



## Hayden Island free-roaming cat survey protocol



*Cat with tipped right ear. Photo courtesy of FCCO*

**Purpose:** To develop a baseline estimate of the feral/stray cat population on Hayden Island and to monitor the population trend annually as “Trap-Neuter-Return” and other humane methods are used to reduce the population.

**Survey objectives:**

1. Estimate the proportion of outdoor pet cats versus feral cats based on presence/absence of ear tip, body condition, sociality, and presence of collar.
2. Estimate feral cat sterilization rates at the study site and compare to sterilization record rates reported by cat colony caretakers
3. Estimate feral cat detection probability by comparing survey data with cat colony caretaker information.
4. Examine patterns of cat distribution relative to established feeding areas
5. Derive preliminary population size estimates for outdoor cats within the study site and in each land-use area.

**Study Area:** The developed portion of Hayden Island (except for far eastern section of island) as well as adjacent undeveloped area. For the purposes of this project we have divided Hayden Island into five land-use areas: **1) Natural Area, 2) Light Industrial; 3) Manufactured Home Community; 4) Box Store; and 5) Residential/Commercial.** Two of the land-use areas (Manufactured Home Community & Residential/Commercial) have been further subdivided into

“plots” to facilitate sampling logistics for a total of **eight land-use area/plots** (See **Attachment 1** for overall site map).

**What to bring** (everything below will be provided by the Project unless noted):

- Yellow vest - all volunteers must wear these when conducting surveys
- Clipboard
- Binoculars (if you don't have your own, Audubon will have some available for you to borrow)
- Smart phone or camera (bring your own)
- Data form and plot maps
- Pen or pencil (bring your own)
- Colored medium tip marker
- Cat Safe at Home & Hayden Island Cat Project Brochures
- GPS (optional) – if you have a GPS, you can use it to record cat locations otherwise just marking cat locations on the provided map is fine

**Frequency & timing of surveys:**

- Conduct surveys on all transects (i.e. roads/paths) within each of the eight land-use areas / plots **three times** during the month of September.
- Each survey should begin in the late afternoon (approximately 5pm) and finish before it starts to get dark. Surveys typically take between 1-3 hours depending on the plot and cat activity.

**Field methods:**

- We will **work in groups of 2 or more** for each survey. One observer will be the primary cat counter while the other observers will focus on recording data, navigate (i.e. make sure the team covers all roads/paths within the plot), outreach / provide brochures if a member of the public is encountered, and take photos of cats. It's OK to take turns in each of these roles during a given survey.
- Complete the top section of the data form before starting. This information includes:
  - **Plot name** (e.g. Manufactured Home Comm. #1)
  - **Date**
  - **Visit #: 1, 2, or 3**
  - **First & last name of each observer**
  - **Start time**
- To conduct the survey, start at one corner of your assigned plot and walk at a slow pace along the road (use sidewalk – either side of road is fine) or foot path, slowly working your way through all the roads in the plot. Try to minimize back-tracking on sections of the road/path you already covered, but inevitably you'll have to do some back-tracking. **Do not count cats when you are back-tracking.** Resume counting when get back to a portion of the road/path that has not been surveyed.
- As you go along, use a colored marker to periodically draw over the portion of the road network on the map that you've already covered.

- When you encounter a cat, mark its location on the provided plot map as accurately as possible (or in GPS) and on the data sheet record the following information:
  - **Cat #** (number sequentially; e.g. the first cat you see will be “1”)
  - **On map?:** write an “X” to confirm you’ve recorded the cat location on the map.
  - **Mark:** record **T**=tipped, **I**=intact, **U**=unknown
  - **Ear** (which ear is tipped): **L**= left ear, **R**=right ear (should be right ear as that is the standard for vets); **NA**=not applicable for cats without an eartip or if you cannot determine ear tip status.
  - **Collar?:** **Y**, **N**, or **U** (unknown)
  - **Age:** **A**=adult (>6 months); **J**=juvenile (betw. 2-6 months); **K**=kitten (<6 months); **U**=unknown
  - **Pregnant?:** **Y**, **N**, or **U** (unknown)
  - **Body Condition:** **H** = healthy, **P**=Poor
    - Cats in “poor” health will show signs of 1 or more of the following traits: loss of fur, notable wounds, visibly malnourished, etc.
  - **Cat description:** color, fur length, distinguishing marks
  - **Photo taken? Y or N**
- Most cats will be detected visually but you can also count cats you hear if you believe they are ones you haven’t counted yet.
- If you have any doubt in recording any of the information on the data form, **please leave blank** – better to be conservative than to make guesses)
- See **Attachment #2** for example data recorded onto a data form and plot map
- **Use binoculars** to help collect data - particularly helpful for determining ear tip status
- After the survey, remember to **record the stop time** of the survey on the data form.
- **Do not count cats that are inside a household (indoors)**
- **\*Do not go on private property when doing the survey\*** Make your observations from the sidewalk or road.

#### **Submitting data forms/maps:**

- Please provide the completed data forms and corresponding marked plot maps for each survey to Joe Liebezeit. If you don’t get the chance to hand the forms to Joe in person, you can scan and send to his email ([jliebezeit@audubonportland.org](mailto:jliebezeit@audubonportland.org)). You can also mail to Joe at 5151 NW Cornell Road, Portland, OR 97210.
- For any photos taken of cats, please label the photos as follows: “**Cat#\_PlotID\_Date**”. For example Cat#3, detected on mobile home comm. plot#1, on Sept 27 would be labelled: “**Cat3\_MHC1\_9.27**”.
- Please feel free to call Joe with any questions about the protocol, survey logistics, at his office phone: **971-222-6121** or cell phone **503-329-6026**.

#### **Communication with the public:**

While conducting surveys you will likely encounter home owners, business owners, and other members of the public. They will probably be wondering what you are doing. Please be cordial and briefly describe the project and hand them a brochure if they want one. Here is an example script:

***“Hi, my name is \_\_\_\_\_. I’m a volunteer conducting cat surveys on Hayden Island as part of a project with the Audubon Society of Portland, Feral Cat Coalition of Oregon, and Multnomah County Animal Services. The information we are collecting will be used to figure out how many feral/stray cats are on the island. The project goal is to reduce the feral cat population using humane methods like “spay/neuter”. We are working with the local community on this effort.”***

Try to get back to doing your survey as soon as you can. Just say, ***“We really need to get back to doing the survey, we’ve got a lot of ground to cover. Thanks for your interest.”***

If folks are really persistent, give them a brochure and point out Joe Liebezeit’s contact info and tell them you can contact him for more info.

## CAT AGE PROGRESSION CHART (Courtesy FCCO)

### KITTEN

(2 MONTHS AND YOUNGER)

- Weighs under 2 pounds
- May still be under mother's care
- May be wobbly, not have full coordination



### JUVENILE

(2 MONTHS – 6 MONTHS)

- Independent, no longer under mother's care
- Eats solid food



### ADULT

(6 MONTHS AND OLDER)



# CAT COLORS CHART (courtesy FCCO)

(You do not need to record colors to this level of detail on the data form)

## SOLID



BLACK



GREY



WHITE



BLACK & WHITE

## TABBY



GREY TABBY



BROWN & WHITE  
TABBY



ORANGE TABBY



BUFF TABBY



ORANGE & WHITE

## CALICO/TORTI



CALICO  
(3 colors in patches)



TORTI  
(Orange/black)



DILUTE TORTI  
(gray/buff)



TORBY  
(Torti with stripes, can  
be Torby and white too)

## POINT



SEAL POINT



FLAME POINT



BLUE POINT



TORTI POINT



LYNX POINT

Attachment 1: Study site map (white numbers = plot #)



## Attachment 2: Data form and example data (in red text)

### DATA FORM – HAYDEN ISLAND CAT PROJECT

Plot name & #: Manuf. home comm. #1 Date: 9/16/15 Visit # (1, 2, or 3): 2

Observers: Joe Liebezeit & Karen Kraus

Start Time: 5:12pm Stop Time: 7:04pm Page 1 of 1

Cat #	On map?	Mark	Ear	Collar? (Y or N)	Age	Pregnant?	Body Condition	Cat description	Photo taken?
1	X	T	R	N	A	N	H	Medium size tabby, short hair	Y
2	X	U	NA	N	J	N	H	Large orange cat with green eyes, long hair	N
3	X	I	NA	N	A	N	P	Skinny, can see ribs through skin, all black, short hair, no tail, limping	Y

**Additional notes:** We encountered 4 people that came up to us and asked about the project and provided them brochures.

**Mark:** T=tipped, I=Intact, U =unknown

**Ear:** R=right, L=left, NA=not applicable

**Age:** A=Adult, J=Juvenile (~ 2 – 6 mo), K=Kitten

**Body Condition:** H=healthy, P= Poor

**Cat description:** color, fur length, distinguishing marks

Attachment 2 (continued): Cat location map. Locations of cats 1, 2, and 3 recorded on the data form are recorded on this map.

