FURBEARER SIGN STATION SURVEY
INSTRUCTIONS

MDC continues its efforts to collect population trend information for upland furbearers by conducting furbearer sign station surveys in autumn. Visitation information will be collected for the same routes surveyed in past years using the same procedure.

Most of your have participated in previous surveys and are familiar with the procedure. For those who are not, a sign station is a 36-inch diameter circle of sifted soil with a strong-smelling synthetic attractant in the center. Furbearers (and other wild and domestic animals) smell and investigate the strange new odor during the course of their nightly activities. Evidence of their visit to the station is recorded by tracks in the sifted soil. An index of relative abundance is calculated from the number of stations visited by each species and the total number of operating stations.

Sign stations are located at or near the edge of dirt or gravel roads, on alternating (left and right) sides, at intervals of 0.3 miles. A survey route has 5 segments, with 10 stations per segment (50 stations per route).

Although past surveys have been conducted for 3 days, our evaluation of information collected indicated that equivalent indices can be achieved from only 1 day of operation. THUS, THE ROUTE IS CHECKED FOR ONLY 1 DAY. HOWEVER, YOU MUST OBTAIN THAT 1 DAY OF INFORMATION FOR ALL SEGMENTS. For example, if a road grader eliminates segment 5 of your route, it will be necessary to resurvey that particular segment.

MATERIALS

The following materials are provided to you for the survey:

1. County map showing route and route segments
2. Plastic flagging
3. Magic marker
4. Synthetic attractant
5. ~~Cotton-tipped wooden sticks (scent sticks)~~
6. Latex gloves
7. Blank datasheet and sample datasheet
8. Track identification guides
9. Postage-paid return envelope

You will also need a shovel, hoe or other tool to loosen roadside soil. Use the 14X24-inch sifter provided to you.

TIMING

Ideally, your survey should be done in mid-September. In the event of scheduling problems, you can complete the survey before or after this time period. Since survey results are needed from all designated counties, please complete the survey when conditions permit.

TIME REQUIREMENTS

The greatest time requirement of the survey is preparation of the stations. Several things influence how quickly stations can be prepared.

If two people are working the route, construction of 50 stations can be easily accomplished in one day. However, many routes will be done by one person. Depending on travel time, terrain, soil type and land use patterns, it may be difficult to complete all stations in an 8-hour day. For those

people traveling to a designated county, it will be worth the extra time to complete all stations in one day.

If you are unable to establish the entire route in one day, please be sure to complete entire segments. Do not complete part of a route segment on the first day and the remainder the next. For example, do not complete segments 1, 2, 3 and only 5 stations of segment 4. You may complete the remaining segments the following day after checking the previously completed segments for animal visits. Indicate the date each segment was checked in the left margin of the datasheet under the segment number.

It should take 1 to 3 hours to check the route, identify tracks, record information, and collect scent sticks and flagging.

ESTABLISHING THE ROUTE

Before going into the field, study the map showing your survey route. The route this year will be the same as last year. Beginning in 2008, the maps have been redrawn using ArcGIS.

The starting point for each route segment is shown as a GREEN dot. Continue down the route, highlighted in YELLOW, until you have established all the stations. The length of each segment should be approximately 2.7 miles (0.3 mile between each of the 10 stations). Each route segment has been assigned a segment number (1 to 5). Be sure that all observations recorded on the datasheet are listed for the appropriate route segment.

Begin by locating the starting point of route segment 1. Label some flagging with the segment and station number (1-1L). Tie the flagging to vegetation on the opposite side of the road from the station. Label and flag all stations in this manner; it will make it much easier to locate the stations and keep track of their numbers. Odd-numbered stations will always be on the left side of the road and even-numbered on the right.

Locate the area where the station is to be made. Remove leaves, grass, stones or other materials from within the circle. Loosen the soil and sift a layer ¼ inch deep, making sure that a good tracking surface is provided on the entire circle. If soil from within the circle is not siftable, you may find some nearby. Good siftable soil may not be readily available at all stations. You may want to transport good sifting soil with you in a washtub or in the bed of your truck. This shortcut saves time and is recommended. Be sure the finished station is 36 inches in diameter.

Dip the cotton of the scent stick in the liquid attractant for 5 seconds. Place the scented stick in the center of the sign station so that the cotton tip is 2 inches above the soil surface. DON'T LET THE LIQUID ATTRACTANT GET ON YOUR SKIN!

Use your vehicle's odometer to measure the 0.3 mile interval between stations. Repeat the procedure for the remaining stations, making sure that stations alternate on the left and right sided of the road.

CHECKING STATIONS

Check stations the day after the route has been prepared. Identify all tracks and record all species visiting the station (mammals and others). It is not necessary, nor is it practical, to try to determine the number of individuals of a species visiting the station. For our purpose, a species either visits the station or it does not.

DO NOT RECORD TRACKS OF ANIMALS WHICH ARE NOT WITHIN THE 36-INCH CIRCLE. Sometimes an animal may investigate the station without entering it. For the sake of uniformity in the survey, these animals should **not** be recorded as a visiting species.

After checking, remove all scent sticks and plastic flagging. Avoid touching the cotton tip and upper portion of the sticks. Discard them at your office or other appropriate place away from the survey area.

IDENTIFYING TRACKS

Identification of animal tracks is the most enjoyable and challenging part of the sign station survey. Only occasionally, however, will tracks be as clear and recognizable as those in field guides. As a result, identification will require careful study of all the tracks in the sifted soil.

Track guides have been provided to help you identify mammal tracks. Review these materials thoroughly beforehand and take them with you while checking the stations. Pay particular attention to the characteristics distinguishing coyotes from dogs, and red from gray fox.

Identify tracks to species when possible. DON'T GUESS. Unless you're reasonably sure, record the visiting animal as unknown. Quite often more than one species will visit a station in a single night. Be sure you have checked all tracks within the station.

RECORDING OBSERVATIONS

Record the county in which your survey is conducted, your name, the date stations are checked, and the previous night's weather conditions (three questions) at the top of the datasheet. To record animal visits, check the appropriate species column for that station. Please list additional species or unknowns under the "Other Species" column. Remember to list ALL visiting species.

A column is provided on the datasheet to record station condition. Check the appropriate column (operable or inoperable). Under normal conditions, most stations will be operable. Inoperable stations include those completely disrupted by vehicles, cattle or humans, blown away by high winds, exposed to hard rains or other serious disturbances. If you decide a scent station is inoperable, describe why it is so in the station description column. If the scent stick has been removed from the station, it is still operable because tracks may have been made prior to the removal of the stick and the lingering odor of the attractant may persist at the station.

A completed sample datasheet is included with the survey materials to assist you in recording your observations.

BAD WEATHER

It's a good idea to check your local weather forecast before preparing your stations. Work around bad weather as much as possible. A light rain may not interfere with the survey as long as the tracking surface of the station is not destroyed.

RETURNING MATERIALS

After you have completed the survey, CHECK DATA FORM AND BE SURE IT IS COMPLETE. RETURN DATA FORM AND COUNTY MAP to the MDC Resource Science Center in the return envelope provided. Keep the remaining materials for next year's survey. You may discard unused liquid attractant, but not in the area of your survey route.

QUESTIONS

If you encounter problems or have questions, call Trevor Johannsen at the Resource Science Center, 573-882-9900, extensions 2955 or his cell phone, 660-890-4305 .