

## Wildlife Monitoring Project Template

*Wildlife monitoring is important for identifying the presence of species that are at risk, evaluating the effects of management, restoration or harvest, and tracking invasive, pest or nuisance species.*

*This project will allow you to develop: 1) distribution maps of specific wildlife species or wildlife diversity, 2) use these results to guide restoration, habitat enhancement or management efforts, and/or 3) create outreach material to inform local land use decision makers or the community about the importance of habitat protection/enhancement for wildlife or provide guidance on how to manage or reduce human-animal interactions with nuisance species.*

### Why Monitor Wildlife?

Wildlife play an integral role in ecosystems by regulating population sizes of plant or prey species, providing natural resources—such as food—to other species (including humans), and filling key ecological roles such as pollination and seed dispersal, just to name a few. Wildlife species can also become pest or nuisance species as well as influence the probability of human exposure to zoonotic diseases. As such, there are a number of reasons why land managers, researchers or local conservation groups may need to monitor wildlife, including:

1. Promoting or protecting habitat for a species of concern on a specific property (see [CT's Species of Concern](#));
2. Inventorying wildlife biodiversity to establish baseline data to guide habitat restoration or enhancement efforts; or
3. Identifying the presence of pest or nuisance species to guide management efforts or reduce human-animal encounters.



### What Will this Wildlife Monitoring Project Accomplish?

Regardless of the specific issue your wildlife project addresses, this project template will help you develop a monitoring approach and display wildlife results on an interactive map, which can be used to guide recommendations for habitat restoration or enhancement and outreach materials to inform the public.

### Ideas for Tailoring Project

*If your team would like to explore additional components to add to your project, here are some ideas:*

- Develop on-going monitoring plan or carry out monitoring approach on additional properties.
- Try different habitat enhancement/restoration techniques, followed by monitoring.
- Create trail or property signage, informational pamphlets or videos, or activity booklets to educate and engage the public about the specific wildlife issue.

**IMPORTANT:** Once you've completed this handout or outlined your project, take photos of all pages (including additional pages that describe your project plan) and email it to [nrca@uconn.edu](mailto:nrca@uconn.edu) so that we can best assist you during your project.



## **Your Project Plan**

*The following is a guide to assist you in your project planning. You may wish to develop your own strategy. If you follow this outline below, however, it's not necessary to fill in every box; you may want to add or modify the sections below to best help you develop your project.*

### **Step 1: Determine your project duration**

The scope of your project should be determined by how much time you are able to commit to the project. All team members need to contribute equally to the project. As a team, determine the total amount of time you will be able to dedicate to this project.

- ☐ 3-5 weeks
- ☐ 6-8 weeks
- ☐ Other \_\_\_\_\_

Compare schedules and list some tentative times that might work for your field work. For example, do you want to wrap up the project before the end of summer? Before the holiday season sets in? Are there days of the week after school/work/other that are most accommodating for your schedules or days/dates that you are unavailable to meet?

### **Step 2: Determine what wildlife issue or topic your project will address**

Describe the specific wildlife question your project will address below. Here are some questions that might help you brainstorm project ideas: 1) Do you know of an area in need of protection or recognition for its value in providing critical habitat, but little is known on the wildlife (in particular species of concern) that reside there? 2) Is there habitat in need of restoration for a specific species, but wildlife monitoring is needed to prioritize areas where efforts are needed most? 3) Do you need to assess restoration success on a property by monitoring wildlife before, during and after? 4) Are you interested in identifying areas where nuisance species are present to educate the public and reduce negative interactions?



Based on the topic of your project, list the species or groups of species that your project will focus on (this is important in order to ensure proper survey techniques are used).

Once you've identified your project topic and focal species, you will want to find online resources or literature on the wildlife species of interest to learn more about their ecology, survey techniques, how to ID the species with the specific survey technique and other literature on conservation or management efforts used for the species of interest. Use the space below to make notes of online resources and literature.

### **Step 3: Determine what area(s) to monitor**

List project location(s) that your team would like to focus on. What kind of property is it (state park/forest, land trust, town park, school property, etc.). Who do you need to contact for permission (if needed), & tentative date of site visit.

Property name & type:

Point of contact:

Tentative schedule for preliminary visit(s), if needed:



#### Step 4: Determine monitoring approach & schedule

Describe the survey/monitoring technique you will use (*e.g.*, camera traps, acoustic monitoring, point counts, hand searching, track & sign, etc.) and list any equipment or resources you need.

Describe where monitoring will occur. If you are interested in seeing how certain environmental, geographic or disturbance factors influence wildlife, make sure that monitoring occurs at sites that vary regarding that factor (*e.g.*, highly degraded sites, moderately degraded sites, or non-degraded (*i.e.*, relatively healthy sites). Also, consider the number of sites needed to sufficiently monitor wildlife at your location (note: this may be restricted by the amount of equipment you have and your time availability).

Monitoring site type(s):

Number of monitoring sites:

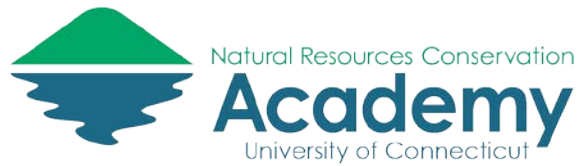
Describe how often monitoring will occur.

How many times and/or for what duration of time will a site be monitored:

If monitoring a site multiple times, at what interval will repeat visits occur (*e.g.*, every other week, once per season):

Tentative schedule for visit(s):





Describe how you will use Track-Kit, Epicollect, Google Maps and/or any other apps or technology (*e.g.*, iNaturalist, eBird, etc.; note: you do not need to use both apps if not necessary):

Beyond monitoring and mapping the results, are there other components to your project you'd like to consider? (Review "Ideas for Tailoring Project" above; *e.g.*, habitat restoration/enhancement, outreach component)

**Step 5: Determine final product and how you will share your results**

Describe how you will document your project (*e.g.*, report, poster, video, story map, interactive map, outreach materials, Online NRCA Project Form).



Describe where you will showcase your project (e.g., put on a community event, present at organization meeting, present at a regional conference, distribute education materials, share products on website/social media, share on NRCA website via conference poster, or Online NRCA Project Form).

### Project Timeline

Select the project scope that is most suitable for your team (short project, 3-5 weeks or longer project, 6-8 weeks) and review the timeline and tasks below. Assign teammates to tasks, as appropriate. Add additional tasks to each phase, as necessary.

3-5 Week Plan – **Blue**

6-8 Week Plan – **Blue & Green**

| General Timeline                                   | Project Tasks   | Resources Needed   | Assign Teammates to Tasks |
|--|---|--|---------------------------|
| <b>Phase 1:</b><br><br><hr/> Write completion date | <ol style="list-style-type: none"> <li>1. Determine purpose of wildlife monitoring.</li> <li>2. Review online resources &amp; conduct lit search to learn more about the wildlife of interest.</li> <li>3. Determine the best non-invasive wildlife survey techniques (e.g., camera traps, acoustic monitoring, track &amp; sign, point counts, hand searching), where you will survey, and how often you will survey.</li> <li>4. Choose most appropriate app(s) for your project. For example, create a habitat assessment Epicollect form for survey locations, decide mapping data to be collected using Track Kit, etc.</li> <li>5. Choose property &amp; establish survey sites.</li> <li>6. Discuss final product goal(s) &amp; where to showcase work.</li> </ol> | <ul style="list-style-type: none"> <li>• Literature on wildlife species ecology and survey techniques</li> <li>• (Optional) Wildlife ID guides</li> </ul>  |                           |
| <b>Phase 2:</b><br><br><hr/> Write completion date | <ol style="list-style-type: none"> <li>1. Acquire equipment needed for surveys (note: NRCA has equipment to loan).</li> <li>2. Create data collection form(s) (e.g., Epicollect form).</li> <li>3. Carry out wildlife surveys &amp; collect other environmental or mapping data at project site(s).</li> </ol>  | <ul style="list-style-type: none"> <li>• Survey equipment</li> <li>• CTP Handbook</li> <li>• Smartphone with Epicollect &amp; Track-Kit apps</li> <li>• (Optional) Uploaded Epicollect form</li> <li>• Wildlife ID guides</li> </ul> |                           |



| General Timeline  | Project Tasks  | Resources Needed   | Assign Teammates to Tasks |
|---|--|--|---------------------------|
| <b>Phase 3:</b><br><br><u>Write completion date</u>   | 1. Organize field data into spreadsheet and create interactive distribution or diversity map and complete any analyses.<br>2. Draft recommendations based on results.<br>3. Determine final product & where to showcase work   | <ul style="list-style-type: none"> <li>• Computer &amp; smartphone</li> <li>• CTP Handbook</li> <li>• Literature on wildlife management</li> <li>• (Optional) Poster template or story map how-to-guide</li> </ul>           |                           |
| <b>Phase 4:</b><br><br><u>Write completion date</u>   | <b>Management path:</b><br>1. Determine habitat enhancement or restoration approach based on assessment & literature.<br>2. Plan & organize restoration or habitat enhancement party.<br>OR<br><b>Outreach path:</b><br>1. Determine best way to convey your project's message (based on results) to target audience.<br>2. Create outreach materials. | <ul style="list-style-type: none"> <li>• Literature on wildlife management</li> <li>• Free software to create outreach material, such as video editing programs, ESRI story map platform or presentation programs</li> </ul> |                           |
| <b>Phase 5:</b><br><br><u>Write completion date</u><br><br><i>Note: Timing dependent on volunteers &amp; season</i> | 1. Restoration or habitat enhancement party; or<br>2. Continued monitoring after restoration; or<br>3. Publicizing outreach materials.   | <ul style="list-style-type: none"> <li>• Equipment and supplies needed for specific restoration approach</li> <li>• (Optional) Refreshments &amp; first aid supplies for volunteers</li> </ul>                               |                           |
| <b>Final Week:</b><br><br><u>Write completion date</u>  | 1. Develop final product describing project & outcome.<br>1. Showcase project.   | <ul style="list-style-type: none"> <li>• (Optional) Poster template or story map how-to-guide</li> <li>• Online NRCA Project Form</li> </ul>   |                           |

### Sample Project:

**Backyard Bears:** A student from Nonnewaug High School partnered with the Bent of the River Audubon to evaluate the effects of human activity at the center on black bear activity. They set up camera traps in multiple habitats and distances from the center and recorded bear activity when human activity was high and low. They mapped and visualized the results using Track Kit GPS & Google Maps. To communicate their findings to the public through a short informational video that was shared not only on the Audubon website (<http://bentoftheriver.audubon.org/bears-in-the-landscape>), but also on the CT Dept. of Energy & Environmental Protection social media. Learn more about the project from their NRCA conference poster: <http://nrca.uconn.edu/students/documents/posters2016/emilyalegi.pdf>.

