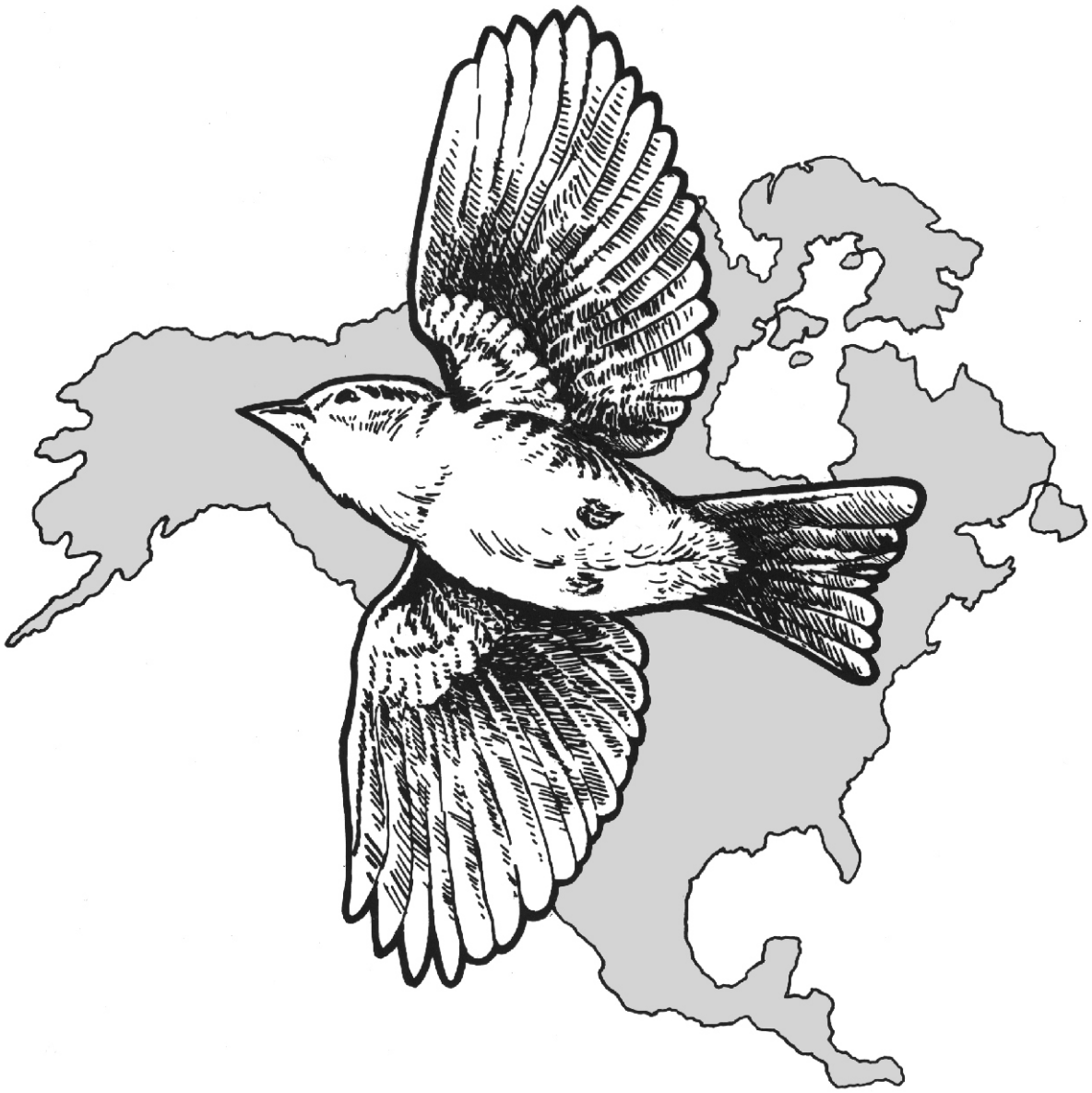
TEXAS PARKS AND WILDLIFE

Project Prairie Birds:

A Citizen Science Project for Wintering Grassland Birds



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SECOND EDITION

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PPB Coordinator: c/o Gulf Coast Bird Observatory (see above)

MISSION STATEMENT

To determine the wintering distribution of grassland species, to identify habitat preferences for these species and utilize these data collected to develop land management recommendations for conservation planning. Most importantly, to give concerned citizens a conservation project that they can contribute their efforts towards while learning how meaningful data are collected and why.

WHAT IS A PRAIRIE OR A GRASSLAND?

An extensive area of flat to rolling land dominated by tall, mid- or short-grasses and forbs with trees and shrubs usually limited to drainages and other protected areas. Edaphic factors (soil characteristics) and natural processes, such as fire and periodic grazing, maintain the plant community.

WHERE CAN PROJECT PRAIRIE BIRDS BE CONDUCTED?

Simply put, Project Prairie Birds can be conducted in most temperate grasslands in the southeastern U.S. The methods described here can be easily employed in almost any grassland situation including mid-grass prairies, tall-grass prairies, pine savannahs, fallow pastures, recent clearings, agricultural or ranching areas, etc. Man-made sites will also need to be surveyed, like mowed or grazed pastures (e.g., with non-native grasses like Bermuda or love grass, sizable manicured lawns, golf courses, and the like).

WE NEED TO HEAR FROM YOU

Project Prairie Birds is for the birds, but conducted by the public. If you are interested in assisting, be sure and let us know how to get in touch with you. We established a unique prairie bird listserve. To subscribe, send a message to listserv@listserv.uh.edu On the first line put: subscribe pbb-list *yourfirstname yourlastname*. To send mail to the list, the address is: pbb-list@listserv.uh.edu

Check out the PPB Web site: www.tpwd.state.tx.us/nature/birding/prairie_birds/index.htm

The bird on the cover is an Ammodramus, species

BACKGROUND

Some of this country's most imperiled species are grassland birds such as Nelson's Sharp-tailed and Henslow's sparrows. Each winter season, many species of grassland birds migrate to the southeastern United States, including Texas. Over a dozen species of sparrows along with the Eastern Meadowlark and Sedge Wren winter in a mosaic of remnant native prairie, agricultural fields, grazing pastures, and hedgerows.

One of the highest priority species of the group, Henslow's Sparrow, was potentially resident in the tall-grass prairies of the Upper Texas Coast; however, with loss of over 90% of these tall-grass prairies, that population has not been observed breeding since 1982. Other populations of Henslow's Sparrow do use remnant prairies in winter, but in unknown densities and distribution. In addition, in recent years there has been concern in the scientific and birding communities about the population trend of the Henslow's Sparrow. The North American Breeding Bird Survey (BBS) data clearly indicate a population decline. Christmas Bird Count (CBC) data also indicate declines on wintering grounds. However, because of the secretive nature of this species the data gathered by the BBS and CBC may not reflect true population trends. As such, we are proposing a relatively new technique for censusing winter populations of Henslow's Sparrows and other grassland species of concern. The Henslow's Sparrow is not the sole focus of this study, it is merely the *poster child*.

THE ORIGIN OF THE PPB METHODOLOGY

One of the largest, best-maintained areas of the longleaf pine forest ecosystem is on Fort Polk in west-central Louisiana. Military training on the installation causes many small to very large wildfires that maintain the bluestem community that is a signature component of the longleaf forests in this region. The military actively supports research of potentially sensitive species, such as Henslow's Sparrow, that could be impacted by their training. In an effort to assess the abundance and distribution of the Henslow's Sparrow on the installation, staff from Fort Polk Environmental and Natural Resources Management Division developed a survey protocol to collect population data on the species. Normally, grassland bird species can be effectively counted using rope drags, where two individuals simply drag a rope of fixed-length across the herbaceous vegetation and count birds as they flush away from the rope. However, rope drags were impractical on the installation since trees were located on all the proposed transects, making a continuous, uninterrupted survey impossible. Staff then developed the pole technique that enabled them to create a zone of disturbance much like a rope drag does, but also allows surveys to continue uninterrupted through the trees.

–Ross Carrie

OBJECTIVES AND JUSTIFICATION

Southeastern grasslands are the primary destination for more than a dozen species of Nearctic migratory grassland birds. However, there are large gaps in information concerning winter distribution, habitat requirements and population changes in this group of nationally-recognized declining species. In 1998-1999, the pilot project area for Project Prairie Birds (PPB) was the Upper Texas Coast, home to the largest urban area in the state, an area of exponential human growth and development. The greater Houston area once contained extensive prairie habitat, but it is rapidly disappearing. Our goal is to promote a program that will allow for the rapid collection of important data that will be included in the Partners in Flight planning process. Project objectives are to: (1) determine area-distribution of priority grassland species, (2) identify habitat preferences for target species, (3) utilize data collected to develop land management guidelines and recommendations for conservation planning, and (4) give concerned citizens a project that they can contribute their efforts towards. **Project Prairie Birds can be done in various ecoregions of the nation or elsewhere in the temperate grasslands.**

We are proposing this as a "citizen science" project designed to make use of the large number of expert and active birders and ornithologists. We expect to map the distribution and identify specific habitat requirements for all over-wintering avian grassland species where PPB is conducted. This instructional guide booklet describes standardized field methods for conducting research on grassland birds. This workbook and the Web site are designed to provide the best possible self-paced training. Remember to stay with the protocol since we are gathering comparative data among sites. Changing any detail, however small it might be, will create problems in the analyses and therefore the entire project. Survey sites can be conducted on either public or private lands. Both avian surveys and vegetation plots must be conducted at each participating prairie site. Avian transects for each site will be run a minimum of three times per winter season within specified intervals. Vegetation plots will also be conducted and will include five random plots per bird transect.

The Gulf Coast Bird Observatory and its PPB Coordinator will serve as the primary contact, coordinate communication, oversee the design of field techniques and data analysis, among other tasks.

PARTNERS IN FLIGHT HIGH PRIORITY GRASSLAND SPECIES

Partners in Flight was formed to address the conservation needs of declining bird species. Federal and state agencies, non-governmental conservation organizations, communities and conservation-minded corporations, landowners and other businesses, have joined together in an international effort to address these declines. Together, we are working to understand the ecology and natural history of all birds in the Western Hemisphere, while also discovering the causes of their vulnerability and declines. Our main goals are to create an awareness of birds and to implement actions needed to assure that these valuable species continue to occur in healthy and productive populations in the future.

Priority bird species most in need of conservation attention were identified using the PIF prioritization process. This process utilizes the best available scientific information and the knowledge of the nation's top avian experts to develop scores for all species of landbirds occurring in the U.S. Scores are based on information such as global abundance and distribution, threats to wintering grounds, and population trend information from sources such as the Breeding Bird Survey. Some of the highest priority grassland species wintering in the southeastern U.S. are shown below.

HIGH PRIORITY SPECIES IN THE SOUTHEASTERN U.S.

Bachman's Sparrow
Henslow's Sparrow
Nelson's Sharp-tailed Sp.
Sprague's Pipit
Seaside Sparrow
Le Conte's Sparrow
Sedge Wren
Grasshopper Sparrow

INCENTIVES

For the Birder...

- Develop advanced identification skills.
- Learn avian field sampling techniques from biologists.
- Gain access to birding in special areas normally closed to public.
- Birding enjoyment with a focus on data collection that will positively benefit bird populations. You will make a difference!

For the Landowner...

- Learn which bird species are benefitting from your land management techniques.
- Participate in an all-volunteer conservation effort in your community.
- Learn about birders and the economic benefits of birding.
- Develop new ideas on cost-effective grassland management.

GENERAL VEGETATION TYPES OF THE SOUTHEASTERN U.S. WHERE PPB CAN BE CONDUCTED

This is essential for the data sheets on pages 18 and 19.

Eastern grasslands and associated wetlands:

Longleaf/slash pine savannah

Maritime pine (loblolly, pond) savannah

Hardwood (oak, ash) savannah

Coastal tallgrass prairies (sw Louisiana, Upper and Central Texas coast)

Tamaulipan prairies (South Texas and Tamaulipas, Mexico)

Peninsular Florida and south Georgia prairies (both wet and dry; including Okefenokee and Everglades)

Midwest and southeast interior relict prairies-savannas-barrens-glades (Grand Prairie, Arkansas and Kentucky Barrens, Black Belt, Jackson Prairie, Blackjack Savannah, Oak Ridge Barren, Center Barren, Floyd Prairie)

Appalachian grassy bald

Tallgrass prairie-forest mosaic (Missouri, Oklahoma, Texas)
- Recently disturbed (heavy grazing, burns, no thatch)
- Undisturbed (thatch present)

Grassland with woody component

Cropland (rice, hay, alfalfa, plowed, etc.)

Pasture (warm-season or cool-season grasses)

Rank annual field

Airport and military installation maintained airfield

Estuarine emergent marsh and/or wet meadow (include fresh, brackish or salt)
- Disturbed
- Undisturbed

Lowland southern pine forests (depending on management, these may support enough open stands to conduct PPB surveys):

Longleaf/slash flatwood

Longleaf/slash savannah

Longleaf-wiregrass/bluestem sandhill

Shortleaf Pine-bluestem

Long-rotation loblolly-shortleaf savannah

Short-rotation loblolly/slash plantation

Tropical and subtropical cover types (Puerto Rico, Virgin Island, South Florida):

Brushy oldfield

Shaded pasture

Mature pine forest (Florida pine rockland)

Maritime communities:

Dune and/or beach (e.g., dune grassland)

Palustrine emergent wetland and/or wet meadow

Western grassland:

Mixed grass area
- Disturbed
- Undisturbed

Short grass area
- Disturbed
- Undisturbed

Semi-desert/arid grassland

Grassland with woody component (e.g., sandsage)

Cropland (rice, hay, alfalfa, plowed, etc.)

Pasture (warm-season or cool-season grasses)

Rank annual field

Airport and military installation maintained airfield

Estuarine emergent marsh and/or wet meadows (include fresh, brackish or salt)
- Disturbed
- Undisturbed

NOTE:

If your study area does not fit in any of the above, briefly describe it on your data sheets found on pages 18 and 19.

SIZE OF GRASSLAND

There is no minimum field size, but at least the 20 x 100 m transect must fit. The following are acreage size classes for grassland sites. This is an estimate of contiguous patch size and homogeneity of the area as you are standing in your transect. In other words, when you look around, does the habitat change dramatically or does it all appear the same to you? If you need assistance, consult the landowner or land manager for these figures.

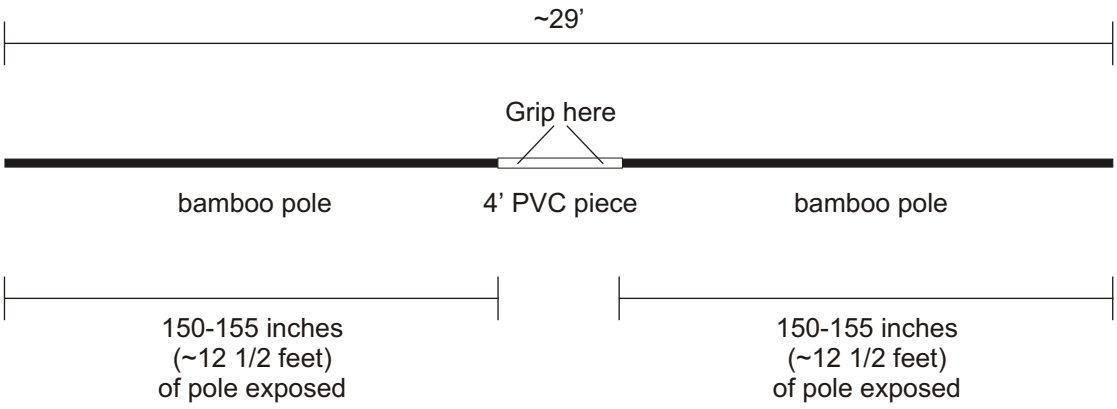
Categories:

a. <1-5 acres (1 acre is roughly the size of a football field)*
b. 6-10 acres
c. 11-50 acres
d. 51-100 acres
e. >100 acres

* *An acre is roughly 64 m (208'). Actually, 208.71' x 208.71' = 43,560 sq. ft., but a football field is 160' x 300' = 48,000 sq. ft. making the football field less than 10% larger than one acre.*

THE "BRANDONIZER" *See pages 9 and 10 for more information*

This simple device was developed by Brandon Crawford, a Student Conservation Association (SCA) Conservation Associate at Attwater Prairie-Chicken NWR, who assisted with the initial surveys at that site. This will work in pure grassland situations that lack trees. Slip each pole (left and right) about 14 inches into a 4' piece of 3/4" PVC. The bamboo should fit snugly, possibly with the aid of some tape, but not permanently so they can be taken apart to make transporting easier. Grip the PVC piece by holding it at waist-level. With an up and down motion, alternating left then right arm, it is much easier to beat the grass for skulking birds. This device reduces stress to the back, shoulders and arms.



METHODOLOGY

Establish Line Transects

- Transects will be 100 m long and approximately 20 m wide; the three participants with extended poles that form the survey line is approximately 20 m wide (Figure 1 on page 10).
- To avoid flushing birds from transect-to-transect, separate transects by at least 200 m.
- Transects adjacent to less-traveled roads should be placed approximately 10 m from the roadside and run perpendicular (away from the road, not parallel to it).
- Don't establish a transect into the rising morning sun (which is roughly 40-140 degrees compass bearing); it's too bright.
- Take a photograph of each transect at about the same time each year. These prints or slides should be sent to the GCBO so they can be filed. Notice the change in the grass structure over the years.

Monument Your Sites

Mark your sites in such a way that they can be easily located in future years even without you present. This includes a general map of the area as well as a specific *hand-drawn* map of where each transect begins and ends (see example on facing page). It will be important to take slide photos annually of each transect from the same spot with some reference of scale (i.e., have a person standing in the grass at the same exact spot each year). Determining the location with a GPS unit is highly recommended, but not always feasible. Drive a brightly painted piece of rebar deep into the beginning of the transect making sure it is clear of cattle, humans, tractors, etc. Simple flagging has a very short life span since deer and cattle browse on them, while normal weather conditions accelerate rotting. Use tall t-posts, conduit, or PVC; use metal if your area is burned regularly.

We recommend driving a 4' piece of rebar about 1-2' deep in the ground with a 6' piece of PVC slipped onto it. This is very visible and safe for cattle and tractors. Replace the PVC when needed (i.e., after a fire). Check your local hardware store for these very inexpensive items.

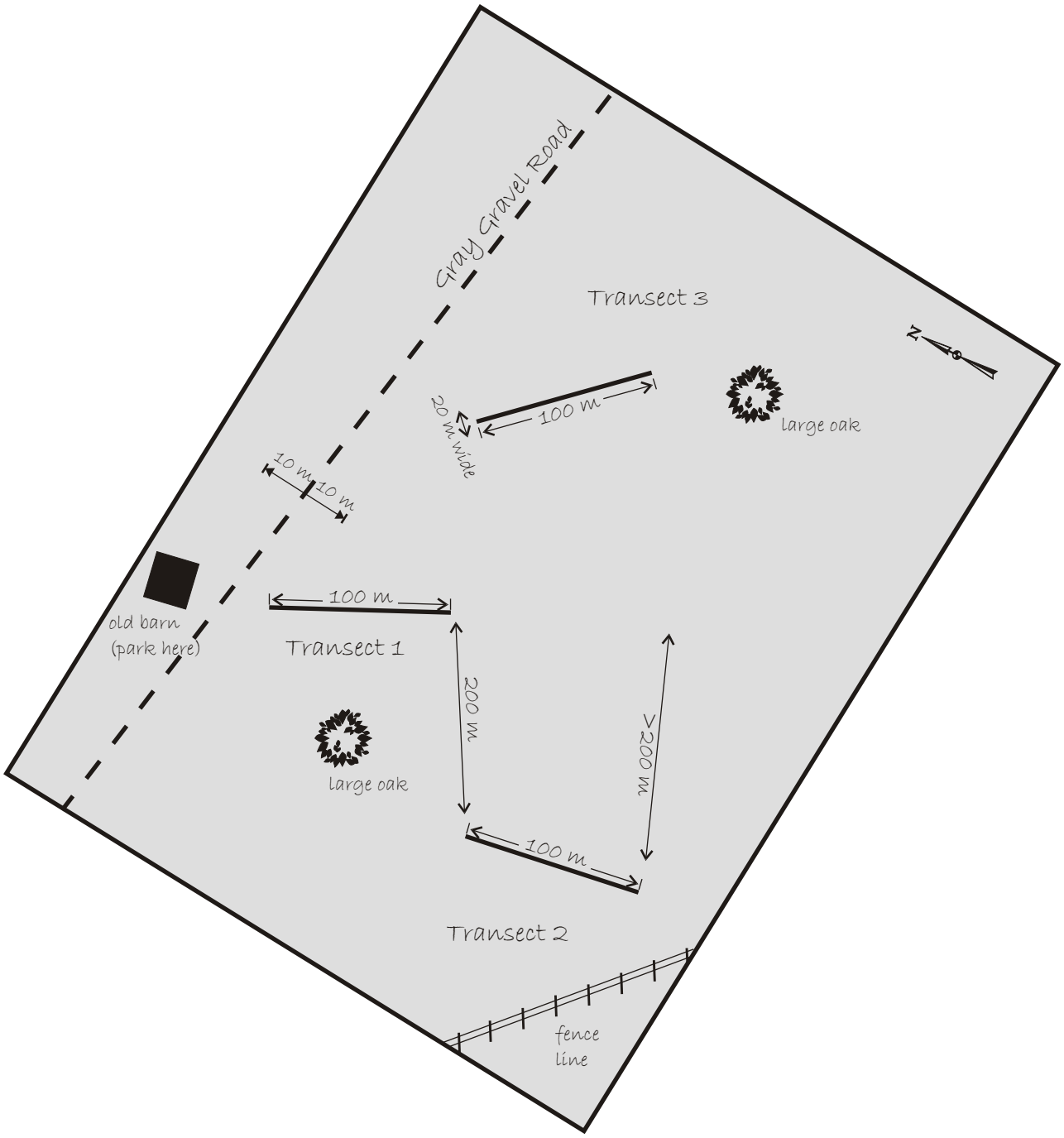
We recommend monumenting in the fall at least two weeks prior to a December avian survey.

We also recommend that a team establish no more than 10 transects total to avoid over-committing. Please conduct some practice runs weeks before your first official survey. The practice will help build confidence and field experience.

SAMPLE FIELD MAP

NOTES/DIRECTIONS:

In Anywhere County, drive south on Highway 3 for 6.2 miles south of the intersection of FM 691 and Highway 8. Turn left on gray gravel road. Proceed 3.1 miles to the start of the transect. Park at the old barn. Walk south 10 m towards windmill on horizon (175°) to first transect marker – a white PVC marker. See map.

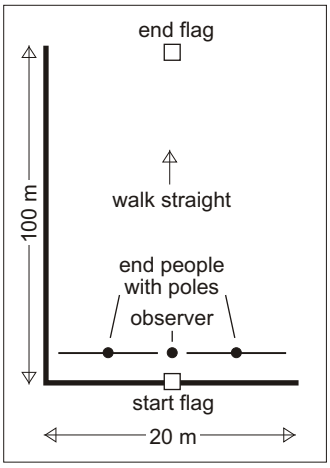


Avian Surveys

- Surveys need to be conducted anytime from half an hour after sunrise until 1400 hours on days when there are wind speeds less than 5 on the Beaufort Scale (see bird data sheet on page 19 for definition), skies are clear to overcast, and daytime temperatures are > 40°F (no drizzle or rain).
- To avoid flushing birds onto the transect, crews should walk single file with poles up to the transect start point.
- Survey crews of three will include two outside individuals each using bamboo cane poles to beat the vegetation to flush skulking birds (Figure 2). The center person, starting at the transect start point and between the pole operators, will aim for the end marker and commence walking while maintaining pole operators' rhythm and position. The center person will monitor the entire transect for birds as they flush in front of the survey line (Figure 3). All three individuals will spot birds and maintain a straight survey line approximately 20 m wide while walking the length of the 100 m transect.
- For maneuvering poles easier, add a simple device (The Brandonizer) explained on page 6.
- Strive to complete each transect in 90-120 seconds with minimal stops. Take a mental note of the location of any unidentified bird. After transect has been completed, try to relocate and identify any unknown birds (above and beyond the 90-120 second time period).
- Members of the survey crew will identify and record the number of birds that they flush during each transect run. After flushing, the crew should monitor birds until they land to ensure that they are not counted more than once.
- Only birds detected by observer crews of three should be recorded on the data sheet. We encourage additional participants (i.e., substitutes or alternates), but they cannot assist in spotting or identifying birds during the survey of a transect when a crew of three is already in place. This insures uniformity in data collection (i.e., all teams have only three sets of eyes locating and identifying birds).
- Please note that finding "no birds" is extremely important. Don't feel that a zero is reflective of your efforts. A zero could reflect detrimental habitat conditions that need to be reported. A general rule of thumb is "zero data" is better than "no data." Don't leave anything blank on a data sheet.
- Don't expect a lot of birds; a survey of five or more individuals of all species combined is a fairly high count.
- The field season for avian surveys will extend from December through February and will be divided into 3 categories by month:
  (I) December (II) January (III) February
- Survey crews should conduct a total of three surveys per transect with one survey per field season category above (I, II and III). At least two weeks should pass between surveys.
- Blank data sheets are available on pages 18 and 19. Please make plenty of photocopies for your team throughout the field season. There are also sample data sheets on pages 20 and 21 that may be useful. Keep photocopies of all your completed data sheets, but send originals to the PPB Coordinator at the end of each field day.
- PPB staff will enter all data electronically and run statistical analyses.
- Watch for online data entry on the GCBO Web site: www.gcbo.org (coming soon)

Figure 1

View of transect from above.



Tips:

- **Watch out for large grasshoppers that flush from the grass; they can look like a pale sparrow from the corner of your eye.**
- **During avian surveys, never wear sunglasses since they distort colors that are very important when identifying a bird.**

Figure 2 A survey crew of three ready to walk a transect attempting to flush *skulking* grassland birds. Both outside poles shown above continue outside of the figure box. The outside poles are equal length to the inner poles seen here.

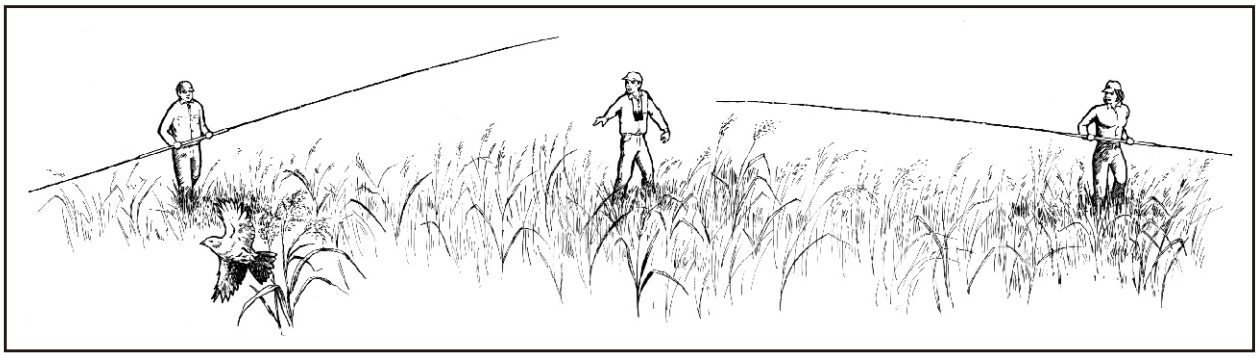


Figure 3 A successful flush: The bird is never harmed, the observer (middle person) detects and identifies the species and meaningful information is then collected. Pole operators are encouraged to help spot and identify birds, but additional people cannot assist.

NOTE: To reduce variability in the results, please maintain consistency in data collected. Please do not make any changes or adjustments to the field methodology.

Vegetation Sampling

- Measure vegetation after all avian surveys have been completed each season to minimize disturbance of birds occupying the transects (measure only once per year; or measure a few days before a prescribed burn is scheduled).
- Collect cover data with a 1 m square homemade "hula-hoop" made of 3/4" PVC connected with PVC elbows. From the staked and monumented starting point where avian surveys were conducted, toss the square to the left about one or two meters (see Figure 4). As the square lays flat (or as flat as possible), determine the percent composition (in multiples of 10) of the following cover: grass (standing alive or dead; includes sedges, rushes and reeds), forbs (these are broad-leaved herbaceous plants), woody shrubs, leaf litter (flattened, dead vegetation) and bare ground (includes soil or rock). Count the number of fire ant mounds and gopher mounds within the square. Determine the percent of the area in the square covered by water (not standing rainwater) and measure the average water depth. Alternate your tosses at each 25 m spot.
- To determine vertical thickness, use the Density Board Technique (see Figure 5).
- In wooded situations, record basal area of trees using a 1-factor metric prism (includes instructions) at each of the five toss sites. Place in one of the three different size classes depending on the diameter of the trees at breast height (4 1/2' above ground). This will help to structurally describe the wooded conditions.
- Count the total number of woody shrubs, the total number of trees and the total number of snags (standing, dead trees) in the 20 x 100 m transect area.

Figure 4

Measure vegetation along the same transect line where avian surveys were conducted. Toss the square ("hula-hoop") a total of five times, once every 25 meters, as seen here.

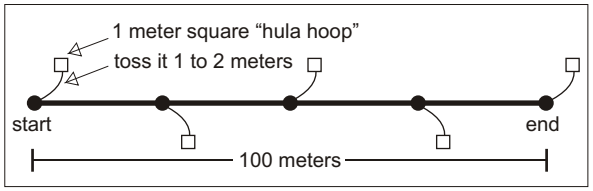
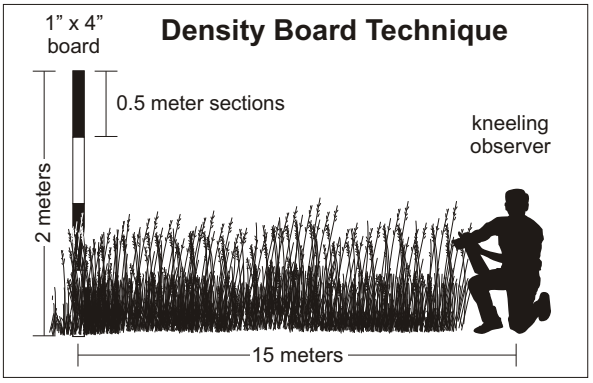


Figure 5



One person should stand the board up and hold it steady in the center of the square on every toss. A second person, the observer, will walk 15 meters due north from the board, then turn and face the board. From a kneeling position, the observer will estimate the percentage (in multiples of 10) of the entire board that is obstructed by vegetation. The board should have a total of four equal sections, two painted black and two painted white, in an alternating fashion. This contrast aids in determining the amount of vegetation covering the board. In the example above, the first (bottom half-meter) section is 100% obstructed by vegetation. The second section is obstructed by 80% vegetation; this is how it should be scored on the vegetation data sheet.

EQUIPMENT LIST

- four 14' cane poles
- two 4' sections of PVC (The Brandonizer; likely 3/4" diameter)
- compass
- clipboard with data sheets and pencils (be sure and make plenty of photocopies of blank data sheets for your team through the season)
- comfortable rubber knee boots or waterproof shoes, long pants and tick/chigger spray
- baseball cap or hat (no sunglasses!)
- work gloves
- binoculars and field guide
- transect markers (e.g., rebar, PVC, conduit, etc.)
- 100 meter tape (or a pre-measured and marked rope)
- 1 m square "hula-hoop"
- density board
- 12" ruler (metric; for wet grasslands)
- diameter tape (for measuring dbh)*
- basal area prism (1-factor metric that includes operating instructions)*
- other _____

*for savannahs and "forested" grasslands

JIZZ DESCRIPTIONS AND ALPHA CODES FOR SELECTED SPECIES

"Jizz" refers to the entire impression that the observer receives when observing an unidentified bird. In addition to the general coloration and behavior of the bird, the habitat the bird is in will help with identification (see pages 16 and 17 for more). These descriptions are in no way intended to be the authority on identifying grassland birds, they are simply added to assist you in the field. The observer should always consult one of the field guides available and use the following to reinforce any subtle differences. Added practice and experience in the field will allow you to find your own differences that might not be mentioned here or elsewhere. Be sure and share what you have discovered on your own. Post it on the PPB listserve.

Selected Grassland Species in A.O.U. Check-list Order

Northern Bobwhite *(Colinus virginianus)* Alpha code: NOBO
A plump, large-bodied bird with short tail and mottled reddish-brown upperparts. Feeds in large groups (coveys) and when flushed, the group rises straight up with loud rattling wing beats. Flies only a short distance before quickly seeking shelter in high grass or brambles. Common in fields with some brush and weeds.

Horned Lark *(Eremophila alpestris)* Alpha code: HOLA
Note black tail with white outer edges. Plain brown upperparts, distinctive pattern of black, white and yellow on face. Usually in groups and very rarely seen singly. Prefers bare ground or mudflats, but also occurs in short, grazed pastures.

House Wren *(Troglodytes aedon)* Alpha code: HOWR
Drab, plain brown wren with faint eyebrow. Tail often cocked. Found in thickets and brushy patches. Unlikely to fly from brush into grass when flushed; prefers to stay in thick brushy cover. Call is a harsh, thick, buzzy scold-note.

Sedge Wren *(Cistothorus platensis)* Alpha code: SEWR
Small short-tailed warm-brown wren. Almost always vocalizes just prior to and/or in flight, giving a short, slurred *chick-chick* call. Weak flight for short distances just above grass level, often crashing into grass/shrub clumps. Appears fairly dark above with buffy-brown flanks. Prefers moist grasslands.

American Pipit *(Anthus rubescens)* Alpha code: AMPI
Note long black tail with white outer tail feathers. Upperparts uniformly grayish-brown with no distinguishing streaks, marks or wing bars. Often pumps tail if perched. Commonly found in sparsely vegetated wet or dry fields. Usually found in flocks (two to hundreds of individuals occurring together). Usually says its name softly "pipit, pipit" in flight.

Sprague's Pipit *(Anthus spragueii)* Alpha code: SPPI
Has a dark tail and white outer tail feathers, but distinguished from the above by shorter tail and by buffy-brown upperparts that have a scaly look and a streaked rump sometimes visible when flushed. This species has a prominent dark eye, more white in tail than the above and does not pump tail. When flushed, it flies high into the air in a "stair-stepping" fashion (unlike AMPI), spirals and then drops down like a falling rock back into the field. Calls when flushed from dry field edges and prefers bare to mostly bare ground. A non-flocking pipit, unlike the above; mostly solitary.

Bachman's Sparrow *(Aimophila aestivalis)* Alpha code: BACS
Large rich cinnamon-colored sparrow. More likely to flush well before observer is on top of bird. Strong flier that usually flies long distances a few feet off the ground landing back in the grass. A non-flocking Pineywoods specialty.

Chipping Sparrow *(Spizella passerina)* Alpha code: CHSP
A small, but long-tailed sparrow that occurs in flocks. Adults have a chestnut cap and a white eye brow. Young birds are streaked, but usually occur in the same flock as adults. A widespread generalist in winter; found in fields or forests; occurs at ground level or in canopy; attracted to urban settings (seed feeders) or far from human habitation.

Field Sparrow *(Spizella pusilla)* Alpha code: FISP
A small, pale, flocking sparrow that occurs in weedy fields. Pale eye ring, white wing bars and bright pink bill separate this species from its relatives. Has a longish tail relative to its body.

Vesper Sparrow *(Pooecetes gramineus)* Alpha code: VESP
A fairly large, chunky sparrow with noticeable white outer tails feathers when seen from behind (i.e., when flushed). Heavily streaked. Perched birds sometimes show a faint, white eye ring and a small rusty shoulder patch. The facial appearance is somewhat clean (unstreaked) and pale.

Savannah Sparrow *(Passerculus sandwichensis)* Alpha code: SAVS
Likely the most abundant and widespread wintering sparrow in the more short, sparse grassy conditions. Does not wait for a close approach before flushing. Heavily streaked all over, this sparrow has a small pinkish to flesh-colored bill and pink legs. Most individuals sport yellow lores. Sometimes perches off the ground where it's visible after flushing, but flies fairly far on initial flush.

Grasshopper Sparrow *(Ammodramus savannarum)* Alpha code: GRSP
A rich, buffy sparrow that flushes from tall grass. Like most members of the genus, this species waits until closely approached until flushing; would rather flee by running on ground than by flying. Variable in appearance, most individuals are buffy below with some streaking or flecking on the breast. When perched, look for an even richer brown-buff in the lores and forehead.

Henslow's Sparrow *(Ammodramus henslowii)* Alpha code: HESP
Small dark rust-colored sparrow with an olive-yellow head. Reluctantly flushes only when observer is directly on top of bird. Weak flight just above grass level for short distances and often twists in flight just before crashing back into the grass or small shrub. Often pumps tail in flight.

Le Conte's Sparrow *(Ammodramus leconteii)* Alpha code: LCSP
This "golden sparrow" appears very buffy-yellow overall. Small short-tailed sparrow with a light-to-rich gold head, a light-brown back and a light, pale belly. Often flies short distances just above grass level like other members of the genus, but may fly longer distances than HESP, but not necessarily as long as GRSP (all three can be found together in winter in the same grasslands).

Nelson's Sharp-tailed Sparrow *(Ammodramus nelsoni)* Alpha code: NSTS
A dark yet colorful sparrow with buffy-orange facial marks; in fresh plumage, can be the most spectacular species of sparrow in North America. On the wintering grounds, it prefers areas with standing (very salty) brackish water with tall grass and reeds.

Seaside Sparrow *(Ammodramus maritimus)* Alpha code: SESP
This very dark sparrow has a very flat-headed and large-billed appearance; resident in areas with standing (very salty) brackish water with short to medium bunch grasses like *Spartina* species. Most individuals have a fairly bright yellow lore. After flushing, they will typically perch up on grass blades and look around. Flies straight with rapid, shallow wingbeats. Not found far from the coast.

Song Sparrow *(Melospiza melodia)* Alpha code: SOSP
Large, dark sparrow; pumps long rounded tail in flight. Breast heavily streaked with dark breast spot and thick malar streaks. Call is a loud, frequently uttered *chimp*. Generally associated with at least some brushy/shrubby cover, or at least patches of thick, rank grass.

Lincoln's Sparrow *(Melospiza lincolnii)* Alpha code: LISP
Relatively drab-looking in flight, but may appear slightly buffy. Wings and upperparts brownish, face with wide gray eyebrow. Breast buffy with fine streaks. Utters thick, heavy *tick* or *thick* call when disturbed, as well as a raspy *zeee* that is louder than SWSP. Occurs in shrubby cover, including patches of brush in otherwise grassy or weedy habitats.

Swamp Sparrow *(Melospiza georgina)* Alpha code: SWSP
Gray face, bright rusty wings and upperparts, lightly streaked breast. Pumps tail in flight. Calls are a sharp *chip* and a high-pitched *seee* or *zeee*. May be found in pure grass or associated areas with shrubs. Usually does not allow a close approach. Named for its fondness of wet, grassy, often mucky areas.

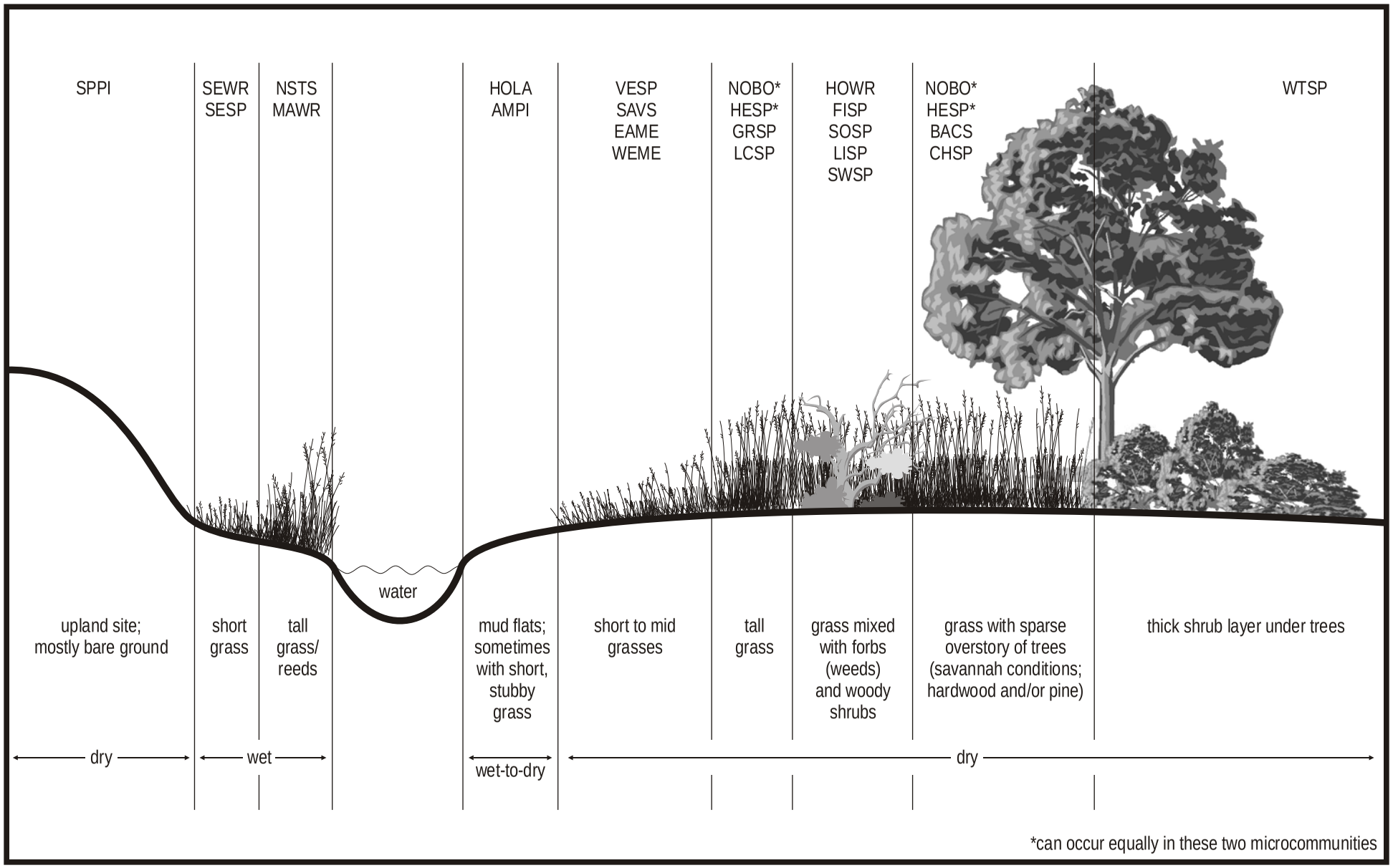
White-throated Sparrow *(Zonotrichia albicollis)* Alpha code: WTSP
A large, thicket-loving sparrow with rich, rusty-brown streaked upperparts, gray-brown rump and long rounded tail; poorly defined wing bars and prominent white throat. Also distinctive is the streaked crown and yellow lore of adults. First winter birds are dingy and "washed out" looking with a pale white throat and heavy streaking on breast. Often flock with other thicket species in winter when they can be heard calling/singing (i.e., a loud whistle) frequently from a dense, wet thicket or field border. Usually does not occur away from the ground under shrubs, woodlands or dense thickets. Not considered a grassland species.

The complex of:
Eastern Meadowlark *(Sturnella magna)* Alpha code: EAME,
Western Meadowlark *(Sturnella neglecta)* Alpha code: WEME, and
meadowlark, species *(Sturnella, sp.)* Alpha code: MEAD
NOTE: the two meadowlarks in winter are very difficult to distinguish when not vocalizing. Numerous flocks of WEME move eastward in winter in Texas (and beyond) and occur in close proximity to EAME. It is recommended that **meadowlark, species** (Alpha code: MEAD) be used if species identification is not made, especially when a bird is flushed from the ground and seen briefly in flight. Do not assume that it's an EAME just because you're in the "eastern" part of the U.S., especially Texas. Not determining this group to the species level is totally acceptable. These are large-bodied birds with dark brown upperparts with a reddish tinge and distinctive white outer tail feathers. When flushed, flight is labored, low and of short distance with stiff glides, almost reminiscent of NOBO but with prominent white flashes in outer tail. Commonly found in pastures, agricultural fields and wet prairies. Usually in flocks, sometimes small or even large.

Additional species that might be encountered:
Killdeer (KILL), Common Snipe (COSN), Short-eared Owl (SEOW), Marsh Wren (MAWR), American Robin (AMRO), Loggerhead Shrike (LOSH), Yellow-rumped Warbler (YRWA), Common Grackle (COGR), etc.

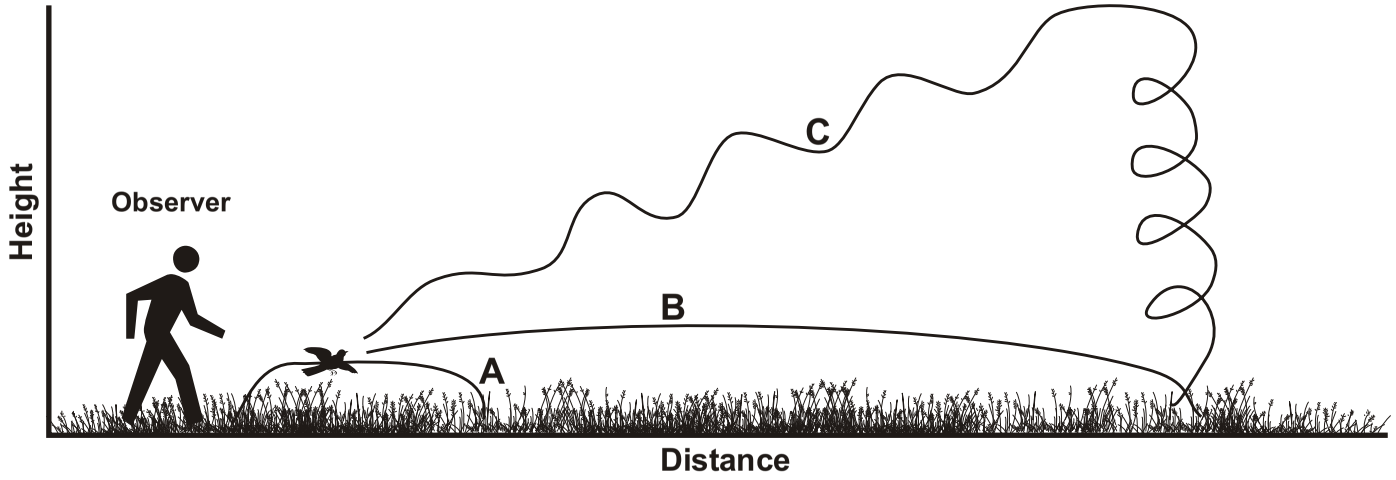
For a complete list of alpha codes, see: www.geocities.com/NapaValley/8596/species_codes.html or www.pwrc.usgs.gov/bbl/manual/aspeclst.htm

Grasslands are usually not homogeneous and can include several microcommunities.
This picture shows the preferred microhabitat where
most individuals of selected grassland species occur.
NOTE: With every rule in the biological world, there is an exception.



TYPICAL FLEEING BEHAVIOR ON INITIAL FLUSHES OF SELECTED SPECIES

These are general rules — there are always exceptions and variations



Flight paths with notes on appearances *(jizz)* as seen from above (dorsal and posterior views):

A appears to be a weak flyer; typically makes short, laborious flights

1. dark above; crash landing = SEWR
2. pale buffy-yellow above = LCSP
3. reddish-rust above = HESP

B appears to be a strong flyer; typically makes long, hurried flights

1. flies low and straight; appears very gray; usually lands in a shrub or other perch where they sit up and look back at you = SAVS
2. flies low to medium height with flashes of white from outer tail; appears very gray = VESP
3. appears a very rich buff color = GRSP
4. in pineywoods; appears long-tailed and buffy = BACS
5. in wet grass/reeds: a) appears orange-headed = NSTS
   b) appears dark with rapid wing beats; typically peers back at you once it lands = SESP
6. dark, long-tailed birds typically in shrubby areas where they like to perch in a shrub after being flushed
   a) LISP b) larger and plumper = SOSP c) reddish wings = SWSP
   d) weak flight; stays hidden = HOWR e) flocking = FISP

C stair-steps high then drops to the ground = SPPI

OTHER?

- White outer tail?
  Try VESP, HOLA, either of the pipits or either of the meadowlarks.
- Flock of larger, plump-bodied birds?
  Try NOBO or either meadowlark.
- Flock in pineywoods of small, rufous-capped birds?
  Try CHSP.

see pages 12-15 for species codes (abbreviations)

PROJECT PRAIRIE BIRDS – VEGETATION DATA SHEET

Participants _____

Site name _____ Transect number _____

Vegetation class type (see page 4-5 for choices) _____

Date vegetation measured _____

Year site was last burned _____, or mowed _____, or plowed _____, or other _____

Grazing history: Currently grazed? (circle one) YES NO Year last grazed _____

Size class of grassland (see page 6 for choices) _____

See page 11 for details on collecting the following data

COVER COMPOSITION WITHIN THE 1 METER SQUARE "HULA HOOP"

Toss	← TOTALS 100% → % grasses	% forbs	% woody shrubs	% leaf litter	% bare ground	# ant mounds	# gopher mounds	% of square covered by water	average depth of water (mm)	Density Board (%) SECTIONS 1 BOTTOM	2	3	4 TOP
1													
2													
3													
4													
5													

Within the 20 x 100 m transect (not the "hula-hoop"):

Number of shrubs or shrub clumps _____

Number of: _____ sapling-sized trees, _____ pole-sized trees, _____ sawtimber-sized trees

Number of: _____ sapling-sized snags, _____ pole-sized snags, _____ sawtimber-sized snags

BASAL AREA

Tree Diameter at Breast Height (DBH) – only in wooded conditions

Sapling = 5-16 cm Pole = 17-35 cm Sawtimber = over 35 cm

	Hardwoods			Pines		
From Toss Site	Sapling	Pole	Sawtimber	Sapling	Pole	Sawtimber
1						
2						
3						
4						
5						

*Do not leave **any** spaces blank above— score a zero where appropriate. Write notes on back if necessary.*

All original data sheets need to be returned to the Project Prairie Bird Field Coordinator, c/o Gulf Coast Bird Observatory, 103 West Highway 332, Lake Jackson, TX 77566.

PROJECT PRAIRIE BIRDS – BIRD SURVEY DATA SHEET

Participants _____ Vegetation class type (see page 4-5 for choices)

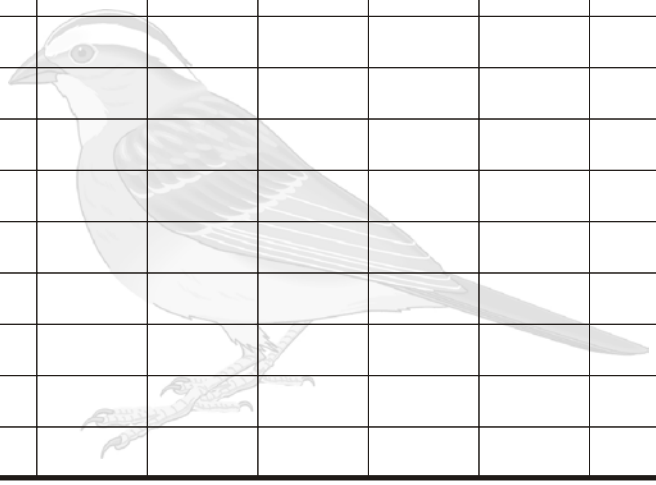
_____ _____

_____ Date _____

Site name _____ Comments _____

RECORD ONLY BIRDS FLUSHED FROM TRANSECTS (not fly-overs, birds seen in transit or along roadside)

Transect No.	Time	Sky[1]	Wind[2]	Bird Species[3] (for quantity, write in a number, not hash or tally marks)								



[1] **Official Sky codes**

0	Clear or few clouds	3	(not applicable in SE U.S.)	6	(not applicable in SE U.S.)
1	Partly cloudy or variable sky	4	Fog or smoke	7	Snow
2	Cloudy or overcast	5	Drizzle	8	Showers

[2] **Official Wind speed (Beaufort Number)**

0	Smoke rises vertically	3	Leaves, small twigs in constant motion; light flag extended
1	Wind direction shown by smoke drift	4	Raises dust and loose paper; small branches move
2	Wind felt on face; leaves rustle	5	Small trees with leaves sway; crests on inland water– **too windy, do not survey for birds**

[3] **Bird Species**

NOBO	Northern Bobwhite	FISP	Field Sparrow	WTSP	White-throated Sparrow
COSN	Common Snipe	VESP	Vesper Sparrow	EAME	Eastern Meadowlark
SEOW	Short-eared Owl	SAVS	Savannah Sparrow	WEME	Western Meadowlark
HOLA	Horned Lark	GRSP	Grasshopper Sparrow	MEAD	meadowlark sp.
HOWR	House Wren	HESP	Henslow's Sparrow		
SEWR	Sedge Wren	LCSP	Le Conte's Sparrow	UNK	Unknown bird
MAWR	Marsh Wren	NSTS	Nelson's Sharp-tailed Sparrow		
AMPI	American Pipit	SESP	Seaside Sparrow	Write-ins	_____
SPPI	Sprague's Pipit	SOSP	Song Sparrow		_____
BACS	Bachman's Sparrow	LISP	Lincoln's Sparrow		_____
CHSP	Chipping Sparrow	SWSP	Swamp Sparrow		

If you cannot identify an individual to species, at least narrow it down to genus (i.e., Ammodramus, sp.) or better yet, between two species (i.e., GR/LCSP) and score it as such.

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PROJECT PRAIRIE BIRDS – VEGETATION DATA SHEET

Participants John Birder, Jane Sparrow and Don Pipit

Site name Attwater NWR Transect number 3

Vegetation class type (see page 4-5 for choices) Tall-grass prairie

Date vegetation measured 3 March 1999

Year site was last burned 1995, or mowed —, or plowed —, or other —

Grazing history: Currently grazed? (circle one) YES (NO) Year last grazed 1997

Size class of grassland (see page 6 for choices) (b) 6-10 acres

See page 11 for details on collecting the following data

COVER COMPOSITION WITHIN THE 1 METER SQUARE "HULA HOOP"

Toss	← TOTALS 100% → % grasses	% forbs	% woody shrubs	% leaf litter	% bare ground	# ant mounds	# gopher mounds	% of square covered by water	average depth of water (mm)	Density Board (%) SECTIONS 1 BOTTOM	2	3	4 TOP
1	40	30	10	10	10	0	0	0	0	100	90	0	0
2	50	40	0	10	0	0	0	0	0	100	50	0	0
3	50	50	0	0	0	0	0	0	0	100	60	0	0
4	40	40	10	0	10	1	0	0	0	100	90	0	0
5	40	50	0	10	0	0	0	0	0	100	50	0	0

Within the 20 x 100 m transect (not the "hula-hoop"):

Number of shrubs or shrub clumps 7

Number of: 0 sapling-sized trees, 0 pole-sized trees, 0 sawtimber-sized trees

Number of: 0 sapling-sized snags, 0 pole-sized snags, 0 sawtimber-sized snags

BASAL AREA

Tree Diameter at Breast Height (DBH) – only in wooded conditions

Sapling = 5-16 cm Pole = 17-35 cm Sawtimber = over 35 cm

	Hardwoods			Pines		
From Toss Site	Sapling	Pole	Sawtimber	Sapling	Pole	Sawtimber
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0

*Do not leave **any** spaces blank above— score a zero where appropriate. Write notes on back if necessary.*

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PROJECT PRAIRIE BIRDS – BIRD SURVEY DATA SHEET

Participants John Birder
Jane Sparrow
Don and Grace Pipit

Vegetation class type (see page 4-5 for choices) tall-grass prairie

Date 12/07/98

Site name Attwater NWR

Comments great looks at LCSP on transect #1

RECORD ONLY BIRDS FLUSHED FROM TRANSECTS (not fly-overs, birds seen in transit or along roadside)

Transect No.	Time	Sky[1]	Wind[2]	Bird Species[3] (for quantity, write in a number, not hash or tally marks)								
				LCSP	SAVS	SEWR	SWSP	LISP	UNK	AMMO		
1	0831	1	2	3	1	0	0	0	0	0		
2	0845	1	2	0	0	1	1	1	0	0		
3	0905	2	1	1	3	0	0	0	0	0		
4	0932	2	1	1	1	0	0	0	1	0		
5	0951	2	1	1	2	0	0	0	0	1		

[1] **Official Sky codes**

0	Clear or few clouds	3	(not applicable in SE U.S.)	6	(not applicable in SE U.S.)
1	Partly cloudy or variable sky	4	Fog or smoke	7	Snow
2	Cloudy or overcast	5	Drizzle	8	Showers

[2] **Official Wind speed (Beaufort Number)**

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[3] **Bird Species**

NOBO	Northern Bobwhite	FISP	Field Sparrow	WTSP	White-throated Sparrow
COSN	Common Snipe	VESP	Vesper Sparrow	EAME	Eastern Meadowlark
SEOW	Short-eared Owl	SAVS	Savannah Sparrow	WEME	Western Meadowlark
HOLA	Horned Lark	GRSP	Grasshopper Sparrow	MEAD	meadowlark sp.
HOWR	House Wren	HESP	Henslow's Sparrow		
SEWR	Sedge Wren	LCSP	Le Conte's Sparrow	UNK	Unknown bird
MAWR	Marsh Wren	NSTS	Nelson's Sharp-tailed Sparrow		
AMPI	American Pipit	SESP	Seaside Sparrow	Write-ins	_____
SPPI	Sprague's Pipit	SOSP	Song Sparrow		_____
BACS	Bachman's Sparrow	LISP	Lincoln's Sparrow		_____
CHSP	Chipping Sparrow	SWSP	Swamp Sparrow		

If you cannot identify an individual to species, at least narrow it down to genus (i.e., Ammodramus, sp.) or better yet, between two species (i.e., GR/LCSP) and score it as such.

All original data sheets need to be returned to the Project Prairie Bird Field Coordinator, c/o Gulf Coast Bird Observatory, 103 West Highway 332, Lake Jackson, TX 77566.

SUGGESTED READING

This short list does not include standard field guides and is in no way a complete bibliography on grassland birds – it's simply a startup *list. Consult your local library or bookstore for field guides, reference books, published articles or the following.*

Arnold, K. A. and N. C. Garza, Jr. 1998. Populations and habitat requirements of breeding Henslow's Sparrows in Harris County, Texas. Bull. Texas Ornith. Soc. 31:42-49.

Byers, C., J. Curson and U. Olsson. 1995. Sparrows and Buntings: A guide to the sparrows and buntings of North America and the world. Houghton Mifflin Co.

Herkert, J. R. 1994. Status and habitat selection of the Henslow's Sparrow in Illinois. Wilson Bulletin 106:35-45.

Mitchell, W. A. 1998. Species profile: Henslow's Sparrow *(Ammodramus henslowii)* on military installations in the southeastern United States. Technical Report SERDP-98-9, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

Plentovich, S., N. R. Holler, and G. E. Hill. 1999. Habitat requirements of Henslow's Sparrows wintering in silvicultural lands of the Gulf Coastal Plain. Auk 116:109-115.

Rising, James D. 1996. The sparrows of the United States and Canada. Academic Press.

Robbins, L. E. and R. L. Myers. 1992. Seasonal effects of prescribed burning in Florida: a review. Tall Timbers Research, Inc., Miscellaneous Publ. No. 8.

Root, T. 1988. Atlas of wintering North American birds: An analysis of Christmas Bird Count data. Univ. Chicago Press.

Shriver, W. G., P. D. Vickery and S. A. Hedges. 1996. Effects of summer burns on Florida Grasshopper Sparrows. Fla. Field Nat. 24:68-73.

Smith, D. J. and C. R. Smith. 1992. Henslow's Sparrow and Grasshopper Sparrow: a comparison of habitat use in Finger Lakes National Forest, New York. Bird Obs. (Massachusetts) 20:187-194.

Zimmerman, J. L. 1988. Breeding season habitat selection by Henslow's Sparrow *(Ammodramus henslowii)* in Kansas. Wilson Bulletin 100:17-24.

Zimmerman, J. L. 1992. Density-independent factors affecting the avian diversity of the tallgrass prairie community. Wilson Bulletin 104:85-94.

Since temperate grasslands depend on fire to maintain a healthy ecosystem, for more information on fire ecology and the effects on wildlife, try the Tall Timbers Web site: http://www.talltimbers.org

LIABILITY

Included here are two useful forms on liability that need to be reviewed, signed, photocopied and submitted to the PPB Coordinator **prior** to conducting any field work. Do NOT send either of the forms to the landowner – both must be sent to the PPB Coordinator where they will remain safely filed. If the PPB participant is under 18 years of age, forms must be signed by a parent or guardian. Make sure that the private landowner, land manager or agency staff approves all forms. Remember, this is a serious issue; do not enter any property without full permission.

RELEASE OF LIABILITY

In consideration of being allowed to collect information and conduct work in the field for Project Prairie Birds, I, _____do hereby release and agree not to hold liable the State of Texas, Texas Parks and Wildlife Department, Texas Partners in Flight, the Gulf Coast Bird Observatory, Raven Environmental Services, Inc., the U.S. Forest Service, the U.S. Fish and Wildlife Service, the Bird Interest Group of Texas, and the agents, employees and officers of those organizations, from any and all actions, causes of action, claims, demands, costs or damages arising from or resulting from property damage, personal injury or death sustained by me which results from participation in Project Prairie Birds, and travel to and from field sites. By this release I intend to bind me, my heirs, executors, and assigns.

I further agree for myself, my heirs, executors, administrators, and assigns, to indemnify and hold harmless the State of Texas, Texas Parks and Wildlife Department, Texas Partners in Flight, the Gulf Coast Bird Observatory, Raven Environmental Services, Inc., the U.S. Forest Service, the U.S. Fish and Wildlife Service, the Bird Interest Group of Texas, and the agents, employees and officers of those organizations, from any liability, action, claim, damage, award, or judgment incurred or suffered by any of those organizations or individuals as a result of any act or omission by me or caused entirely or partly by me.

I understand and agree that I will not be considered an agent or employee of the State, or any of the organizations named above, and I will not be covered by the State or any of those other organizations named above for any workers' compensation, death or disability benefits.

I realize that while I am at a field site, or traveling to or from a field site, I may be placed in positions that are dangerous to my life, health, and property. For example, I understand there is always the chance of injury, death, or property damage due to automobile accident or vandalism. I also understand that conducting work in the field always involves other natural and manmade dangers, including injury or death by falling, snakebite, lightning, drowning, etc. I also understand that in many instances help or medical treatment may not be available, and it is my sole responsibility to get and pay for medical help as needed. I understand and agree that neither the State, the other organizations named above, nor their officers and employees, are obligated to take any steps to protect me, help me, or provide medical treatment, and I hereby release them of any duty to do so. I hereby voluntarily assume all risk of death, bodily injury, and property damage under any circumstances that may arise.

I am 18 years of age or older, of sound mind, and in good health. This release is valid until I cancel it in writing.

_____ _____

Signature of PPB participant (or parent/guardian)

Date

TEXAS PARKS & WILDLIFE

RELEASE OF LIABILITY
PROVIDED BY PPB PARTICIPANT FOR LANDOWNER

In consideration of being allowed to go onto the property described below and collect information for Project Prairie Birds, I, _____, do hereby release and agree not to hold liable

_____

(name of landowner(s))

and the agents, employees and officers of the landowner(s), from any and all actions, causes of action, claims, demands, costs or damages arising from or resulting from property damage, personal injury or death sustained by me which results from participation in Project Prairie Birds. By this release I intend to bind me, my heirs, executors, and assigns.

I further agree for myself, my heirs, executors, administrators, and assigns, to indemnify and hold harmless the landowner(s) named above, and the agents, employees and officers of the landowner(s), from any liability, action, claim, damage, award, or judgment incurred or suffered by the landowner(s) as a result of any act or omission by me or caused entirely or partly by me.

I realize that while I am at the property described below, I may be placed in positions that are dangerous to my life, health, and/or property. For example, I understand there is always the chance of injury, death, or property damage due to automobile accident or vandalism. I understand that conducting work in the field involves other natural and manmade dangers, including injury or death by falling, snakebite, lightning, drowning, etc. I also understand that in many instances help or medical treatment may not be available, and it is my sole responsibility to get and pay for medical help as needed. I understand and agree that neither the landowner(s), nor their officers and employees, are obligated to take any steps to protect me, help me, or provide medical treatment, and I hereby release them of any duty to do so. I hereby voluntarily assume all risk of death, bodily injury, and property damage under any circumstances that may arise.

I am 18 years of age or older, of sound mind, and in good health. This release is valid until I cancel it in writing.

Description and location of property where work is to be conducted:

_____

_____

_____

_____ _____

Signature of PPB participant (or parent/guardian) Date

TEXAS PARKS & WILDLIFE

ACKNOWLEDGMENTS

We would like to thank the following:

- USFWS-Region 2 for graciously supplying *start-up* funds.
- The Bird Interest Group of Texas also supplied *start-up* funds. They support conservation efforts for native birds and habitat in Texas. All the zoos and aquariums in Texas are part of the group and collaborate to promote conservation of Texas native wildlife. The following members contributed: Abilene Zoological Gardens, Cameron Park Zoo (Waco), Dallas World Aquarium, Dallas Zoo, Ellen Trout Zoo (Lufkin), El Paso Zoo, Ft. Worth Zoological Park, Gladys Porter Zoo (Brownsville) and Houston Zoological Gardens.
- David Sarkozi of Houston for starting the listserve.

We would also like to thank the following at TPW:

- Layout by Chris Hunt, Creative Services
- Original artwork by Rob Fleming, Creative Services
- Liability information provided by Boyd Kennedy

RECOMMENDED CITATION

Shackelford, C.E., N.R. Carrie, C.M. Riley and D.K. Carrie. 2001. Project Prairie Birds: A Citizen Science Project for Wintering Grassland Birds. Second Edition. Texas Parks and Wildlife PWD BK W7000-485 (1/01). Booklet; 24 pp.

RECOMMENDED TIMETABLE FOR VOLUNTEERING

STEP 1: November – monument transects and do several practice runs; skip two weeks before returning
STEP 2: December – avian survey #1; skip two weeks before returning
STEP 3: January – avian survey #2; skip two weeks before returning
STEP 4: February – avian survey #3
STEP 5: After STEP 4 or anytime in the first half of March – vegetation sampling

APPROXIMATE TIME NEEDED PER ACTIVITY FOR ONE TRANSECT

Does not including driving time

- Monument a site: 15-30 minutes (general maintenance thereafter; once per year; should be done in November)
- Avian survey: 2 minutes or less (three per year; conducted from December through February)
- Vegetation sampling: 20-40 minutes (once per year; typically done in March)

USEFUL CONVERSIONS FOR DATA SHEETS

1 millimeter	=	0.03937 inches	1 kilometer	=	0.621 miles
1 centimeter	=	0.3937 inches	1 mile	=	5,280 feet or 1.609 kilometers
1 inch	=	2.54 centimeters			
1 foot	=	0.3048 meters	1 hectare	=	2.471 acres
1 yard	=	0.9144 meters	1 acre	=	0.405 hectares or 43,560 square feet or 4,840 square yards
1 meter	=	3.2808 feet or 39.37 inches or 1.094 yards			

This project is a partnership among:

RAVEN

Environmental Services, Inc.

BIRD INTEREST GROUP of TEXAS

4200 Smith School Road
Austin, Texas 78744

PWD BK W7000-485 (1/01)