Texas Master Naturalist Program Guidance for logging Volunteer Service Hours using iNaturalist, Texas Nature Trackers Projects and eBird

Introduction

The use of apps for collecting natural history data has greatly expanded in recent years with two platforms, iNaturalist and eBird, becoming widely accepted and utilized by conservation agencies and organizations across the country and globe, including the Texas Master Naturalist Program and its sponsors, Texas Parks and Wildlife Department and Texas A&M AgriLife Extension Service.

This document is a resource of best practices to aid Texas Master Naturalist chapters (TMNs) in developing a consistent application of volunteer service reporting for these platforms and those activities related to them. The Texas Master Naturalist program, Texas Nature Trackers Biologists, and several active Texas Master Naturalists worked together to produce this document.

We recognize that each chapter has unique circumstances in which they'll need to implement the following best practices. We also trust that each chapter understands that the data generated by TMN contributions through community/citizen science applications are critical for conservation efforts across Texas, and that these conservation efforts are a necessary aspect of conserving natural diversity for every Texan now and in the future. It is in this spirit we offer the best practices for reporting iNaturalist and eBird hours outlined below and advise that they adhere to the rigor and high standards expected of other volunteer projects: hours for iNaturalist and eBird work should be logged only for work actively performed where the primary focus was centered on an approved project (rather than merely making incidental observations).

iNaturalist

The use of iNaturalist as a tool for documenting, sharing and identifying plant and animal observations has become a global phenomenon. In Texas alone, we have tens of thousands of observers and millions of observations. Texas Parks and Wildlife Department's Texas Nature Trackers (TNT) program has been using iNaturalist to help document flora and fauna through 12 curated projects for several years, garnering hundreds of thousands of observations for those projects. TNT staff travel the state and conduct webinars, training people of all backgrounds, including TMNs, to use iNaturalist and become active community scientists by contributing high-quality observations to collection and curated TNT projects and offering identifications on others' Texas observations. iNaturalist contributions, together with data collected via other platforms including eBird, are now part of the fabric of many large-scale, long-term research and monitoring projects, providing valuable data to researchers working across a broad spectrum of subject areas. iNaturalist observations are also valuable in guiding land management decisions at local levels, educating and engaging the public about the nature surrounding them and broadening the understanding and knowledge of TMNs about the natural resources in the places they live and serve.

Texas Master Naturalist chapters are required to train incoming members on the use of community/citizen science, through their curriculum guide (Chapter 24 Citizen Science) and encourage those trainees to consider adopting an approved community/citizen science data collection service project. One of the platforms used by TPWD's Texas Nature Trackers community/citizen science program currently is iNaturalist. iNaturalist can be used in many ways by TMNs. To help provide guidance and ideally a more uniform approach to the approval of service hours, we offer this set of recommendations for all Texas Master Naturalist chapters that both recognize the efforts made across the board and provide consistent, cross-chapter acceptance of hours for those efforts within the boundaries of Texas.

While learning to use iNaturalist is a process, TMNs are encouraged to strive to produce high-quality observations that meet criteria for use in research and conservation work. Those criteria include:

- Meet the criteria for a Verifiable observation by including a sound file and/or photographic evidence.
- Contain true location information (whether hidden via geoprivacy or open) that includes a measure of positional accuracy (ideally, less than 500 meters)
- Observations are shared with TNT projects or other iNaturalist projects approved by the chapter
- Observations are focused on wild organisms and observations of cultivated organisms are designated as such

If any terminology or guidance pertaining to iNaturalist is not clear, please contact the Texas Nature Trackers Biologists at tracker@tpwd.texas.gov.

Field Data Collection Using the iNaturalist Platform:

1. Create a VMS Project specific to iNaturalist field work with a unique code, for example: **FR[1] iNaturalist**.
2. Use the following as the project description: "iNaturalist is a community science tool and on-line biodiversity database platform comprised of global networks of naturalists, community scientists and others built on the concept of mapping and sharing flora and fauna observations documenting biodiversity. This includes projects organized and managed by Texas Nature Trackers as well as bioblitzes[2] and other field data collection projects created by organizations, groups and individuals collecting flora and fauna data **within Texas** using the iNaturalist platform. When contributing hours, please provide the project name, and project sponsor or partner organization (if not Texas Nature Trackers) and the location from which you were documenting observations."
3. With local Chapter Board pre-approval of the project, Volunteer Service Hours can be logged for iNaturalist efforts in the following ways **within the borders of Texas only**:
    a. In increments of 15 minutes at a minimum.
    b. Data collection: Bioblitz – Data collection as part of a bioblitz conducted on public land, through non-profit agencies and organizations such as nature centers, or on private land if data are shared with projects hosted by Texas Nature Trackers – or other collection projects approved by your chapter, including but not limited to City Nature Challenge.
    c. Data collection: General Survey – Data collection on public land, i.e. park, natural area, roadside, right-of-way as examples (not bioblitz-specific). Observations must be shared with a TNT-hosted taxonomic project or other chapter-approved project.
    d. Data collection: Private Lands (non-bioblitz) – Data collection on private land that is contributed to a specific project for those taxa monitored through Texas Nature Trackers taxonomic projects or other public collection projects approved by your chapter. Time spent on private land observations *not* shared does not count, nor does time spent collecting or identifying observations on your own property. For example, if a project on private land welcomes Master Naturalists to inventory the property, but doesn't allow those data to be shared publicly or with a TNT iNaturalist project, that time will not be accepted as service hours.
    e. Data Collection: Other – Data collection under the umbrella of another project that may range from local monitoring or assessment projects undertaken by the chapter or another entity and approved by the chapter on a case-by-case basis. These can range from TMN class projects for new trainees, Texas-specific regional projects, or nationwide projects that include flora and fauna within Texas. Examples include but

[1] FR = Field Research code in VMS

[2] Bioblitz = a data collection event for a particular location over a set period of time. Texas Nature Trackers bioblitzes are usually run via iNaturalist projects and may focus on all taxa or a subset of focal organisms.

are not limited to Edwards Plateau Naturalist, eButterfly North America, Plants of Texas, Beetles of Texas and Loggerhead Shrike Sightings, etc. Requirements for data sharing apply, as do restrictions for not recording time surveying one's own property.

iNaturalist Species Identification/Curation (non-field work):

1. Create a VMS Project specific to iNaturalist species identification/curation on the website, for example: **FR: iNaturalist TNT Project Curation/Identification**
2. Service hours can be logged for identification/curation of observations not on a volunteer's own property.
3. When spending time identifying or curating community/citizen science observations, while all observations and identification work enhances conservation, the TMN and TNT Programs encourage the prioritization of Species of Greatest Conservation Need (SGCN), rare and declining species, and species confined to small geographic extents. A list of SGCN can be found at this link: https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/nongame/tcap/sgcn.phtml . Texas Nature Trackers also maintains a list of target species. These lists can be found here: https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/texas_nature_trackers/target_species/ .

4. Use the following project description: "Assisting with the accurate identification of iNaturalist observations from their webpage (https://www.inaturalist.org/observations/identify) for Texas flora and fauna is an important activity for helping observations become research grade and thus usable by researchers, biologists, and others for conservation in Texas. This often-overlooked component of community/citizen science is invaluable and thus an important service in which TMNs are encouraged to participate. To be accepted, identification work should focus on Texas flora and fauna only. Because there are not chapters in every part of Texas and because Texas Master Naturalists have both wide ranges and levels of expertise, it is recognized that identification/curation can be statewide and should not be limited to a chapter's specific service area. When contributing hours, please note the type of curation being done as outlined below, identifying the specific bioblitz in those types of collection projects."
5. Hours can be logged for iNaturalist species identification efforts, or curation, statewide in the following ways:
    a. In increments of 30 minutes at a minimum.
    b. Data curation/identification of SGCN species and other priority tracked species is of highest priority. Members are encouraged to focus on these species and limit curation/identification of common flora and fauna (i.e cardinals, fox squirrels, white-tailed deer, raccoons, cultivated/captive plants, etc).
    c. Data curation/identification of flora and fauna following bioblitzes including City Nature Challenge, TPWD's Texas Pollinator Bioblitz, or specific bioblitzes by TMN chapters, nature centers, or other agencies and organizations within Texas.

d. Uploading data, organizing and curation/identification of observations made during project- specific camera trap efforts using game/trail cameras, either through projects organized by the chapter or projects created by other agencies with which TMNs may be assisting. This does not include a random game camera set up on a deer feeder or other location on private property.
e. Data curation/identification assistance of TNT iNaturalist projects arranged specifically with TNT staff. Hours may be logged for assisting TNT staff with curation and management of 12 taxonomic "traditional" iNaturalist projects. Requested tasks may include reviewing Species of Greatest Conservation Need (SGCN) records in projects for data completeness; reaching out to iNaturalist users with SGCN/tracked species observations requesting they add observations to TNT projects or add missing data to the observation (like locational accuracies); verifying (curating) observations in TNT projects. To assist with this effort, please contact TNT staff at tracker@tpwd.texas.gov .

Texas Nature Trackers Camera Trap Loan Program

iNaturalist observations rely on photographic or sound file evidence, with identifications driven by community consensus, and may be shared with various projects. The Texas Nature Tracker Program offers a Camera Trap Loan Program to provide TMN chapters with a complete kit of cameras and accessories to set up a time-limited, robust surveillance project. Launched in the fall of 2018, interested chapters complete an application detailing their plan for deploying and managing the cameras, which species they plan to target (Species of Greatest Conservation Need are prioritized), and how they plan to process the collected data, which includes submitting data to relevant TNT iNaturalist taxonomic projects. To assist with understanding how TMNs can document volunteer hours for this project, the following guidance is provided:

1. Create a VMS Project specific to iNaturalist field work with a unique code, for example: **FR Camera Trap Loan Program**.
2. Use the following description of this project: "The Texas Nature Trackers Camera Trap Loan Program is designed for long-term (usually 6-month) data collection focusing primarily on mammal Species of Greatest Conservation Need utilizing game cameras dispersed through a specific area within the service area of a Texas Master Naturalist chapter. Members of the chapter deploy and monitor the cameras, organize the data, and submit the resulting observations to relevant, curated TNT projects, focusing primarily on Mammals of Texas. Hours for this project can be accrued for field work with the cameras and for time spent indoors organizing, analyzing, and uploading the observations to said projects. When reporting hours be sure to specify the code for the Camera Trap program as set up by the chapter."
3. Hours can be logged for the Camera Trapping Loan Program in the following ways:
    a. Time spent in the field scouting locations for the cameras, for camera deployment and field monitoring, including regular monitoring of the cameras, changing out batteries and SD cards.
    b. Time spent indoors organizing the collected data into relevant categories, i.e. categorizing by species. Data identification and uploading to TNT's Mammals of Texas (or other TNT) project are also included, reported in 30-minute increments.
    c. Time spent outdoors gathering cameras and other equipment at the end of the project.
    d. Time spent on analyzing results, reporting findings and presenting results to chapter members and other audiences including but not limited to the Statewide Texas Master Naturalist Annual Meeting.
    e. Time spent reporting lessons learned and best practices from the chapter's project participation.

eBird

eBird is a data entry platform managed by the Cornell Lab of Ornithology. It is the single largest biodiversity-related community science platform in the world, with over 100 million bird sightings contributed globally every year. With its focus on bird abundance, distribution, habitat use, and trends, this platform has become integral to both research and conservation projects at state, national, hemispheric, and global scales. eBird data may be entered in the platform via the mobile app while in the field or via the website.

It is important to separate the act of entering data into eBird from the act of birding or collecting data for a formal research project. Texas Master Naturalists volunteer in service to their communities or the scientific community, but we must never stretch the definition of community service beyond those benefits. Personal birding trips that don't meet the qualifications of an official, formal survey should not be counted as service. However, because the data from those birding trips are useful to the scientific community, time spent entering data into eBird may be counted as service under the limitations below.

The following conditions must be met for time entering eBird data to count as service:

1. Provide the following description for reporting eBird hours in VMS: "Texas Master Naturalists can record hours submitting data into eBird for chapter-approved projects that meet the definition of formal surveys. When reporting eBird hours, volunteers should be specific in identifying the project/type of eBirding done, duration, party size, distance covered, and (when possible) numbers of birds/species detected."
2. Time spent collecting bird data in a Chapter-approved formal survey should be logged under a project for that survey and not towards an eBird service project. Generally speaking, Chapters should not approve casual, or incidental birding activities as a formal bird survey. Official surveys are activities that have formal protocols that dictate time, season, duration, location, and methods of monitoring birds. Official surveys may be national protocols or local projects, but they should always seek to answer a research question. Generally speaking, formal surveys at the local level are designed and conducted in coordination with the land manager.
3. If survey protocols do not require/enable participants to log data into eBird during the survey, one participant from the survey group may collect "eBird service hours" for time spent entering data into eBird after the event. Generally speaking, this should be no more than 15 minutes.
4. If participants are conducting non-survey (personal/incidental) birding trips, and choose to enter data into eBird while they bird, one person per group may code a maximum of 15 minutes of eBird time per trip. Incidental birding can occur anytime outside of focused or specific survey/project, i.e for personal enjoyment or leisure.
5. Time spent volunteering on national surveys (including, but not limited to those below) should be logged under Chapter-approved projects for these specific projects. Time for eBird data entry may not be counted for these national surveys.
    i. Audubon Christmas Bird Count

ii. Great Backyard Bird Count
iii. USGS Breeding Bird Survey
iv. Project FeederWatch
v. Project NestWatch
vi. Great Texas Birding Classic Events
vii. Audubon's Climate Watch
viii. Audubon's Hummingbirds at Home

Other Community Science Projects

This document reports on the most often used platforms for collecting scientific data. For any others that may come up, as well as other projects of a similar nature, it is recommended that the guidelines above be used for developing reporting criteria on a case-by-case basis.