



Environmental Service Learning

Spring 2025 Projects



Center for Earth and Environmental Science



DEPARTMENT OF EARTH SCIENCES
SCHOOL OF SCIENCE



Who is CEES?

What is CEES?

CEES is an applied research center housed within the School of Science and Department of Earth Sciences.



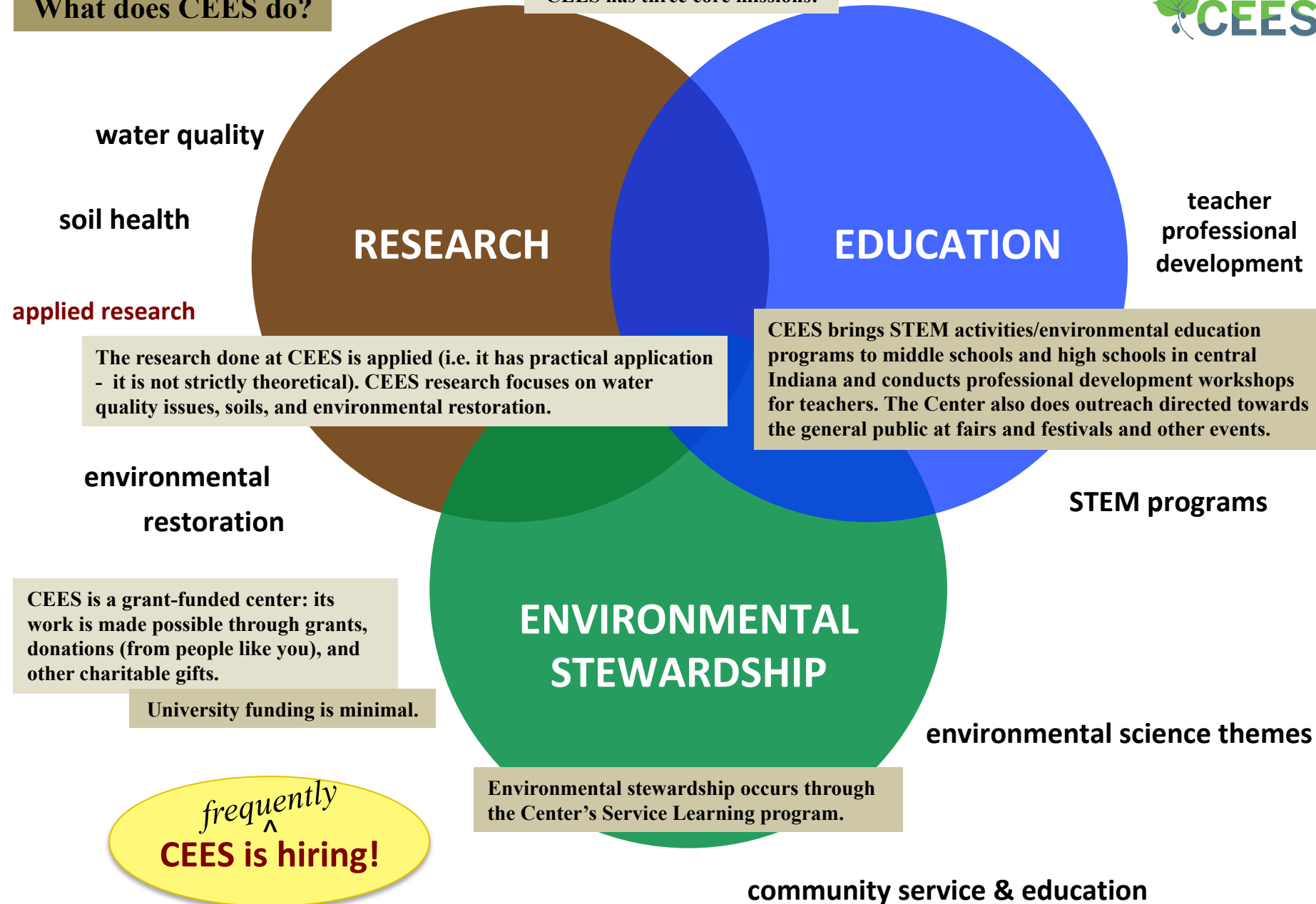
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What does CEES do?

CEES has three core missions:



The research done at CEES is applied (i.e. it has practical application - it is not strictly theoretical). CEES research focuses on water quality issues, soils, and environmental restoration.

CEES brings STEM activities/environmental education programs to middle schools and high schools in central Indiana and conducts professional development workshops for teachers. The Center also does outreach directed towards the general public at fairs and festivals and other events.

CEES is a grant-funded center: its work is made possible through grants, donations (from people like you), and other charitable gifts.

University funding is minimal.

Environmental stewardship occurs through the Center's Service Learning program.

frequently
CEES is hiring!



Environmental Service Learning:

- Providing opportunities for *environmental stewardship* and *experiential learning*.
- Engaging in *dialog* about *environmental issues*.
- Introducing regional *natural areas*.
- Introducing *groups that maintain* these areas.
- Introducing issues to stimulate *changes in behavior* as well as *critical thinking* about **humanity's role** as an **agent of change**.
- *Restoring* and *improving* natural areas.
- *Mitigating* and *preventing* pollution.
- *Building* a sense of *community*.

Education & Community Service

Aside from the obvious faculty requirement or extra-credit bribe?



IMPROVE WATER QUALITY

... and some projects also result in improved water quality – both locally and regionally!

CEES's Service Learning program provides opportunities for all of the above



Service Learning Projects



Spring 2025

Spring 2025 stewardship will focus on:

community science

invasive species removal

environmental clean up

Biodiversity Survey

Bird Watching for Community Science

The Great Backyard Bird Count

Purpose

GBBC (initiated in 1998) is a long term global project that provides a snapshot of bird diversity and abundance in mid February.

Community science projects increase “eyes on the ground” for data observation.

People of all skill levels can take part.

Birding is often the “gateway drug” to an appreciation of the diversity of the natural world – and – participation in community science projects.

Birds are, metaphorically speaking, the canaries in the coal mine for many environmental issues.

This is because birds are large, relatively obvious, and therefore more easily studied.

No birding skills needed - we train you for Indiana winter bird ID!



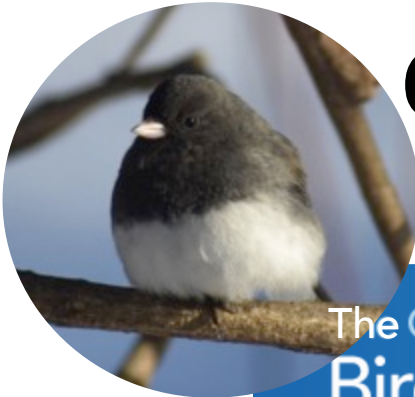
charismatic megafauna

Birds hold a middle position in most food webs: they feed on insects, fruits, and grains – lower level components of food webs.

Their dependence on insects to feed their young during the breeding season is particularly important.

Environmental impacts affecting lower-level food web components (and thus ecosystem integrity/function) may be more readily observed/assessed through their impacts on birds.





Citizen Science: GBBC



LOCATION: Holliday Park
Nature Center



Powered by eBird



If your instructor wants you to do a water-quality related project, do not select GBBC.

Home About the GBBC Get Started Submit Observations Explore Data My eBird



GBBC is always President's Day weekend

Instructor APPROVAL

2025 Great Backyard Bird Count is February 14-17

Bird watchers of all ages count birds to create a real-time snapshot of where birds are.

Count birds anytime, anywhere, with eBird »



This project is indoors (but we may go outside, weather permitting).

No birding skills needed - we train you for Indiana winter bird ID!



Project 1 & 2

February 14 (Friday)

There is a morning and afternoon project each day

Project 3 & 4

February 15 (Saturday)

morning project is 9:30 AM – 12:30 PM
afternoon project is 1:00 PM – 4:00 PM



There is no back-up date: we do this project rain or shine.

Citizen Science: GBBC

LOCATION: [Holliday Park Nature Center](#)

Instructor APPROVAL
needed



Powered by eBird



Friday Projects

Project 1

February 14 (morning)

9:30 AM – 12:30 PM

Project 2

February 15 (afternoon)

1:00 PM – 4:00 PM



Just to reiterate the date/time of each event

Back-up Date: **NA**

Citizen Science: GBBC

We will use the wildlife observation room at the Holiday Park Nature Center.

Instructor APPROVAL needed



Powered by eBird



Saturday Projects

Project 3

February 15 (morning)

9:30 AM – 12:30 PM

Project 4

February 15 (afternoon)

1:00 PM – 4:00 PM



Do you have field glasses or a 35mm DSLR camera?

Bring them!

Back-up Date: **NA**

Invasive Species Removal

**Bush Honeysuckle –
it's everywhere!**

Invasive plants often have far-reaching impacts on the environments in which they become established.

Bush Honeysuckle has characteristics that make it particularly problematic due to the effects the shrub has on infiltration and water quality.

Infiltration is the movement of water deeper into the soil.



You will learn to identify it

. . . . loathe it

. and celebrate its removal!

Invasive Species Removal

Purpose

Removing invasive species helps address (remediate) the various negative impacts caused by the presence of the invasive species in the environment.

improve habitat

These are just a few of the negative impacts invasive species can have.

invasives replace native species

invasives decrease biodiversity

invasives may not be a suitable food resource for insect herbivores

improve water quality

honeysuckle promotes sediment loading of waterways



All this green shrubbery is honeysuckle

See *Why we do these projects – invasives & trash removal* for an explanation.

Southwestway Park

LOCATION: south side of Indianapolis
8400 Mann Rd.

3rd largest park in Indianapolis!

Invasive Species Removal



Honeysuckle leaves out very early!



Southwestway Park has an extensive trail system. We will be working in the area of Mann Hill.

Project 5

March 28 (Friday)

10:00 AM - 1:00 PM

Project 6

March 29 (Saturday)

10:00 AM - 1:00 PM

Backup Date: Sunday, March 30

10:00 AM – 1:00 PM



Holiday Park



LOCATION: north side of Indianapolis near 64th St.

Invasive Species Removal

Project 7

April 18 (Friday)

10:00 AM - 1:00 PM

Project 8

April 19 (Saturday)

10:00 AM - 1:00 PM



Back-up Date: April 20 (Sunday)

10:00 AM - 1:00 PM

Holiday park is a location with a lot of topography. We will be “off trail” and it can get rather muddy at this time of year.

The White River floods regularly.

New York Street Bridge

ARBOR

The ARBOR is an experimental forest* located on the east bank of the White River, between New York Street and 10th Street.

When the White River floods, the ARBOR may be inundated.

If transportation is an issue, the ARBOR project may be a good choice for you. The ARBOR is on the west side of campus.

Flooding deposits woody debris in the forest – and large amounts of trash.



March 2022 flood; view from the 10th Street Bridge.

Flood waters can also deposit seeds.

Sometimes the plants brought in are invasive species.

Garlic Mustard

flowering stage

rosette stage

If we have a colder winter/spring, the plant may still be in the rosette stage when we are working at the ARBOR.

Temperature and precipitation will influence the growth rate of garlic mustard.

If we have a warm winter/spring, the plant may be in flower by mid April.



ARBOR Trash Clean-up

The White River floods frequently.

With each flood event, trash is deposited in the floodplain.

We'll remove trash, thereby disrupting the land-to-river-to-ocean pathway it follows.

Purpose

return recyclables to the recycling stream

interrupt the land-to-ocean pathway of plastics

improve habitat

improve water quality

Collected trash will be sorted as recyclable or non-recyclable, and disposed of accordingly.

This project is convenient to campus: the ARBOR is on the west side of campus – it's the forest located along the eastern bank of the White River.

Located between New York Street and 10th Street bridges.



The ARBOR is a riparian forest on the east bank of the White River. The trees (initially just tiny twigs and small saplings) were planted during service learning events that took place in the fall of 2000.

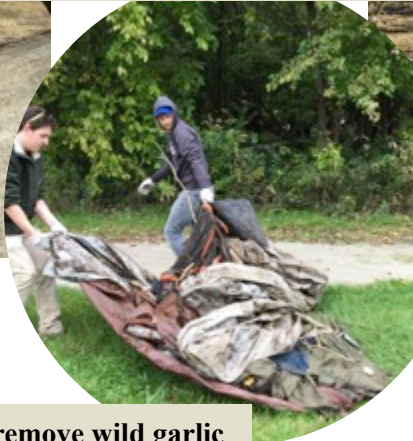


“Riparian” simply means that the forest is located along a river or stream.

Lilly ARBOR



All sorts of odd trash is found at the ARBOR.



LOCATION: Lilly ARBOR – Porto Alegre St. between 10th Street and New York Street bridges

Project 9

Friday, April 4

10:00 AM – 1:00 PM



We will also remove wild garlic mustard, an invasive herb.

Project 10

Saturday, April 5

10:00 AM – 1:00 PM



Backup Date:

April 6 (Sunday)

10:00 AM – 1:00 PM



Flooding sometimes extends past the Urban Wilderness Trail to the base of the levee.



Bird-building collisions are one of the leading causes of death for birds.

ANNUAL MORTALITY (in millions) DUE TO:

cats: 1300M – 3900 M

buildings/windows (collisions): 365 M – 988 M

automobiles (collisions): 88.7 M – 339.8 M

transmission lines (collisions): 7.7 M – 57.3 M

transmission lines (electrocutions): 0.9 M – 11.5 M

communications towers (collisions): 6.6 M

pesticides: 0.96 M – 4.4 M

wind turbines (collisions): 0.47 M – 0.68 M

The Bird Window-Strike Project (BWSP) monitors campus buildings, collecting data concerning collisions.

Contact Dr. Schmalhofer (cees@iu.edu) if interested.

This project is not open for general registration. Participation requires a regular weekly commitment for the entire spring semester.



For more information about the BWSP



INDIANA UNIVERSITY INDIANAPOLIS

go to the CEES Service Learning menu



SCHOLARSHIPS / JOBS

Center for Earth and Environmental Science

ABOUT

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EDUCATION PROGRAMS

SERVICE LEARNING

NEWS

More information about the Bird Window Strike Project (BWSP) can be found on the CEES web site.

Use the *Information and Resources* link under the Service Learning drop-down menu to navigate to the project page.



Environmental education a

Our vision is to grow environmental and stewardship through our research, outreach, and public

[Read more about CEES](#)

- Current Projects & Events
- What to Expect
- Register
- Reflective Essay
- Faculty Sign-up
- FAQ
- Information and Resources

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Research



Education



Environmental Stewardship

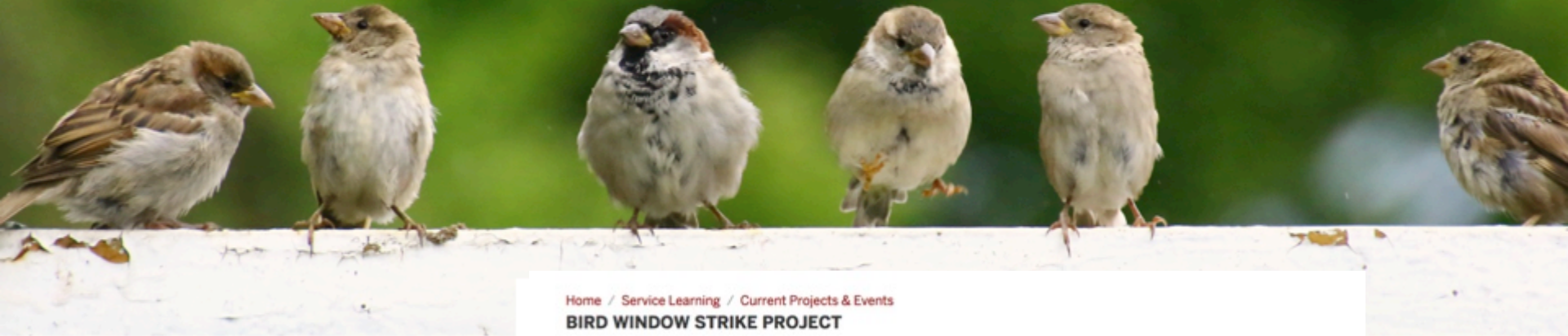




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You don't have to officially take part in the project to help out. If you find a dead or injured bird on campus, use the link at the bottom of the page to report the bird to CEES.

[Home](#) / [Service Learning](#) / [Current Projects & Events](#)

BIRD WINDOW STRIKE PROJECT

[Current Projects & Events](#)[More Project Information](#)[All Project Sites](#)[Our Community](#)

Bird window strike project

As with many other organisms, bird numbers have declined significantly in recent decades. Bird-building collisions (typically window strikes) are an important source of bird mortality and contribute to an estimated 365 million to 988 million bird deaths in the United States annually.¹

The project page provides details about the project and links to resources.

Service Learning Registration

You've decided that you want to participate in a CEES service learning project.



The next step is registration.

The registration process is described under a separate link.

The Process . . .



Questions ?

Contact:

Dr. Victoria Schmalhofer

cees@iu.edu



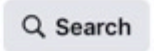
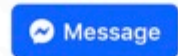
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Facebook: www.facebook.com/CEES.IUI



**Center for Earth and Environmental Science at IU
Indianapolis**

897 likes • 955 followers



Service Learning photos are posted to our Face Book page.

Interesting environmental science, ecology & geology themed material is posted as well.



**Twitter:
@CEES_IUI**



MUCH LEARNING

VERY SERVICE

SO WATER

The Doge is no longer considered funny – alas!

‘Tis not a vibe.

Its humor has ceased to be.

This is an ex-meme.



AMAZE

SUCH CLEAN

WOW