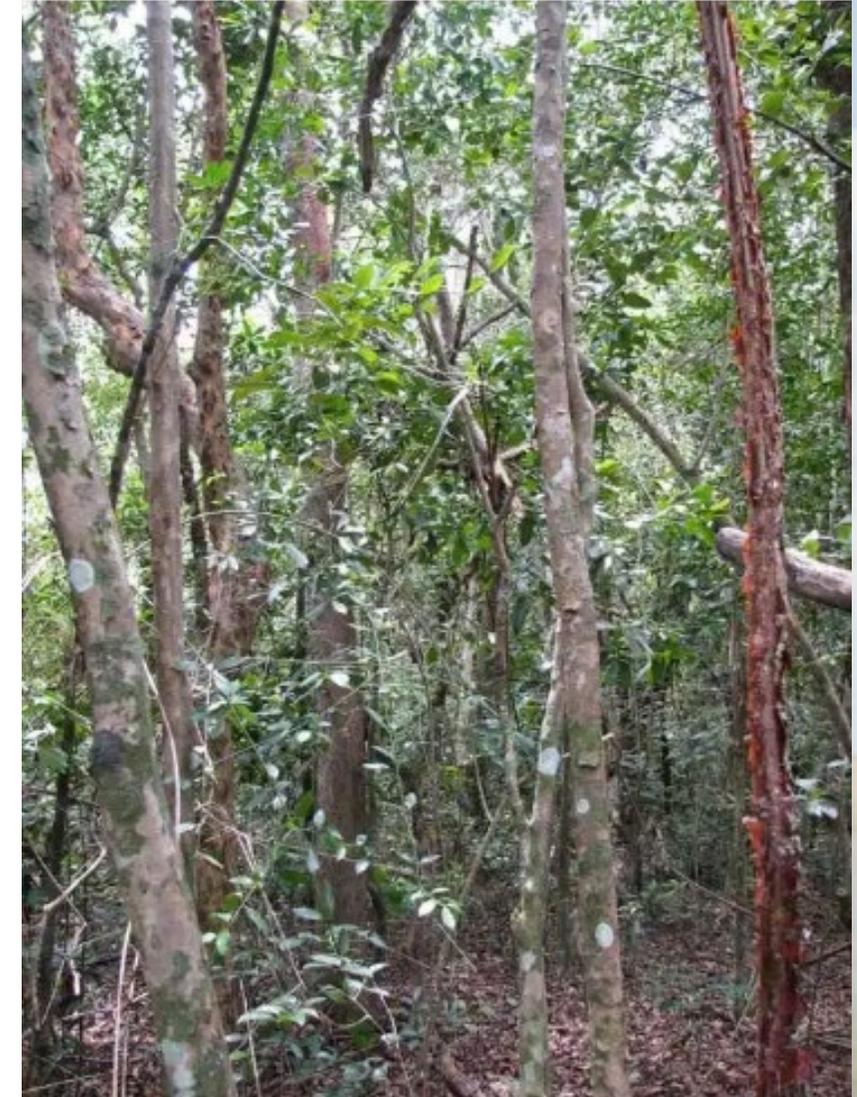
Photo Credit: MyFWC.com



INCORPORATING INDIGENOUS KNOWLEDGE (IK)

CEPP OPERATIONAL PLAN

- **Alternative Formulation:** Formulating alternatives in line with what we've heard from Tribe, such as improving flows/connectivity in the system
- **Alternative Evaluation:**
 - Creation of a metric based on IK to inform the Miccosukee Tribe's evaluation of alternatives.
 - Miccosukee Tribe will provide a narrative statement evaluating alternatives to be documented in Environmental Impact Statement





CREATION OF METRIC INFORMED BY INDIGENOUS KNOWLEDGE (IK)

Part 1A: Hardwood hammock evaluation

- The Miccosukee Tribe has identified a representative group of hardwood hammocks in Water Conservation Area 3A where ponding and high-water level effects are the most extreme for the Tribe.
- Tribe has identified maximum and target water levels for these hardwood hammocks
- **Metric: For each alternative, evaluate exceedances of maximum and target water levels for hardwood hammock threshold over Regional Simulation Model (SRM) period of record (1965 to 2016)**

Part 1B: Inundation of High Ground (High Island)

- IK regarding High Ground: “My family was forced to relocate from our family’s prior island home to one of the highest tree islands in the water conservation area called “High Ground” (High Island). When a family friend showed my ancestor Jesse Willie the island he described it as an island that never went under water even in the highest floods. Today it is inundated by engineered flood waters. ”
- **Metric: For each alternative, evaluate number, frequency, and duration of High Ground inundation events over period of record**



CREATION OF METRIC INFORMED BY INDIGENOUS KNOWLEDGE (IK)

Part 2A: Oxcart Travel

- Statement of IK: “Unanimously, our elders remember crossing what is known today as Water Conservation Area 3-A on ox-drawn carts during the dry season in some years... the path that was traveled by our people, by ox cart or canoe, was about 2 or 3 miles north of the Tamiami Trail. It ran from the east, to Jesse Willie’s camp, to Cypress Point, and out west into the Big Cypress.”
- **Metric: Identify average annual days per year over the POR where water levels are ≤ 4 inches of water in a wet year, dry year, and average year in the corridor between Cypress Point and High Ground (Jesse Willie’s camp)**

Part 2B: Bear Cub Dispersion

- The Miccosukee Tribe of Indians has data that black bear cubs (a sensitive indicator species with cultural importance to the Tribe) require shallow water levels to disperse. Higher depths hinders movement of cubs and increases the risk of cub mortality
- **Metric: Average annual days per year with marsh depths ≤ 4 inches in a wet year, dry year, and average year from May 1 to June 30, using the same corridor as a representative location**



NEXT STEPS: USING IK FOR ALTERNATIVE EVALUATION

CEPP Operational Plan Evaluation Criteria	Evaluation Strategy
Ecology	Scores based on ecologic metrics
Indigenous Knowledge (IK)	Miccosukee Tribe of Indians provides narrative statement of IK for each alternative informed by IK metric results
Water Supply	Pass/Fail
Flood Risk Management	Pass/Fail
Recreation	Pass/Fail



SOURCES CITED

- Statement of Indigenous Knowledge Regarding Historic Miccosukee Water Conservation Area 3-A Conditions. January 2, 2024
- Statement of Indigenous Knowledge Regarding S-12 A and S-1 B Structure Operations. March 28, 2023
- Edward Randall Ornstein, Indigenous Knowledge as Evidence in Federal Rule-Making, 78 U. MIA L. Rev. 409 (2024) Available at: <https://repository.law.miami.edu/umlr/vol78/iss2/5>