

# One Health: Beyond Boundaries for a Healthier Future

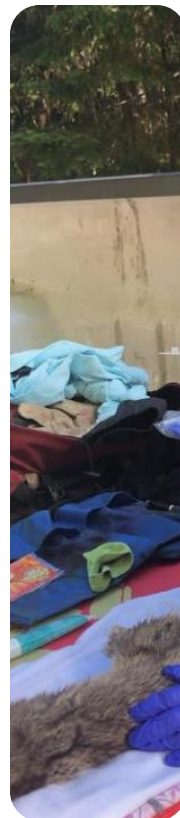
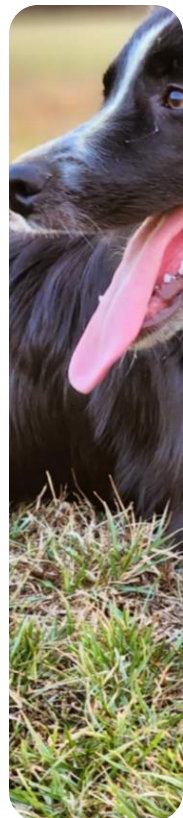
**Sara Margrey, DVM, MPH**  
**State Public Health Veterinarian**



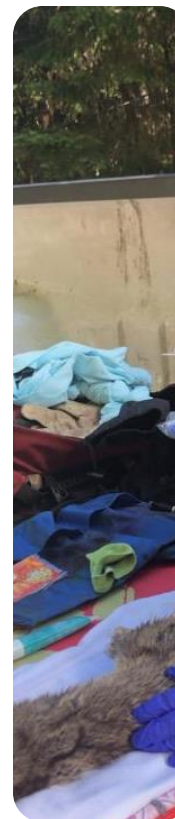
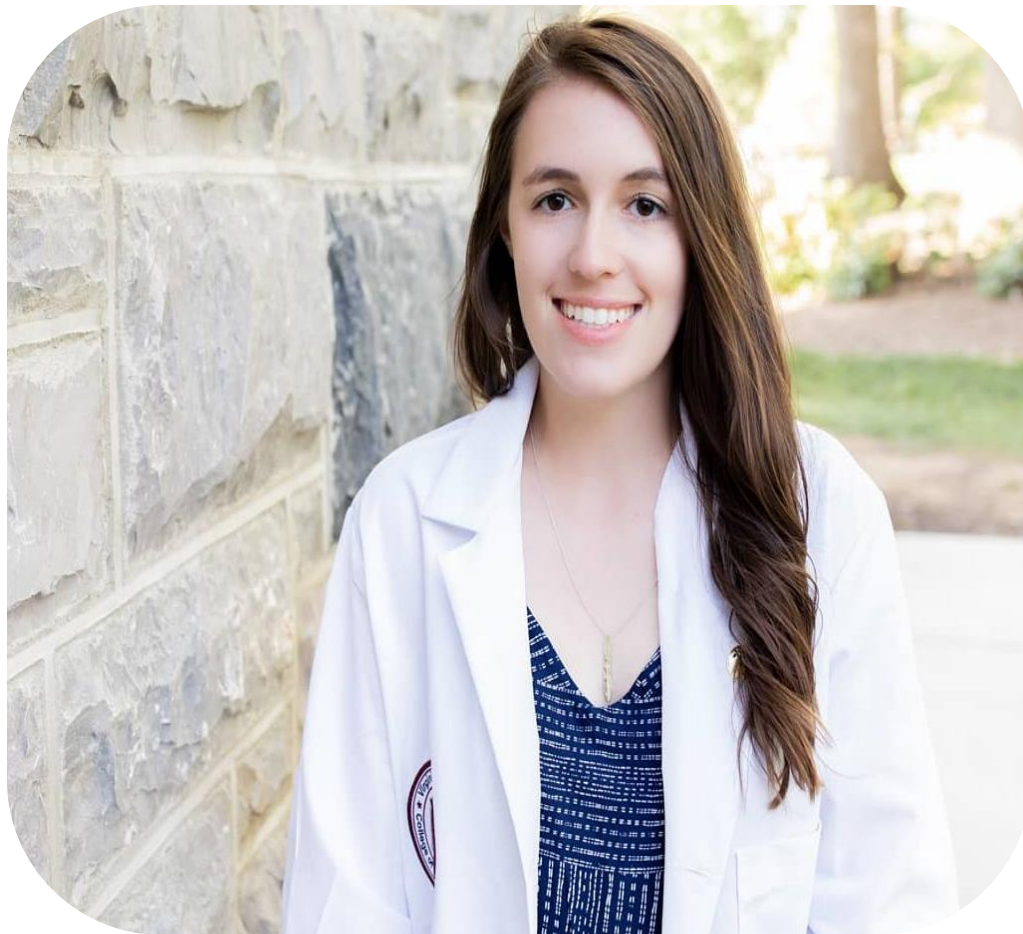
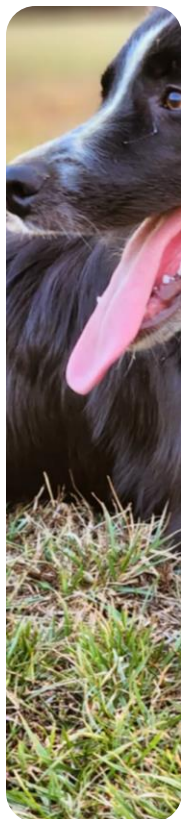
# About Your State Public Health Veterinarian (SPHV)



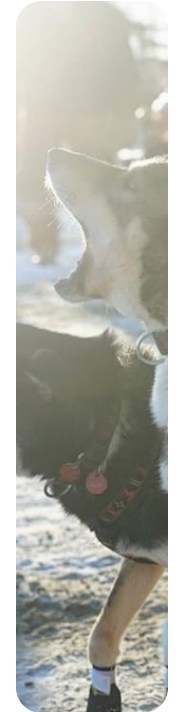
# About Your SPHV



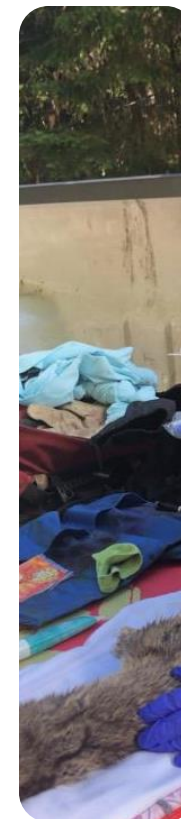
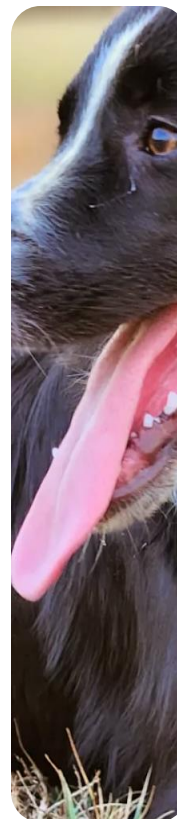
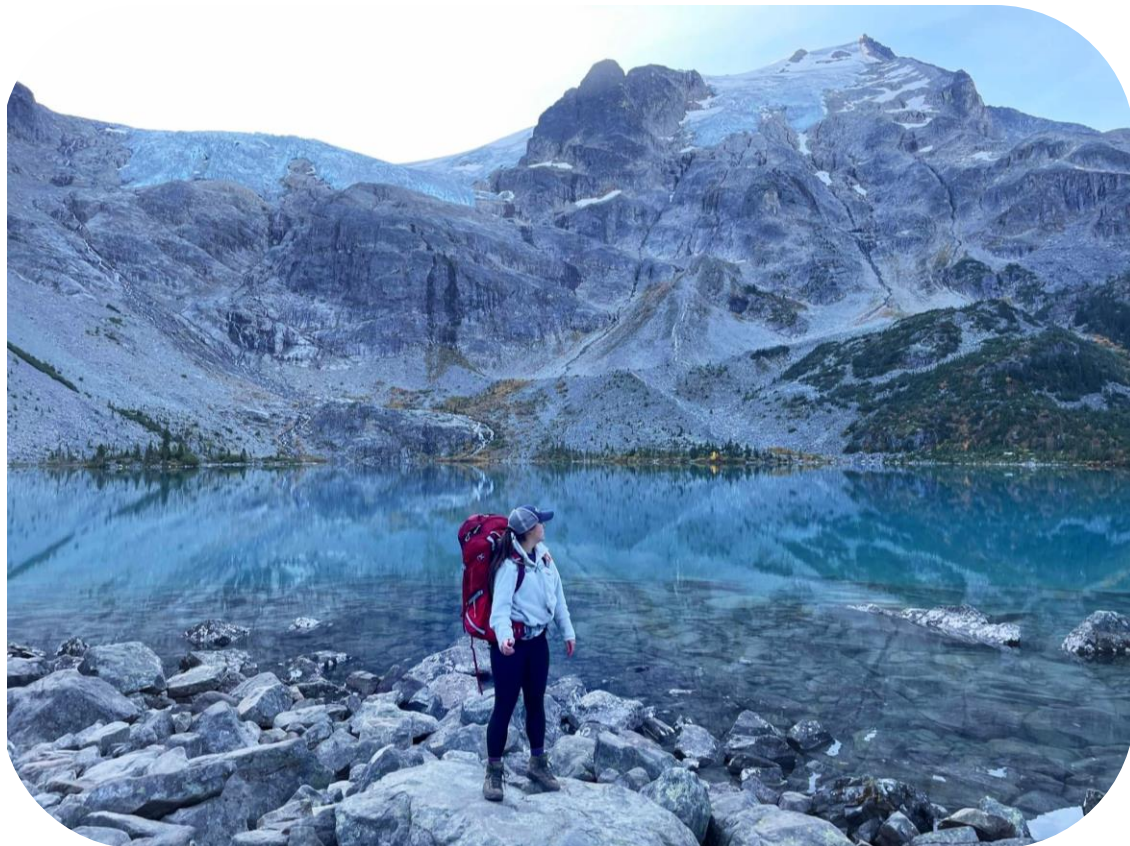
# About Your SPHV



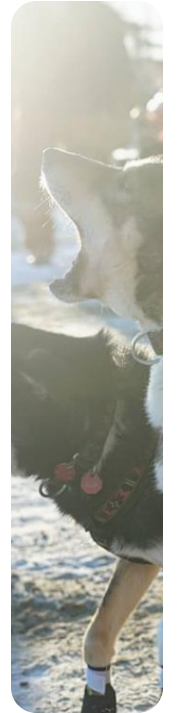
# About Your SPHV



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# About Your SPHV



# What is One Health?

# One Health Definitions

“The One Health concept is a worldwide strategy for expanding **interdisciplinary collaborations and communications** in all aspects of health care for **humans, animals, and the environment**”.

- *One Health Initiative*

“To improve health and well-being through the **prevention of risks** and the **mitigation of effects of crises** that originate at the interface between **humans, animals and their various**

**Working across sectors and disciplines at the interface of humans, animals, and the environment.**

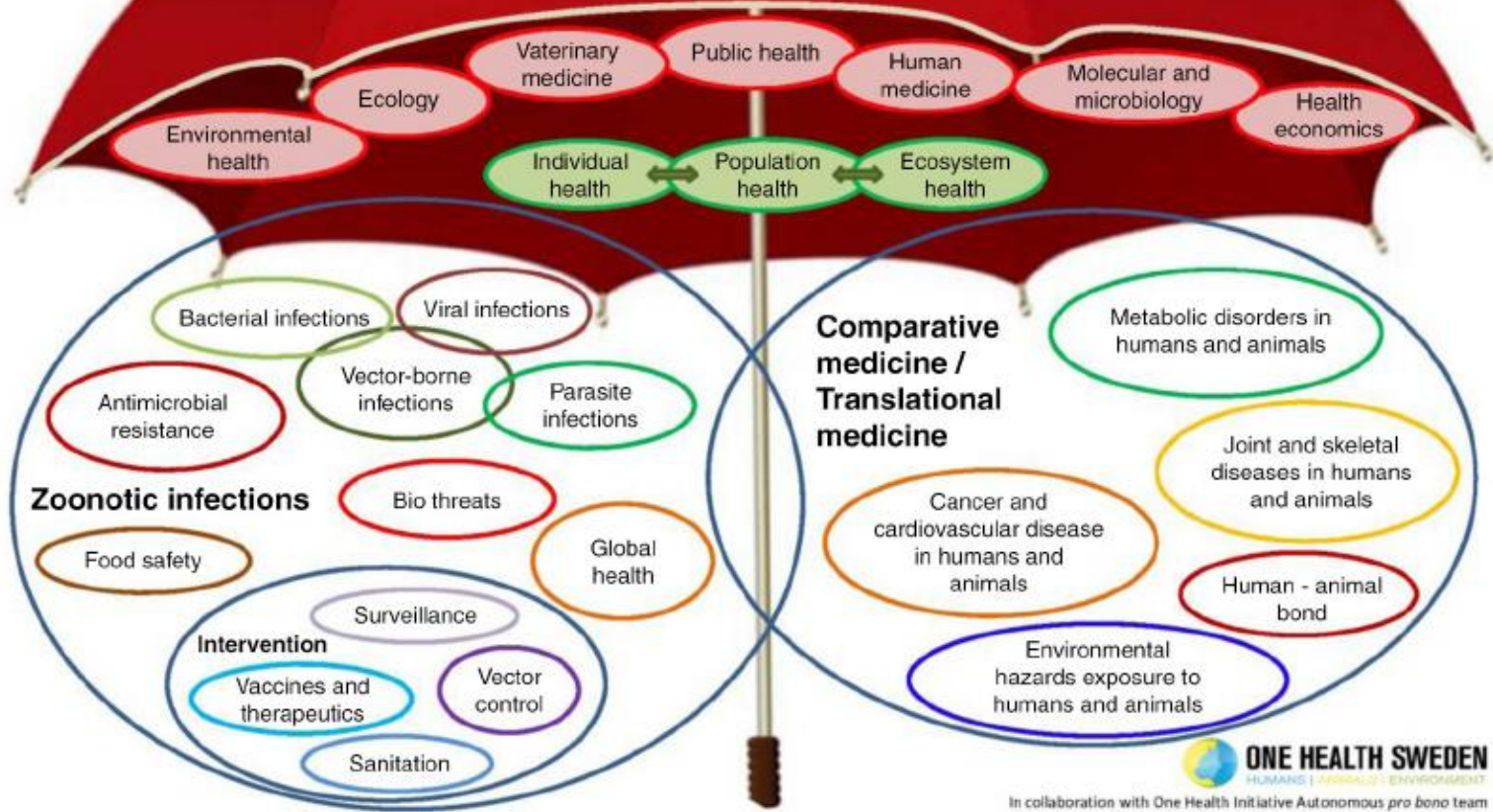
recognizing the **interconnection** between people, **animals, plants, and their shared environment.**”

- *Centers for Disease Control and Prevention*

“One Health is an approach to designing and implementing programmes, policies, legislation, and research in **which multiple sectors communicate and work together** to achieve better public health outcomes.”

- *World Health Organization*

# One Health



# Visualizing One Health

# One Health is centered around collaboration

**No singular profession can know everything.**

**Collaboration starts with relationships.**

**Those relationships start with conversations.**

# Starting the conversation...

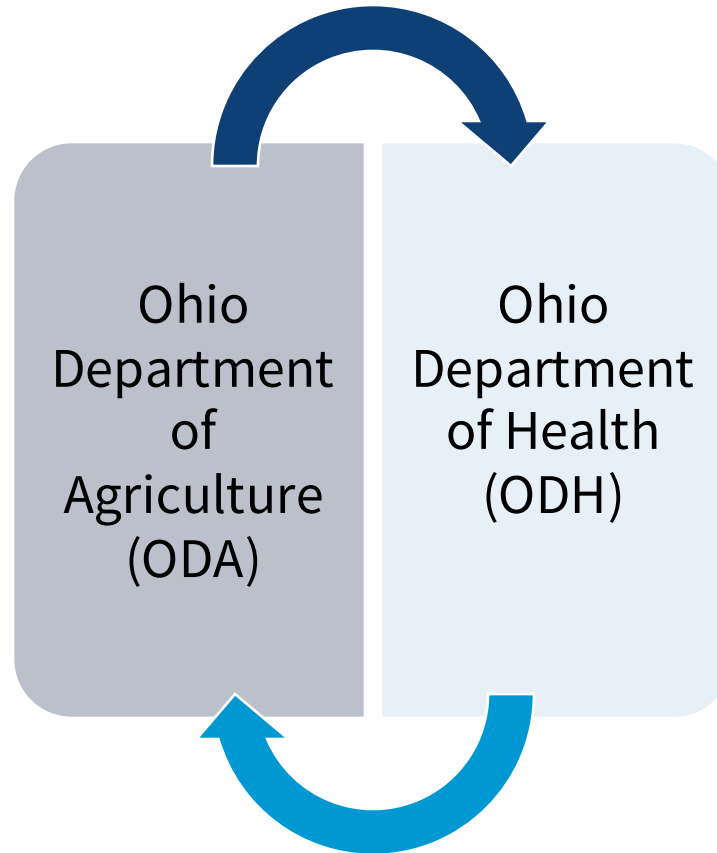
- Zoonotic diseases spread between animals and people.
  - Direct contact.
  - Vector-borne.
  - Indirect contact.
  - Foodborne.
  - Waterborne.



# One Health in Ohio

# Zoonotic Disease Communications

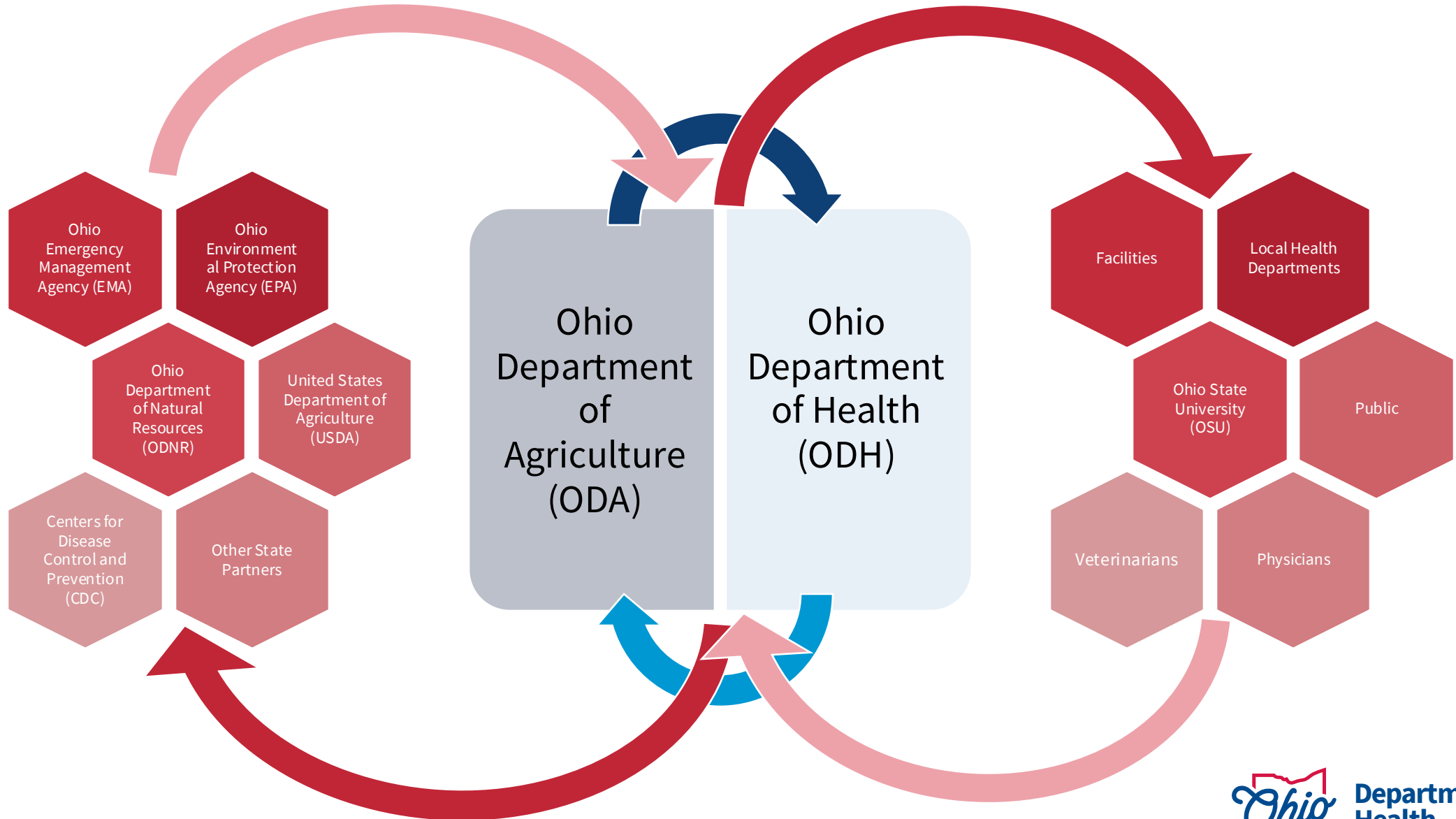
- Both agencies have reportable disease lists with zoonotic diseases.
- Considerations for livestock and companion animals differ.



- Reporting procedures.
- Routine meetings.
  - Bi-weekly.
  - Bi-monthly.
  - As needed.



# Zoonotic Disease Communications



# Small-scale example: *Brucella canis*



Veterinarian calls ODH to report a suspected *Brucella canis* case.

## History

- Dog was a recent stray that was adopted by a family.
- Dog, otherwise healthy, brought for euthanasia.
- Examination and history revealed suspicion for *B. canis*.
- Several family members and technicians potentially exposed.

Brucellosis is reportable to ODA (animal cases) and ODH (human cases).

# Small-scale example: *Brucella canis*



Veterinarian calls ODH to report a suspected *B. canis* case.



ODH provides veterinarian public health guidance, local health department, and ODA contact information for diagnostics.

Notifies ODA for additional follow-up.



ODA provides diagnostic support.

**Brucellosis is reportable to ODA (animal cases) and ODH (human cases).**



**Department of Health**

# Small-scale example: *Brucella canis*



## If positive:

- ODA:
  - Conduct animal traceback investigations.
  - Increases surveillance, as needed.
- ODH and local health departments (LHDs):
  - Follow up with exposed individuals.
  - Provide the veterinary clinic with educational information, including personal protective equipment (PPE) and proper disinfection practices.
  - Work with individuals and physicians to recommend post-exposure prophylaxis (PEP) or advise on treatment as needed.
  - Coordinate with laboratories on additional diagnostics of human specimens (as needed).

# Small-scale example: Q Fever



- ODA Animal Disease Diagnostic Laboratory receives positive *Coxiella burnetii* results.
- Sends reports with veterinarian +/- owner contact information.
- ODH notifies LHD for follow-up.
  - Exposure assessment.
  - Clinical presentation.
  - Herd management advisement.
  - Preventing additional exposures.

**Q Fever is not a reportable animal disease but is a reportable human disease.**

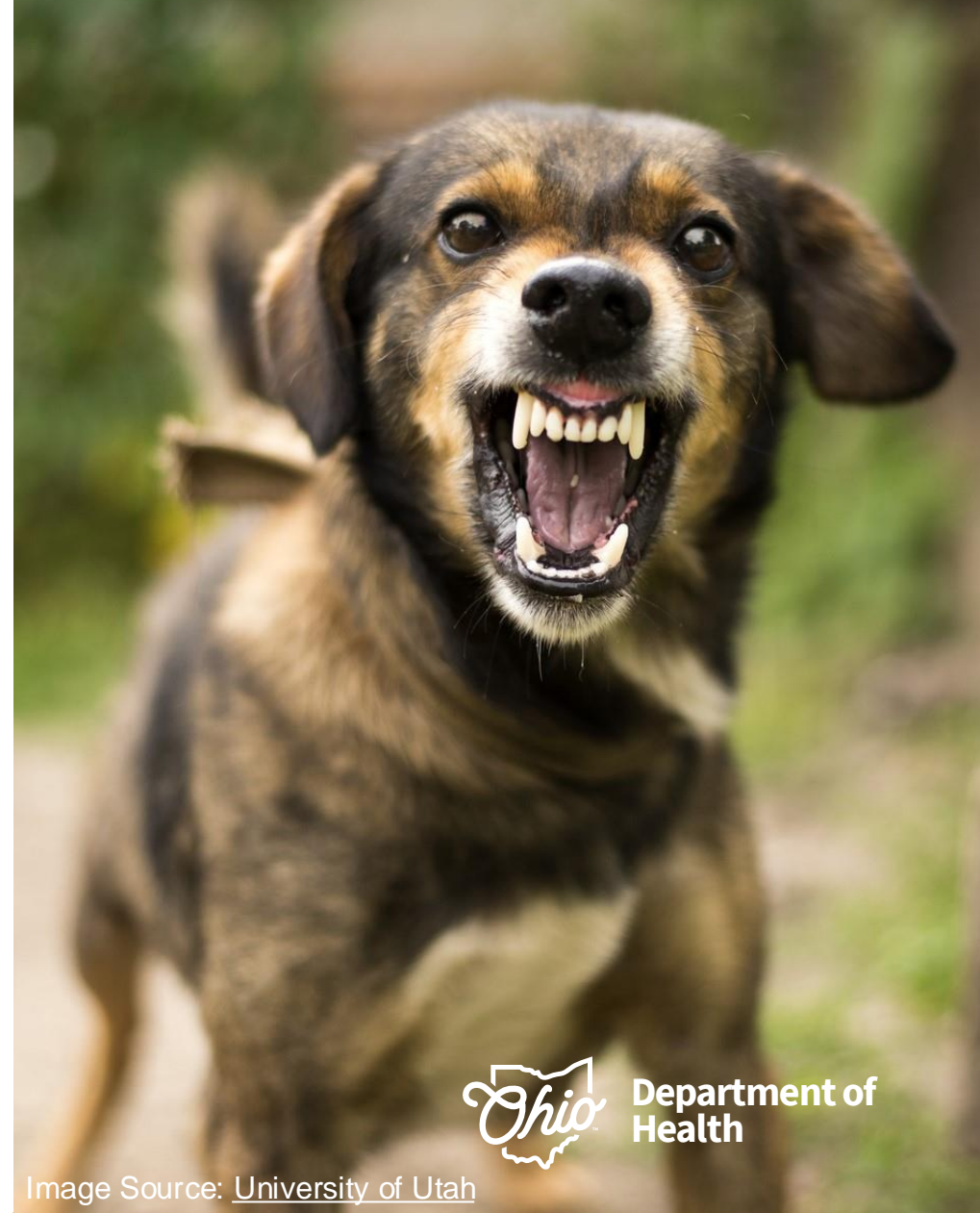


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# Rabies: A One Health Disease

## Impacts many facets of our society.

- The public.
- Law enforcement.
- Local health departments.
- Wildlife specialists.
- Physicians.
- Veterinarians.
- And many more!

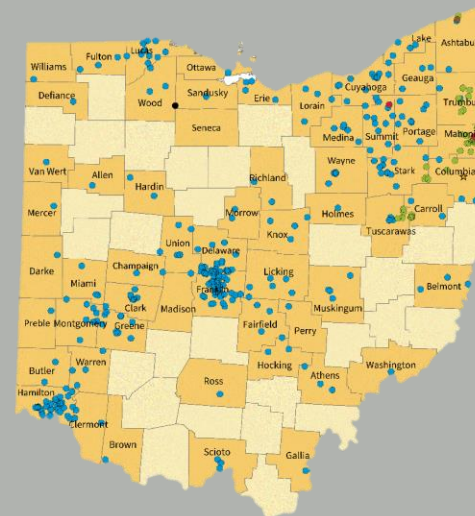




The majority of rabies cases are wildlife, with occasional spillover to domestic species.

2023  
Exposure Events

21,567



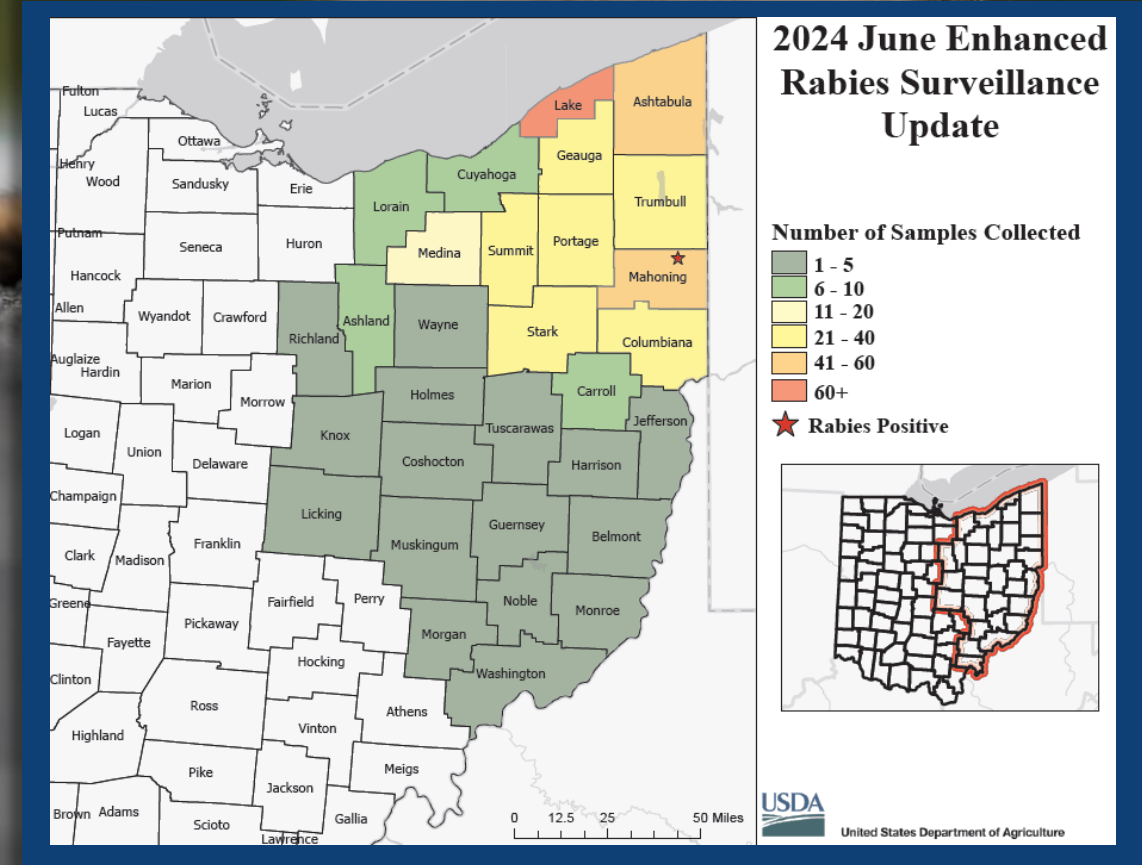
2023  
Rabies Positives

30

# Rabies: A Year in the Life

## Spring

- Collecting animal bite data from LHDs.
- Discussing One Health communications and reporting with agricultural partners.
- Consulting the public, LHDs, veterinarians, physicians, and more.
- Coordinating with veterinarians and ODA to arrange testing of suspect livestock cases.
- Routinely updating webpages to reflect accurate rabies and animal bite data.
- Beginning Enhanced Rabies Surveillance and Trap-Vaccinate-Release Operations with USDA-WS, as needed.





# Rabies: A Year in the Life



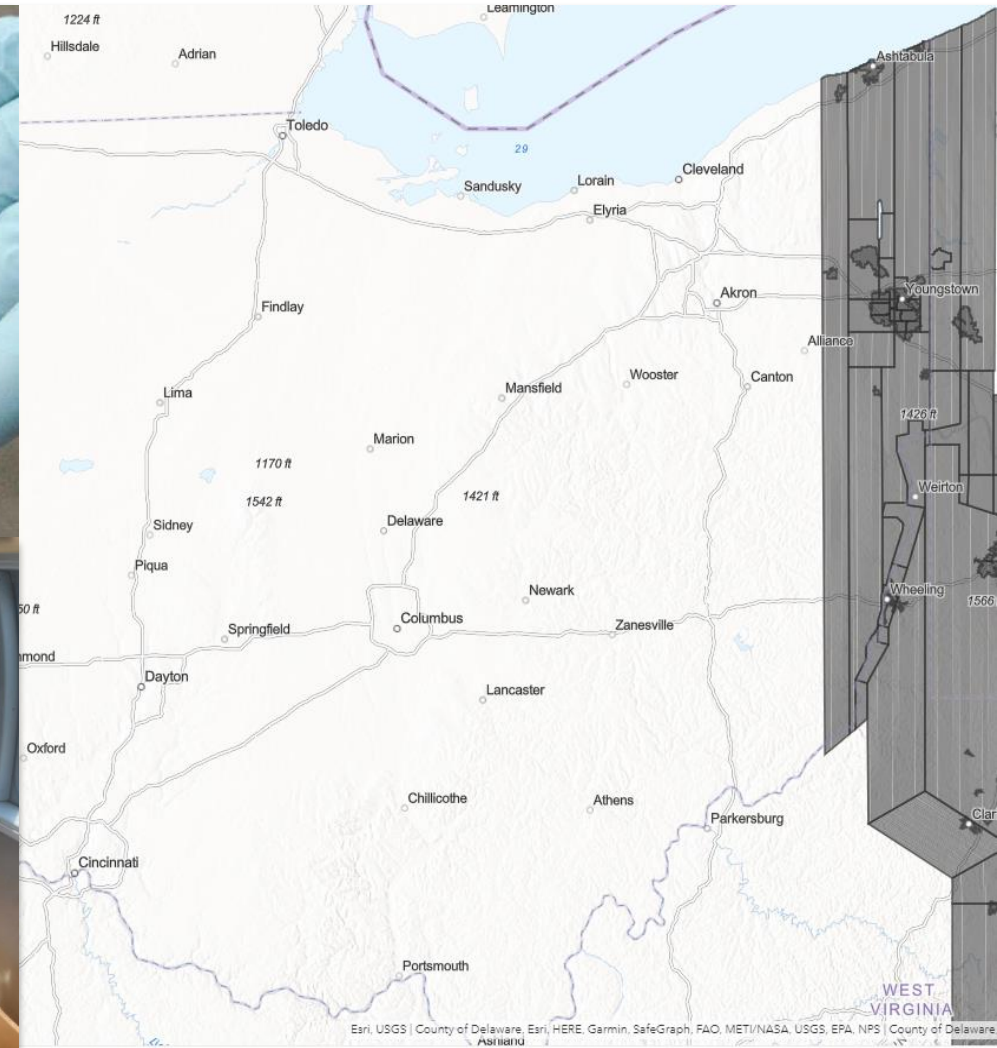
## Summer

- Increasing rabies testing.
  - August 1: tested >1,000 specimens.
- Increasing rabies exposures and consultations.
  - August 15: 406 rabies calls to ODH.
- Coordinating with ODNR on neurological wildlife outbreaks.
- Addressing mass bat exposures at camps.
  - Coordinating with multiple jurisdictions, ODNR, wildlife control specialists, camp organizers, etc.
  - July: Largest mass bat exposure in Ohio since 2006.

# Rabies: A Year in the Life

## Fall

- Oral Rabies Vaccination Campaign.
  - Distributing ~540,000 baits covering ~9,000km<sup>2</sup>.
  - Extends from Maine to Georgia.
  - Bait calls and media campaign.
- Rabid horse – 2023.
  - Response involving ODH, ODA, USDA, multiple LHDs, treating veterinarians and pathologists, and OSU.



# Rabies: A Year in the Life

## Winter

- International Rabies Exposures.
- Exotic animal bites.
  - Wolf-dog hybrids, monkeys, rhinos, zebras.
- Suspect human rabies cases.



# Large-Scale One Health Responses



## East Palestine Train Derailment

- Multi-jurisdictional response.
- Consideration of animals and wildlife.
  - Assessment of Chemical Exposure Survey.
- Outreach to physicians and veterinarians.

# Large-Scale One Health Responses



## Highly Pathogenic Avian Influenza A (H5N1)

- Coordinating between agriculture, public health, dairy, and wildlife officials.
- Monitoring of exposed workers on affected farms.
  - Human cases: 13.
- Agricultural response varies on species.
- Wildlife surveillance.
- Emerging disease as we gain new detections in mammals.

# Looking Forward



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# One Health Challenges

**Systems have put us into silos.**

**Language and knowledge barriers across professions.**

**Funding structures.**

# Future One Health Plans

- **Ohio One Health Working Group.**

- Routine meetings with key state partners to discuss One Health priorities and tasks.
- Expanded invitation to a wider audience to include updates and presentations.

- **One Health Symposium.**

- Conference to discuss One Health issues across Ohio.

- **One Health Zoonotic Disease Prioritization.**

- Identify state priorities and action plans for addressing zoonotic diseases with a One Health approach.

- **Office Hours.**

- Chance for individuals from across the state to ask questions.



# How to get more involved in One Health



Start conversations locally.



Think beyond public health.



Reach out!



Foster a collaborative environment.

# QUESTIONS?

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[ODH.OHIO.GOV](http://ODH.OHIO.GOV)



# Sara Margrey, DVM, MPH

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State Public Health Veterinarian

[Sara.Margrey@odh.ohio.gov](mailto:Sara.Margrey@odh.ohio.gov)

614-214-3965





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