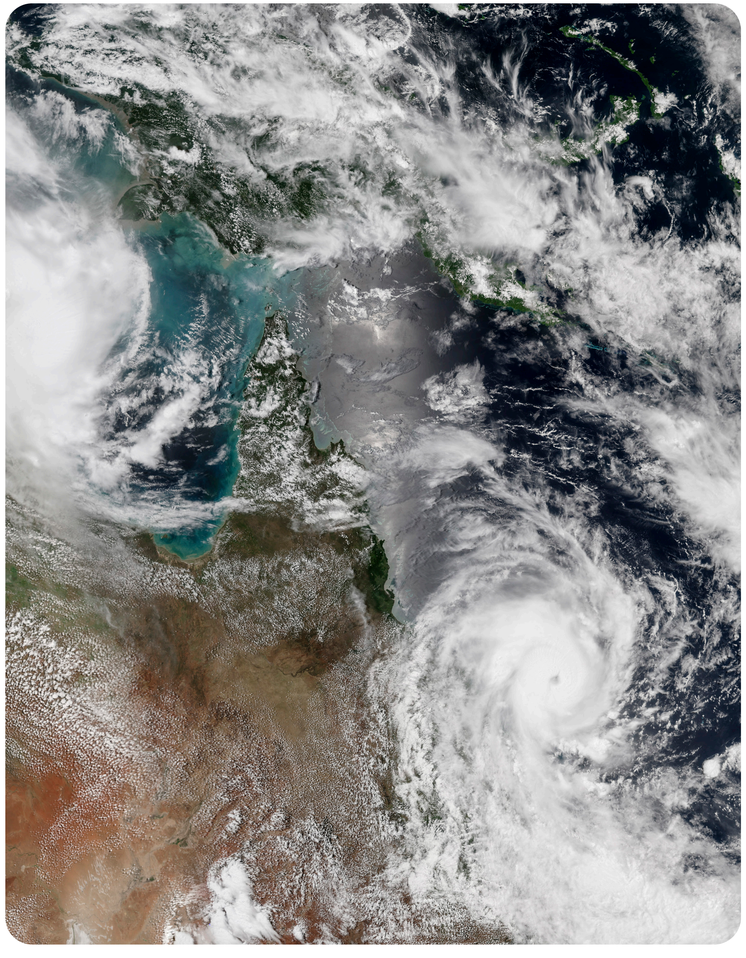
Addressing Climate Change in the Permit Renewal for the EAHCP

EAHCP PERMIT RENEWAL

Background

- The EAHCP's conservation strategy does not address the potential effects of climate change on the springflows in the Comal and San Marcos springs systems, which is a contributing factor as to why the Incidental Take Permit has just a 15-year permit duration (short time period relative to other comparable Habitat Conservation Plans).
- To renew the Incidental Take Permit for a duration of 20–30 years beyond its expiration in 2028, the EAHCP will need to address the potential effects of climate change on Covered Species.



U.S. Fish and Wildlife Service Guidance for Addressing Climate Change in HCPs

What is required?

- To meet Incidental Take Permit issuance criteria, USFWS must assess the impact of the taking of Covered Species
- USFWS must assess this impact with consideration of likely future changes due to climate change or other causes
- The HCP Handbook provides **guidance for addressing climate** change, but **there are no regulatory requirements** for how HCPs must address climate change

What is recommended?

- The HCP Handbook recommends that an HCP consider the implications of climate change effects on its conservation strategy and the conservation strategy's ability to fully offset the impacts of the taking
- Considering climate change effects is essential for increasing the HCP's durability. To fully address climate change, HCPs should—

- Analyze potential effects of climate change on **Covered Species**
- Anticipate climate change effects and address them in the **conservation strategy**
- Consider climate change effects in **changed circumstances**
- Use **adaptive management** process to monitor and address climate change effects

Analyzing Effects on Species

Focus on what stressors affect Covered Species and their habitats.

- What climatic variables are Covered Species sensitive to?
- How might these climatic variables change in the future?
- Will these changes have indirect effects important to Covered Species?

Tools for analyzing effects:

- Climate modeling
- Vulnerability analyses for Covered Species
- Conceptual models with effects pathways
- Habitat suitability models
- Population models

Species Status Assessment Framework

Species Status Assessment Framework's three stages. Source: HCP Handbook (USFWS and NMFS 2016)