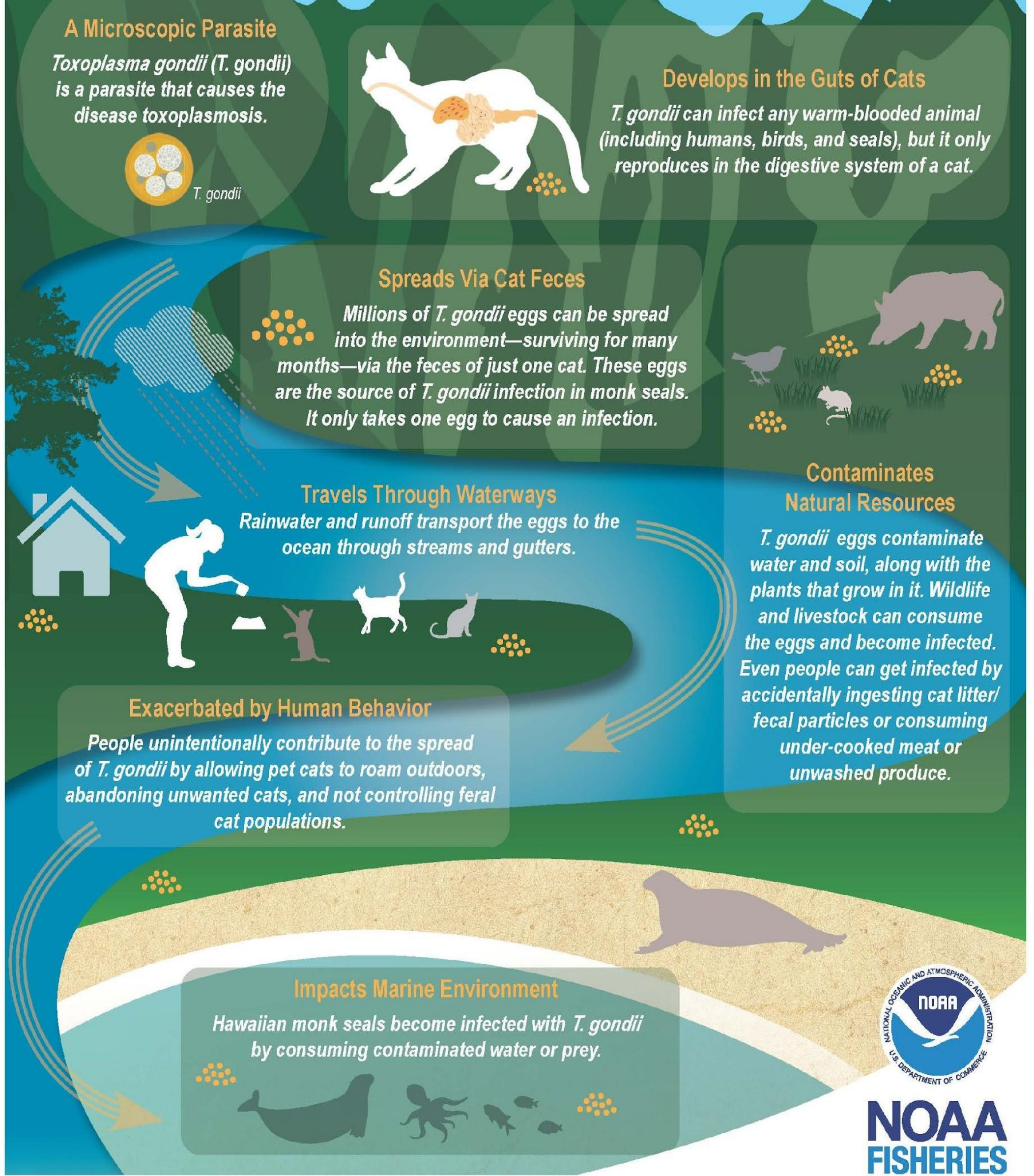


# Background



## A Cat-Borne Threat to Monk Seals

Mauka to Makai: How *Toxoplasma gondii* Makes Its Way from Mountains to Ocean



A free-roaming cat found walking on the beach near a Hawaiian Monk Seal (left image). Photo courtesy of NOAA Fisheries and Kaho'olawe Island Reserve Commission.

Free-roaming cats found resting on the coast in the Big Island (right image). Photo courtesy of Sentient Media website.



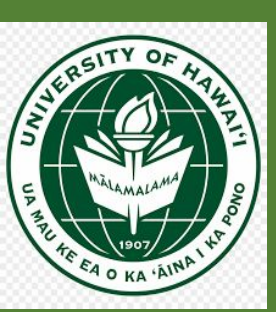
Toxoplasmosis is a leading cause of death in Nēnē geese populations (left image). Photo courtesy of Nala Rogers from The Wildlife Society.



Toxoplasmosis infects not only marine mammals and native birds, but also infects feral pigs and other terrestrial animals in Hawai'i (right image). Photo courtesy of the U.S. Fish & Wildlife Services.



A Hawai'i resident who declined to give their name feeds cats at Kaka'ako Waterfront Park. The Hawai'i Department of Land and Natural Resources advise that people do not feed cat colonies, especially on public lands (left image). Photo courtesy of the Honolulu Civil Beat.

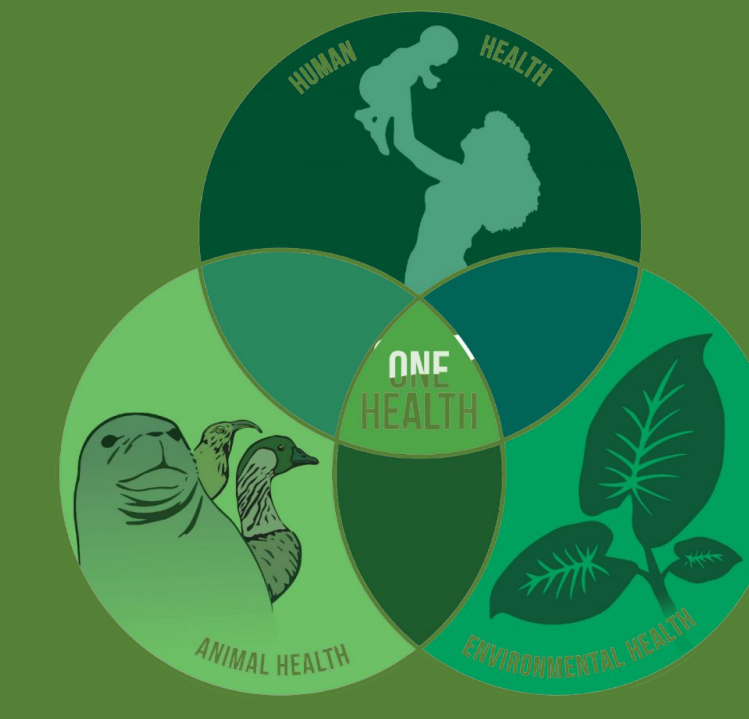


# Using the One Health Approach to Study Toxoplasmosis (*Toxoplasma gondii*) in Animals and People in Hawai'i



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## Current Challenges with Toxoplasmosis in Hawai'i

### Human

- Toxoplasmosis causes a variety of clinical symptoms in people, which range from asymptomatic to mild flu-like symptoms to severe eye and brain disease.
- In 2025, after adopting the Center for Disease Control and Prevention's case definition of toxoplasmosis, HDOH reported an average of 9 weekly cases of toxoplasmosis (Figure 1).
- While there are many human case reports of toxoplasmosis in Hawai'i, there is no current information about the total number of people infected in the general population and the risk factors for *T. gondii*.

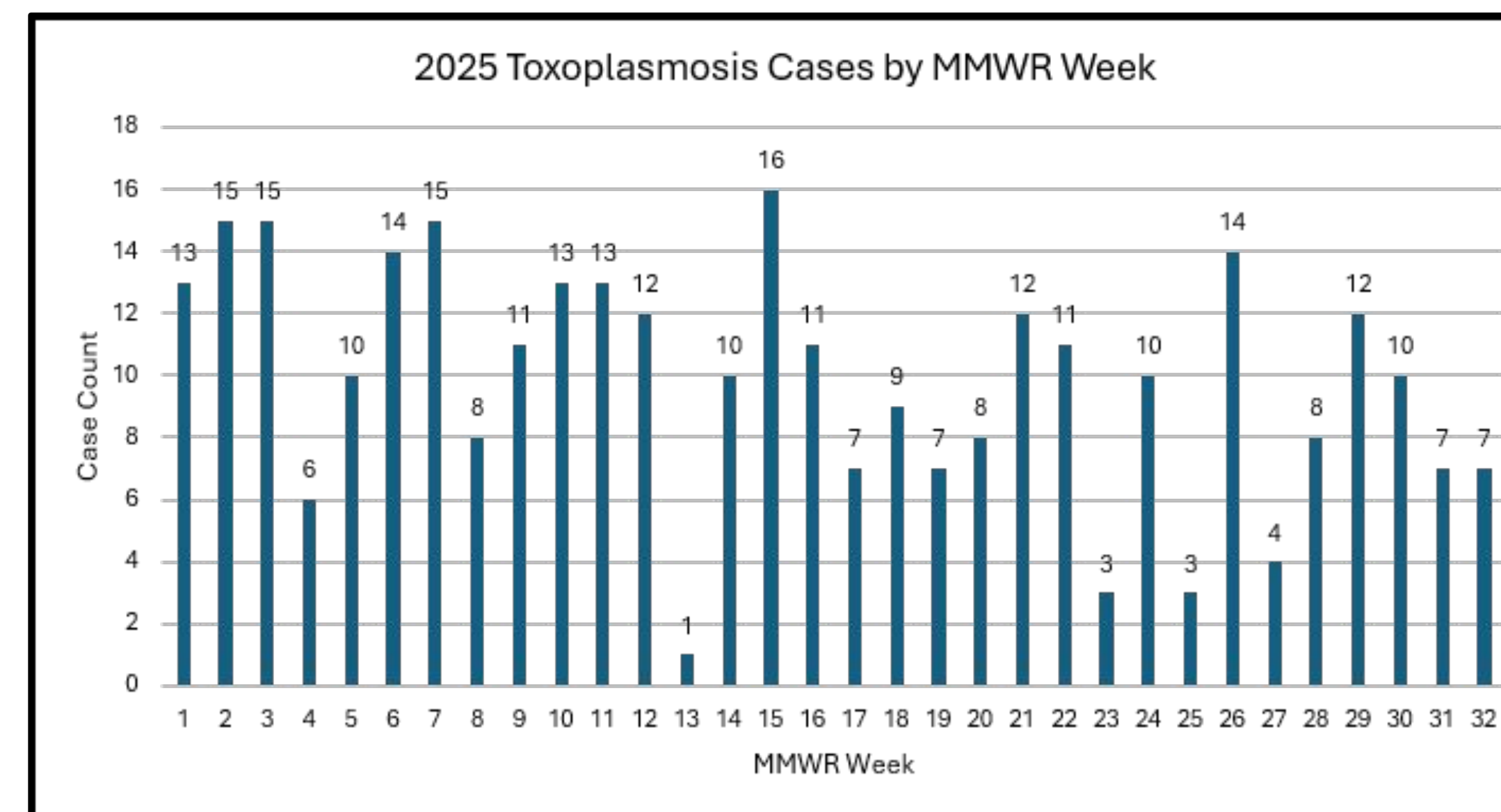


Figure 1. 2025 Human Toxoplasmosis Cases by MMWR Week in Hawai'i reported by the Hawai'i State Department of Health

### Animal

- Cats are the only definitive hosts and primary source of animal and human *T. gondii* infection.
- Toxoplasmosis causes a high burden of disease and death in marine mammals and native birds (Table 1).
- Due to underreporting and inability to recover all animals, the number of reported deaths may be underestimates of the total death of animals caused by toxoplasmosis in Hawai'i and throughout the Pacific.

Species	Confirmed Deaths	Estimated Total Deaths	Impact Significance
Hawaiian Monk Seal	~15+	>15 (undetected cases likely)	Leading disease-related threat (~380 total population)
Spinner Dolphin	3	~60+ (based on 5% recovery rate)	Significant threat; high mortality in nearshore waters
Nēnē (Hawaiian Goose)	Numerous	~4% of all mortalities	Most common infectious disease in Nene geese
'Alalā (Hawaiian Crow)	Multiple	Major impact on wild population	Contributed to extinction in the wild

Table 1. Toxoplasmosis Burden in Wildlife in Hawai'i. Data based on NOAA Fisheries and University of Hawai'i Health and Stranding Lab reports from 1990-2023.

### Environment

- Toxoplasma gondii* are extremely resilient parasites that can survive for up to 24 months or longer in the soil and water.
- One cat can shed a million oocysts of *T. gondii*, which allows widespread contamination of the environment.
- Contamination of *T. gondii* in fruits, vegetables, and water leads to exposure and infection of animals and humans.
- T. gondii* oocysts are likely more common in areas with dense feral and/or free-roaming cat populations. However, the location of these "hot spots" of *T. gondii* contamination are not known.

## Stakeholders & Ongoing Research

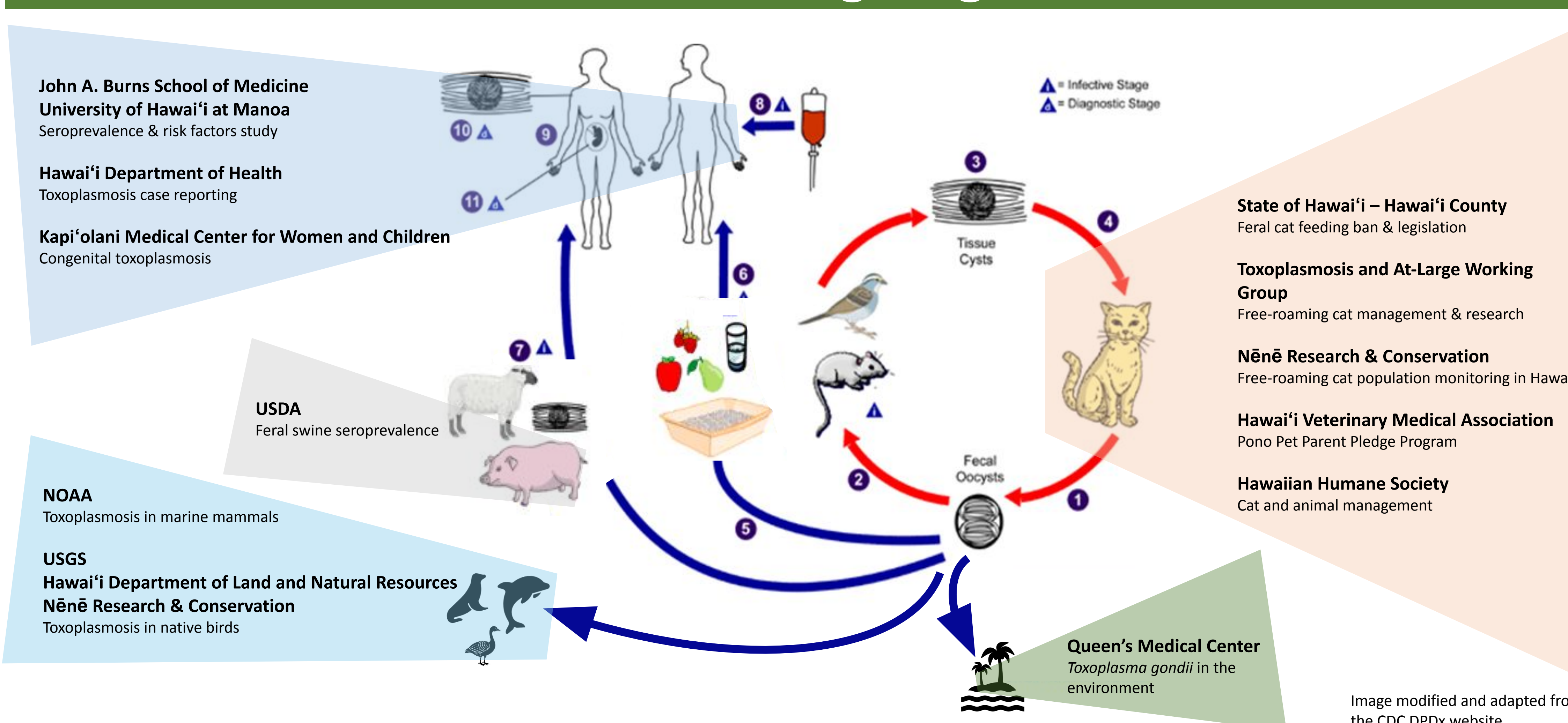


Image modified and adapted from the CDC DPDx website.

# Solutions

## 1. Human Health

- Practice safe food handling measures.
  - Cook meat to safe temperatures.
  - Wash your produce before consumption.
- Avoid eating raw or undercooked meat, unpasteurized dairy products, and unwashed produce.
- Increase knowledge and awareness of toxoplasmosis through community education.

## 2. Animal Health

- Practice proper cat care and ownership.
  - Clean cat litter boxes daily.
  - Keep pet cats indoors.
  - Do not feed raw or undercooked meat to cats.
- Surrender or rehome cats to animal shelters. Do not leave them outside to freely roaming.
- Advocate for laws and policies to improve feral and free-roaming animal management.

## 3. Environmental Health

- Dispose cat litter, potentially contaminated soil, and water in proper waste disposal.
- Wash hands thoroughly before and after handling food, soil, sand, or gardening.
- Report feral cat sightings and/or feedings to the appropriate authorities.

# Current Laws & Policies



## Passed Hawai'i County Bill 51 (Aug 2025):

Local ordinance that prohibits feeding feral and stray animals like cats, pigs, goats, and chickens on county-owned or managed properties to preserve Hawai'i island's fragile ecosystems and honor Native Hawaiian cultural values.

## Pending House Bills & Senate Bills (2025-2026):

**Hawai'i HB 363: Relating to Animals**  
State bill that establishes owner liability for harm or damage their pets cause to property and native birds, prohibiting feeding/caring for predators (including cats) on state lands.

**HB1736 & HB364 HD1: Relating to Animal Control**  
Establishes the Spay and Neuter Special Fund to reduce pet overpopulation, including the free-roaming cat population, and authorizes an income tax designation to provide revenues into the special fund. Requires cats over the age of five months to be surgically sterilized and prohibits cats that are not surgically sterilized from being brought into the State, with certain exceptions.

**HB547 HD2 & SB1023 SD1 HD1: Relating to the Spaying & Neutering of Animals**  
Establishes the Spay and Neuter Special Fund to reduce pet overpopulation and the reproduction of free-roaming cats. Establishes various revenue and fundraising sources for the special fund.

# How can YOU get involved?

## 1. Participate in management approaches.

- Take the *Pono Cat Parent Pledge*.
- Report feral cat sightings to the *Feralmap.com* website.

## 2. Spread the word.

- Share with family, friends, and everyone about toxoplasmosis.

## 3. Support Hawai'i policy legislation and advocacy.

- Work with organizations to support the cause.
- Talk with your state representative and legislature about your views and concerns.

