

United States Fish and Wildlife Service Section 10(a)(1)(A) Permit Reporting Guidelines

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Introduction

The purpose of this document is to provide section 10(a)(1)(A) recovery permit holders guidance on the information that should be submitted to the U.S. Fish and Wildlife Service (Service) in their required annual reports. Any deviations from these reporting guidelines should be discussed with the Austin Ecological Services Field Office. Please refer to the template excel sheet for reporting Part 3A, Part 3B, and/or Part 3C of the reporting guidelines. The template excel sheet can be found on our website:

- https://www.fws.gov/southwest/ES/AustinTexas/ESA_Sci_permits.html

Reporting

Annual reports are **required** by all section 10(a)(1)(A) permittees. Annual reports must include:

- Written description of the project and all the activity conducted under the 10(a)(1)(A) permit, including a summary of the survey results.
- A geospatial dataset (ideally an ArcMap or ArcPro dataset) containing the location of the project area and all wetlands within the project area.
- Survey data is required, but the format of what should be submitted and reported depends on the methods used; there are separate reporting requirements for ARD surveys, human surveys, and any physical capture or detection data. Physical capture and detection data only pertains to those individuals permitted to handle Houston toads. Projects that use multiple methods need to submit data in each applicable format.

Terms

Project area – The geographic space and/or property in which the proposed disturbance is planned to take place, plus the surrounding landscape in which all of the monitoring takes place (the 1.3 km [0.81 mi] buffer zone). See the appendix for example project areas.

Core disturbance site – The geographic space and/or property in which the disturbance that prompts the requirement for Houston toad surveys will occur. See the appendix for examples.

Listening post – The location where the audio recording device (ARD) is deployed or where human observers listen for Houston toad vocalizations.

Monitored wetland – The location of principle interest where Houston toads may reproduce and males may be heard vocalizing.

ANHO – This is how we will abbreviate *Anaxyrus houstonensis* for data collection.

Part 1. Written description of the project

Personnel

- Names of all persons involved in the project and their roles and responsibilities.
- The Section 10(a)(1)(A) scientific report number under which work was conducted.
- Person(s) directly responsible for writing the report.

Purpose

- Description of the reason behind the project (e.g., removal of a pond for road installation, removal of forested habitat for a pipeline, research).
- Monitoring phase (year 1, 2 or 3) this project is in and briefly summarize the previous year(s) monitoring results, if monitoring has reached years 2 or 3.

Location

- General description of the location of the project area, including a map, a list of counties in which surveys took place, and the distance and direction of the project area to major towns and/or cities.
- General description of the geology, soils, vegetation, and land use of the project area and surrounding landscape, including maps.
- Detailed description of each survey site with photographs and a description of the monitored wetland (including estimates of the surface area and depth, hydroperiod, amount of emergent or submerged vegetation, and dominant species) and the surrounding terrestrial habitat (including descriptions of dominant canopy species, canopy height, understory density, amount of herbaceous ground cover), including maps and the survey method used at each the site (i.e. ARD or human auditory surveys).
- General explanation of why any wetlands within the project area were not surveyed (if any). This description can be in table form and should be accompanied by a map(s) with delineated wetlands.

- Estimates of the distance, direction (e.g., N, NE, S, SW, etc.) and vegetation composition (i.e., open field, canopy with dense understory) between the listening post and the monitored wetland or body of water.
- Location of the project area and each wetland or body of water being surveyed in context with previously conducted Houston toad surveys, historical Houston toad occurrences, and proximity to conservation areas (public lands, conservation banks, private lands enrolled in safe harbor agreements).

Results summary

- Overview of the survey methods, the total survey effort, number of Houston toad detections, and a summary of the other amphibians detected.
- Summary of the environmental conditions that occurred during the survey period at the project area and the identification of the source of this information, including frequency of precipitation events and cumulative precipitation totals, average, minimum, and maximum temperatures, and the frequency and intensity of barometric pressure drops.
- If ARDs were used, analysis metrics for the Houston toad specific classifier element must be reported. For each ARD listening post, at minimum the following metrics must be included.
 - Total number of classifier detections.
 - Number of classifier matches manually verified by a human observer.
 - Type I errors- the proportion of false positive classifier matches, calculated as the number of true positive Houston toad calls detected by the classifier divided by the total number of classifier detections.
- If human auditory surveys was the method used, a table with survey dates by site should be reported. An example can be found in the appendix. The two survey dates within each peak breeding season month (February, March, April) that followed a barometric pressure drop and/or were within 24 hours of rainfall should be noted.

Part 2. Geospatial project data

Formatting

- The preferred format for all spatial data is an ArcMap or ArcPro geospatial database with individual shapefiles for the different project components (listed below).
- The coordinate system should be WGS 84.
- Make sure to add sufficient information to the metadata for each file to ensure clear interpretation.

Shapefiles

1. *Project Area* – Shapefile that clearly delineates both the core disturbance area (if applicable) and the complete project area.
2. *All Wetlands* – Shapefile with polygons of each wetland within the project area.

Fields to be Included in Shapefiles

1. *Project Area*

- **PROJ_AREA** – Name of the overall project.
- **PROP_NAME** – Name of the property being surveyed.
- **SURVEY_COMP** – Name of the company working on this project in all capital letters. Be consistent if an abbreviation is used.
- **YEAR** – Year the last survey of this property will occur.
- **SITE** – Limited to either “CORE” or “PROJECT”. “CORE” is the core disturbance area (if applicable). “PROJECT” is the entire project area.

2. *All Wetlands*

- **PROJ_AREA** – Name of the overall project.
- **PROP_NAME** – Name of the property being surveyed.
- **WETLAND_ID** – Wetlands should be labeled as follows:
 - i. First three letters of the company name followed by a unique number.
 1. Example – There are three wetlands to be identified by the Service. They should be labeled as USF1, USF2, USF3. Those will be the names of those wetlands indefinitely. The next project with another three wetlands should be labeled as USF4, USF5, USF6, and so on as more projects are initiated.
 - ii. If the survey is not being done for a company, but by a permittee the initials of that permittee should be used instead of the first three letters of the company name
 1. Example – There are three wetlands to be identified by John Doe. They should be labeled as JD1, JD2, JD3.

- iii. If a wetland has a historical name, then the format should be W followed by the historical name of the wetland in all capital letters.
 1. Example 1 – Pond 10 at Bastrop State Park is being surveyed by the USFWS. The label should be WPOND10.
 2. Example 2 – John Doe is surveying a historically named pond called “Houston Pond”. The label should be WHOUSTONPOND.
- **SURVEY_COMP** - Name of the company working on this project in all capital letters. Be consistent if an abbreviation is used.
- **YEAR** – The last year wetlands were surveyed for this project.
- **SURVEYED** – Limited to “YES” or “NO”. “YES” if this wetland was monitored during the project or “NO” if it was not monitored during the project. Those wetlands not surveyed should have a reason as to why they were not surveyed in the narrative portion of the annual report.
- **ANHO_PRES** – Indicates whether Houston toads are or have been present at this site. Values limited to “YES,” “NO,” “UNK,” or “NULL”. Presence does not have to be limited to the scope of this project if a historical record is known. “YES” values should only be entered if a Houston toad was physically seen at this wetland or if a listening post was close enough to the wetland to confirm presence. “NO” values should only be entered if a listening post was close enough to the wetland to confirm absence. “UNK” values should be entered if a listening post was in a position to record multiple ponds and a toad call could not be definitively sourced to this specific wetland. If no surveys have ever been done on this wetland, a “NULL” value can be entered.
- **YEAR_PRES** – The most recent year presence was confirmed. Presence does not have to be limited to the scope of this project if a historical record is known. If presence has never been confirmed at this wetland, then the value should be “NULL”.
- **PERM** – Values limited to “YES” or “NO.” If a body of water is permanent then the value is “YES.” If a body of water is ephemeral then the value is “NO.”

Supplementary data

- Include any other spatial data pertinent to site assessment and presence/absence determination, this may include soil, geology, vegetation, and aerial photographs
- Include any information regarding previous Houston toad occurrences in or around the project area

Part 3. Automated recording device (ARD) survey results

Survey data needs to be submitted using the “USFWS Houston toad survey datasheet” excel file on the “ARD” worksheet. The following column headings and associated data are required in the worksheet. Data descriptions are as follows:

- **PROJ_AREA** – Name of the overall project the audio surveys are being performed under.
- **PROP_NAME** – Name of the property being surveyed.
- **SURVEY_COMP** - Name of the company working on this project in all capital letters. Be consistent if an abbreviation is used.
- **ARD_ID** – Unique identification name, number, or alphanumeric combination for each ARD location. The ID will remain the same for every year an ARD is in the same location, i.e. on the same tree, post, or at the same GPS coordinates. If an ARD is moved to a new location a new ARD ID should be used.
- **ARD_TYPE** – The make and model of the ARD used at this site.
- **ARD_LAT** – GPS coordinate (Latitude) of the location where the ARD was deployed.
- **ARD_LONG** – GPS coordinate (Longitude) of the location where the ARD was deployed.
- **COUNTY** – County name only (i.e. BASTROP not BASTROP COUNTY).
- **YEAR** – Year this survey effort took place.
- **START_DATE** – The date the ARD was deployed and started recording. The date should be formatted as YYYYMMDD.
- **END_DATE** - The date the ARD stopped recording. The date should be formatted as YYYYMMDD.
- **SURV_TIME** - An optimal monitoring scenario results in 178 hours of recording time (89 days of monitoring x 12 10-minute files), but because of equipment failure, theft, and other reasons, the actual number of hours may be less. Enter the actual number of hours recorded by the ARD at this site.
- **SURV_DAYS** – An optimal monitoring scenario results in 89 days of monitoring, but because of equipment failure, theft, and other reasons, the actual number of days may be less. Enter the actual number of days recorded by the ARD at this site.

- **ANHO_PRES** – Values limited to “YES” or “NO.” Indicate whether Houston toads were detected at this site.
- **ANHO_DATE** - Date the Houston toad was detected for the first time from the ARD files. The date should be formatted as YYYYMMDD.
- **ANHO_TIME** - Start time of the ARD file when the Houston toad was detected for the first time. Military time should be used (e.g., 0200, 2100).
- **NUM_CHORUS** – Number of days Houston toads were recorded chorusing.
- **OTHER_SPP[i]** – This column heading, and as many of the subsequent column headings as required, should be replaced with an abbreviated acronym of the scientific name of all the other species of calling anuran detected in the ARD files from that site (e.g., for the green treefrog *Hyla cinerea* use HYCI). List any additional species in alphabetical order.

In addition to the data results spreadsheet above, projects which deploy ARDs for Houston toad monitoring need to submit the following information:

- Detailed description of the methods used to examine the recordings for the presence/absence of Houston toad vocalizations.
- If a Service supplied Kaleidoscope cluster was used for the analysis, the comma-separated values (CSV) output files need to be provided.
- If a non-Service supplied automated detection algorithm was used to examine recordings, the algorithm and the methods required to replicate the analysis needs to be submitted with the report. Failure to do so will result in reanalysis of recordings and significant delay in report acceptance.
- Copies of the complete set of recordings (i.e.,wav files) made by all ARDs deployed for the project need to be submitted with the report.

In addition to submitting the standardized datasheet, any recordings made by human observers to aid in species identification should be submitted to support presence/absence determinations.

Part 3B. Human survey results

Data needs to be submitted using the “USFWS Houston toad survey datasheet” excel file on the “Human” worksheet. The following column headings and associated data are required in the worksheet. Data descriptions are as follows:

- **PROJ_AREA** - Name of the overall project.
- **PROP_NAME** – Name of the property being surveyed.

- **SURVEY_COMP** - Name of the company working on this project in all capital letters. Be consistent if an abbreviation is used.
- **SURVEYOR** – First and last initials of the biologist(s) (full names should be included in the narrative summary) conducting the survey at the site.
- **POST_ID** – Unique identification name, number, or alphanumeric combination for each listening post location. The ID will remain the same for every year a listening post is in the same location, i.e. on the same tree, post, or at the same GPS coordinates. If a listening post is moved to a new location a new ID should be used.
- **LIS_LAT** – GPS coordinate (Latitude) of the location where the human observer performed the audio survey.
- **LIS_LONG** – GPS coordinate (Longitude) of the location where the human observer performed the audio survey.
- **COUNTY** – County name only (i.e. BASTROP not BASTROP COUNTY).
- **YEAR** – Year this survey effort occurred.
- **SURV_DATE** – Date the Houston toad survey was conducted. Data for each survey date at a specific survey site constitutes a separate row in the spreadsheet. The date should be formatted as YYYYMMDD.
- **START_TIME** – Start time for the audio survey. Military time should be used (for example, 0200, 2100).
- **ANHO_NUM** – Count of individual Houston toads (*Anaxyrus houstonensis* – ANHO) observed or estimated. If a direct count of individuals was conducted, provide the number of toads observed. Otherwise, use one of the following values for each site/listening post for each date surveyed: 0, 1, 2-5, 6-10, or 10+.
- **TEMP** – Temperature at the start of the survey (to the nearest 1°C).
- **BARO_PRES** – Barometric pressure (to the nearest kPA) at the start of the survey.
- **WIND_SPD** – Average wind speed (to the nearest kilometer per hour) during the 10-minute listening period.
- **RHUM** – Relative humidity (to the nearest one percent) at the start of the survey.
- **CLD_COV** – Cloud cover (clear – 0-10%, partly cloudy – 10-50%, mostly cloudy – 50-90%, cloudy – 90-100%) at the start of the survey.

- **PRECIP** – amount of rainfall (millimeters [mm]) occurring within the previous 24 hours at the survey site.
- **PLAYBACK** – Was a recording of a Houston toad call played to elicit a response? Values limited to “YES” or “NO”.
- **OTHER_SPP[i]** – This column heading, and as many of the subsequent column headings as required, should be replaced with an abbreviated acronym of the scientific name of all the other species of calling anuran (e.g., green treefrog *Hyla cinerea* use HYCI), and an estimate of the number heard vocalizing should be entered here, use one of the following values for each survey for each date surveyed: 0, 1, 2-5, 6-10, or 10+.

In addition to submitting the standardized datasheet, any recordings made by human observers to aid in species identification should be submitted to support presence/absence determinations.

Valuable Additional Data

Although we would appreciate any of the following information to be provided within the narrative summary if collected, it is not required, unless otherwise specified in the 10(a)(1)(A) scientific permit.

- **Landscape Context** – Description of the surrounding landscape (for example, management practices, land use)
- **Threats** – Noticeable threats on the landscape or potential threats which might impact the short and/or long-term survival of the species at the particular survey site or within the survey area (e.g., feral hog damage to pond habitat, forest clearing).

Part 3C. Physical capture/detection locations

Physical capture and detection data only pertains to those individuals permitted to handle Houston toads. Data needs to be submitted using the “USFWS Houston toad survey datasheet” excel file on the “Capture” worksheet. The following column headings and associated data are required in the worksheet. Data descriptions are as follows:

- **PROJ_AREA** - Name of the overall project.
- **PROP_NAME** – Name of the property being surveyed.
- **SURVEY_COMP** - Name of the company working on this project in all capital letters. Be consistent if an abbreviation is used.
- **SURVEYOR** – Initials of the permittee that handled or detected the toad.
- **YEAR** – Year the capture or detection was made.

- **DATE** – Date the capture or detection took place. The date should be formatted as YYYYMMDD.
- **COUNTY** – County name only (i.e. BASTROP not BASTROP COUNTY)
- **CAP_LAT** – GPS coordinate (Latitude) of the listening post location.
- **CAP_LONG** – GPS coordinate (Longitude) of the listening post location.
- **SEX** – The sex of the individual or if the individual is a juvenile. Values should be limited to “MALE”, “FEMALE”, or “JUVENILE”.
- **LENGTH** – Snout to Urostyle length in millimeters.
- **WEIGHT** – Weight in grams.
- **TISSUE_TYPE** – If a permittee is permitted to collect tissue, what type of tissue sample was collected (e.g., toe clipping).

For physical capture or detections, sex, length, weight, and tissue type are suggested measures to be taken if possible. However, these variables are not necessary components.

Appendix

Table 1: Example table for reporting survey dates by site.

Date	February			March			April		
	Site			Site			Site		
	USF_1	USF_2	USF_3	USF_1	USF_2	USF_3	USF_1	USF_2	USF_3
1			X	X		X			
2	X	X	X	X		X	X	X	X
3	X	X	X	X					
4	X	X		X		X	X	X	X
5	X	X		X	X ^R	X	X	X	X
6			X		X	X	X	X ^B	X
7	X	X	X		X		X		
8	X	X	X	X	X	X	X ^B		X ^B
9	X	X		X ^B		X ^B	X		X
10					X				X
11	X ^B	X ^B	X ^B	X		X	X	X	X
12	X	X	X		X	X	X	X	X
13	X	X	X				X	X	X
14	X	X		X	X	X	X	X	X
15	X	X		X	X				
16	X	X	X	X	X	X	X	X	X
17	X	X	X	X	X	X	X	X	
18				X	X	X	X	X	X
19	X	X		X	X	X	X ^B	X ^B	X ^B
20	X	X		X ^R		X ^R	X	X	
21	X	X	X		X ^B	X	X	X	X
22	X	X			X	X			X
23	X	X	X	X	X	X	X	X	X
24			X	X		X	X	X	
25	X ^B	X ^B	X ^B		X	X	X	X	X
26	X	X	X	X	X				X
27	X	X	X	X	X	X		X	
28	X	X	X	X	X				X
29				X	X	X	X	X	X
30					X	X	X		
31					X	X			
Total	23	23	18	21	22	24	22	19	22

^B Indicates a survey done following a drop in barometric pressure

^R Indicates a survey done within 24 hours of rainfall