Preparing AviSys Data for Export to eBird

What eBird Really Wants

Contributing to eBird is NOT simply doing an export of your AviSys data and sending it to eBird—unless you don't care how useful (or how useless) that data is, and how much work you have to do on the eBird web site after the export.

eBird uses your observations for scientific analyses and, as such, the more information you can provide about how you collected the data—exactly where you were when you made the observations, when you were there, how much you traveled, and how long you spent in the field—the better and more useful your data will be. Most users won't be able to re-create this information for all records, but taking the time now to attach as much descriptive information as possible to your records will ultimately make them more useful for generations to come. AviSys will help you do that.

*(**An eBird definition:** In this document you will see references to the term "**effort data.**" That simply refers to the elements Start Time, Duration, Number in Party, Distance Traveled, and Area Covered. You will see that effort data is important in providing records that are of the most use to eBird.)*

Let's review the kinds of data protocols that eBird deals with, listed in increasing value to eBird and to science.

- **Invalid Submission:** Any set of observations having no location, or no date. This kind of submission is not eBird-compatible because the minimum requirements are date and location (preferably a Site; state level only as a last resort).
- **Casual Observation:** This is **the least valuable valid category**, essentially observations with no associated effort data. It consists of observations that have just dates and locations—but they have **no start times, durations, number in party, distance traveled or area covered** components.
- **Stationary Count:** This kind of submission consists of observations that have dates and locations, as well as start times and durations. Since there is no distance or area data provided, it is assumed that the observations occurred within a **fixed area of 30 meters in diameter**.
- **Traveling Count:** As a Stationary Count, but also with **distance traveled** while actually birding. Traveling counts of ≤5 miles preferred, but longer are okay.
- **Area Count:** As a Traveling Count, but with **area covered**, in acres, instead of, or in addition to, distance traveled information.

Let's review some of the components of the protocols:

- **Date:** Any date is satisfactory. AviSys will take care of formatting for eBird.
- **Location:** In eBird, a location consists of a named location with **latitude and longitude** information. Since AviSys has no provision for latitude and longitude in sighting records, AviSys and eBird provide comprehensive facilities to help you provide that information automatically—described later.
- **Start Time:** In the AviSys eBird facility, this is provided in the form of hours (0-23) and minutes (0-59). (A half hour after noon is recorded as 12 hours and 30 minutes. If your owling trip starts at 11:22PM, it's recorded as 23 hours, 22 minutes; a much later trip might start at 01:35)
- **Duration:** While actually observing, in minutes.
- **Distance Traveled:** While actually observing, in miles and decimal fractions, such as 3.2 miles. (If you drive 40 miles to a refuge and cover 0.2 miles while birding, you report 0.2 miles, not 40.2)
- **Area Covered:** While actually observing, in acres and decimal fractions, such as 12.4 acres.

If you can't be certain about effort data, but if you have reasonable estimates, it is best that you use those estimates rather than default to a lower category. For example, a reasonably estimated Traveling Count is much more valuable to eBird than a precise Casual Observation—use your judgment. In fact, let's discuss estimating . . .

Precision? Or Reasonable Estimates?

If you have recorded accurate start and duration times and/or distance/area information, by all means use them. These data make your submissions much more valuable. However, there are many situations where estimating can be just as valuable or nearly so, and certainly more valuable than making Casual Observations. Let's look at some examples where using estimates makes sense:

- **Habitual Outings:** Suppose you are in the habit of visiting an area on a regular basis. You generally arrive there between 8AM and 9AM and bird for about two hours, sometimes a bit more, sometimes a bit less, depending on your schedule, the weather, and season (more or less daylight, more or fewer birds). You might have a lot of these outings, many hundreds of sightings. In this case, it might be reasonable to estimate an 8:30 start time and a duration of two hours. You might even adjust these submissions by season, realizing that you arrive earlier and bird longer in the summer, and arrive later and typically bird for a shorter period in the winter. And if you can estimate the area of the outing, or the miles you cover while birding, even within general ranges, you should do so. Making these kinds of estimates is certainly more valuable than submitting Casual Observations with no time or area/distance data. Just separate each of these outings by date, enter the estimates, and submit them.
- **Club Outings:** Very often, club outings have a general start time and predictable duration. You may even be able to find the start times in your club newsletter archives. In these cases, too, the start times and durations might vary by season. It might be easy for you to make general estimates for those outings, and submit data that are much more valuable for eBird.
- **Memory:** You could probably make a good guess as to the circumstances of many of your old birding outings. If you feel that your estimates will be reasonably accurate, you should do so. Complex outings, where you visited several locations throughout a day, can be a challenge, resulting in multiple outings on the same day—you will need to spend more time thinking about what you did way back then, but the effort can pay off in providing more useful data to eBird.

Please understand; the intent here is not to suggest that you "fake" data. The intent is to suggest that you use your memory and good judgment to provide data that are usable and as valuable as possible to eBird, to the conservation community, and to science.
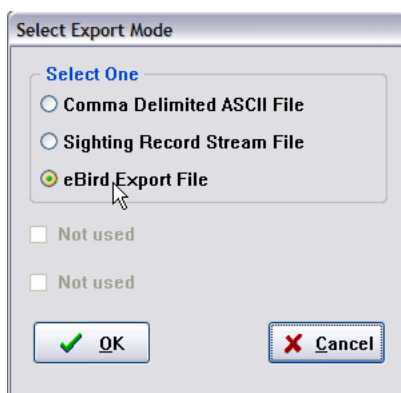
Now you need to make some decisions. It's obvious from the eBird Protocol descriptions, above, that for your data to be useful **you need to export your outings individually**, providing the additional data you can with each outing. This may be more work than you expected. On the other hand, you might welcome the opportunity to invest some time in this project to increase the value of your birding experiences. *See Export RAW CSV File, later in this document, if you would prefer to submit the less useful Casual data to eBird.*

How You Prepare AviSys Data for an eBird Export

Naturally, you do a List Records. But it's not quite as simple as that. You most likely will list your records by outing—a Place and date—so that the information needed by eBird can be associated with the export.

Here is a fragment of a typical listing of records, in this case the records from Mouncie's Meadows are listed, and let's assume that "All Dates" was selected in the Listing Criteria dialog. (Note the counts)

Song Sparrow	Mouncie's Meadow	MA US	Oct 13, 2001	Link
= 25 =		*Melospiza melodia*		
Lincoln's Sparrow	Mouncie's Meadow	MA US	Oct 13, 2001	Export
= 2 =		*Melospiza lincolnii*		
Swamp Sparrow	Mouncie's Meadow	MA US	Oct 13, 2001	
= 40 =		*Melospiza georgiana*		Quit
White-crowned Sparrow	Mouncie's Meadow	MA US	Oct 13, 2001	

Select Export Mode

Select One
- ○ Comma Delimited ASCII File
- ○ Sighting Record Stream File
- ● eBird Export File
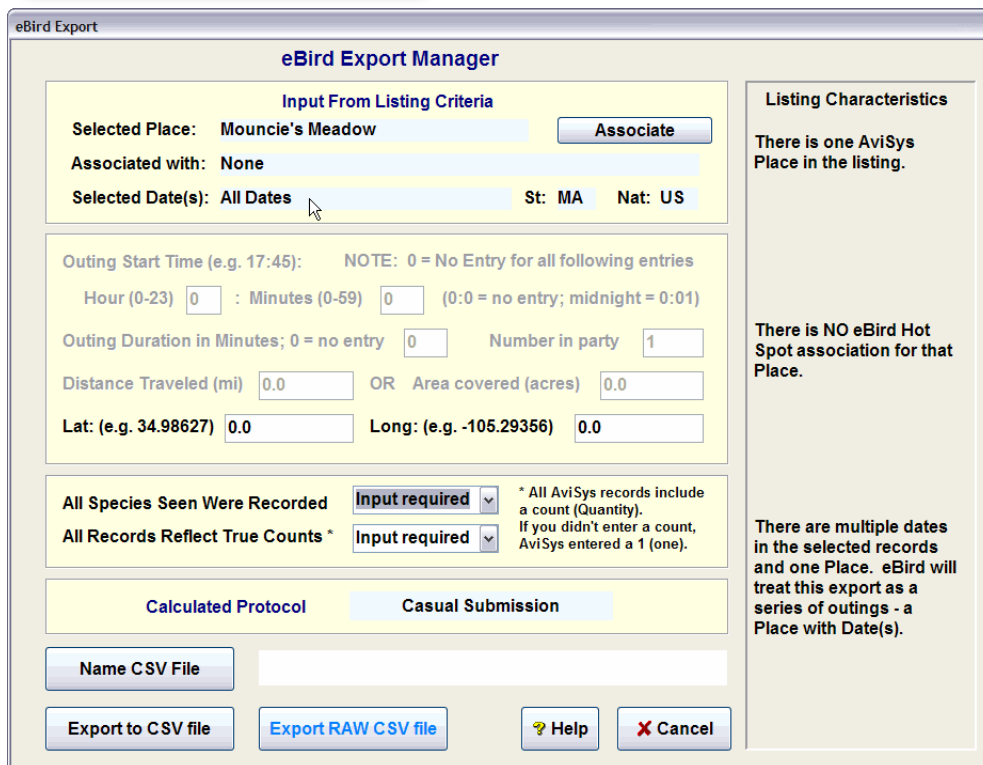
- ☐ Not used
- ☐ Not used

✔ OK   ✖ Cancel

The user clicks the Export button and the Export Mode dialog is presented. In the latest version of AviSys 6, an eBird Export File option is included.

With the selection of eBird Export File, the eBird Export Management dialog is presented. Notice what happens in this case: Because the listing was for All Dates, instead of a single date defining a single outing, all the "effort" data input is disabled—because it makes no sense to enter start times, distances, etc., for multiple outings at one time.

eBird Export

eBird Export Manager

Input From Listing Criteria

			Listing Characteristics
Selected Place:	Mouncie's Meadow	Associate	
Associated with:	None		There is one AviSys Place in the listing.
Selected Date(s):	All Dates	St: MA Nat: US	

Outing Start Time (e.g. 17:45):   NOTE: 0 = No Entry for all following entries

Hour (0-23) [0] : Minutes (0-59) [0]   (0:0 = no entry; midnight = 0:01)

Outing Duration in Minutes; 0 = no entry [0]   Number in party [1]

Distance Traveled (mi) [0.0]   OR   Area covered (acres) [0.0]

Lat: (e.g. 34.98627) [0.0]   Long: (e.g. -105.29356) [0.0]

There is NO eBird Hot Spot association for that Place.

All Species Seen Were Recorded	Input required ▾	* All AviSys records include a count (Quantity).
All Records Reflect True Counts *	Input required ▾	If you didn't enter a count, AviSys entered a 1 (one).

There are multiple dates in the selected records and one Place. eBird will treat this export as a series of outings - a Place with Date(s).

Calculated Protocol   Casual Submission

Name CSV File   [   ]

Export to CSV file   Export RAW CSV file   ? Help   ✖ Cancel

Note that the dialog has calculated that this will be a Casual Submission—the least useful to eBird—because there is no "effort" data. You would have the opportunity to enter the required latitude and longitude data here, or to be prompted for it later by the eBird mapping facility. (We'll talk about those options later.)

The moral here is to break your listings down into outings, one date and one Place, in order to be able to provide the most useful data to eBird.

Let's assume the birder instead listed the records for Mouncie's Meadows on October 13, 2001. Here's the resulting eBird Export dialog. With one date and one Place, all the appropriate "effort" data can be entered.

Now our birder has entered "effort" data. She started birding at 06:32, birded alone for 38 minutes, traveled 1.5 miles while actually birding, and covered 3.8 acres. The submission has been calculated as Area Count, one of the most useful to eBird and science. (By the way, the "Distance Traveled" entry is for the travel while actually birding—it doesn't include the 40 miles to get to the location.)

She was also able to enter the latitude and longitude—a function we will cover later. Also, remember the **Associate** button on this dialog—we'll get to it later, too.

Note that she has indicated that all species seen were recorded (she didn't ignore House Sparrows) and that she recorded the actual counts of all the birds she saw (instead of just checking them off and letting AviSys enter "1" when there were actually 465 Starlings).

Let's talk about that count business . . .

AviSys Quantities

There is no such thing as a sighting of 0 (zero) birds—let's get that straight from the beginning. AviSys will not accept a count of zero birds. If you don't enter anything in the quantity field when entering data in AviSys, AviSys will insert a 1 (one). It has to—it's a data integrity issue.

But a lot of AviSys users don't enter quantities in records, except on their annual CBC or when they do their point counts. So, the dilemma: when submitting eBird records there is always the question, "Does this person religiously enter quantities (counts), or only sometimes, or never?" In any case, eBird needs to know if the AviSys quantities reliably represent the actual number of birds present in the imported data for a given outing.

So, we ask the simple question for each outing, and handle the results as follows:

If you answer "All Records Reflect True Counts," "YES," AviSys will assume that every quantity in every record is exact, and will export the records to eBird exactly as they exist.

If you answer "All Records Reflect True Counts," "NO," AviSys will make the following decision:
- If the quantity field of a sighting record is 1 (one), AviSys will export "Present" to eBird—the implication being that there could have been any number, but there was at least one.
- If the quantity field of a record is greater than 1, AviSys will export the entered quantity to eBird, assuming that if you entered a quantity at all it must have been accurate and intentional in that case.

That solution leaves some unanswered questions. But the alternatives are even worse when considering the habits of typical AviSys users as observed by the author over many years: *"If I say I saw sixteen Black-and-white Warblers, that's exactly what I saw. But House Sparrow? I just check it off,"* in which case "All Records Reflect True Counts" "NO," as handled above, works.

Locations

Now, let's get to these required latitude and longitude numbers, and figure out how we are going to create them. eBird really requires these numbers so that it can accurately plot where your birds were. With millions of submissions, you can see how eBird will have a beautiful mapping of bird locations and how those data relate to habitat and environment. And over time the impact of environmental changes will become manifest.

AviSys works with Places, a tightly structured set of geographic tables of your birding locations, related to the rest of the planet. But AviSys Places don't include latitude and longitude data.

In order to relate your sighting locations to eBird mapping, you have two options:
- If you don't supply latitude and longitude with the data from an outing, when you are on-line eBird will ask you to map the outing Place in its embedded Google Earth facility to derive the location data. That mapping process also includes already defined birding hot spots that you can select as appropriate. Once so established, eBird will internally associate that AviSys Place with the location data for all future submissions by you.
- Also, you can provide latitude and longitude data within AviSys, so that the data are automatically exported to eBird. You can do that in three ways:
    * You can enter latitude and longitude, in decimal degrees, directly in the eBird Export dialog (see above). You might use a local map, gazetteer, or Google Maps, to derive that data.
    * You can associate AviSys Places with one of over 16,000 existing eBird Birding Hot Spots. This is particularly helpful because, once that is done, for every outing that uses one of those Places the coordinate data are automatically included in AviSys exports to eBird. (Additionally, that accumulation of latitude and longitude data might

be useful to future AviSys enhancements—although there is no commitment to do so at this time.)

 * As above, you can also create an AviSys Place association by entering known latitude and longitude data for it. That association will remain in your Association table, the same as an eBird Birding Hot Spot association.

An Association Example: Look at the eBird Export Manager dialog, above. The birder manually entered the latitude and longitude data for Mouncie's Meadow. But in another case, let's say she was listing records for Great Blue Hill WMA in Massachusetts. She could click the Associate button in the eBird Export Manager dialog (above), and she would be presented with the eBird Hot Spot dialog (left), with all 442 eBird Massachusetts hot spots listed. She finds that Great Blue Hill is already an established eBird Hot Spot. So she highlights it and clicks the *Associate* button. From then on, all Great Blue Hill WMA exports she does to eBird will include the coordinates, Great Blue Hill will reside in her AviSys Association file, as shown below, and the location data will be inserted in the eBird Export Manager dialog she just came from.

No Hot Spot? Note that the dialog above also has a provision to manually enter coordinates for a Place for which there is no existing eBird Hot Spot. That data can also be entered in your association file by entering latitude and longitude data and clicking the Manual Store button.

Above, is a fragment of the AviSys Association List. It can also be accessed through the AviSys main screen Utilities | Manage eBird Associations menu item. In that case, you can Add and Delete associations as you wish.

Yellowstone - Swan Lake	WY	US	44.9193872	-110.734542
Yellowstone NP - Canyon	WY	US	44.7215516	-110.486927
Yellowstone NP - Floating Island Lake	WY	US	44.9423636	-110.449708
Yellowstone NP - Mammoth Hot Springs	WY	US	44.9763398	-110.70179
Yellowstone NP (Wyoming)	WY	US	44.5435052	-110.599365
Yellowstone NP--NE Entrance Rd	WY	US	44.8687795	-110.171841
Yellowstone NP--South Entrance Road	WY	US	44.2788101	-110.634196

Notice how granular some of the eBird Hot Spots are.

Mass Place Change

For ALL records in the sighting file, if a record is assigned DIRECTLY to the Current Place, its Place assignment will be changed to the New Place.

If a Current Key Word is specified, the sighting record must ALSO have that Key Word in its comment or the Place assignment will not be changed. If Delete Key Word is checked, and the Current criteria match, the matching Key Word will be deleted in the comment.

A Current Key Word will be handled uniquely; if the Key Word in the comment is imbedded in another word there will not be a match – it must have leading and trailing spaces.

If a New Key Word is specified, and there is a match with the Current criteria, the new Key Word will be inserted in the comment.

You can review the records to be changed by clicking View Current Records.

Change all records that match these criteria . .

| Current Place | . . . | Required |
| Current Key Word | . . . | ☐ Delete Current Key Word |

. . to this new Place and, optionally, Key Word.

| New Place | . . . | Required |
| New Key Word | . . . | |

✓ **Execute**   ▤ **View Current Records**   ? **Help**   ✗ **Close**

This division of Yellowstone is just one example of how birders submitting to eBird have divided up large areas such as National Parks. Your Places table may not be as granular as you would like for eBird submissions, and you may have some smaller areas defined as Key Words rather than Places. If so, this is a good time to review the powerful AviSys Mass Place Change utility, a quick and easy way to re-structure your Places scheme, including resolving locations defined by Key Words.

Sending Data to eBird:

You have . . .
- Selected and listed the records for an outing (Place and date) . . .
- clicked Export and selected eBird Export File . . .
- established an association with latitude and longitude information . . .
- entered effort data, such as start time, duration, miles, etc. . . .
- told the eBird Export dialog about your count and species coverage.

Now it's time to create the file for eBird. At the bottom of the eBird Export dialog you'll find the following:
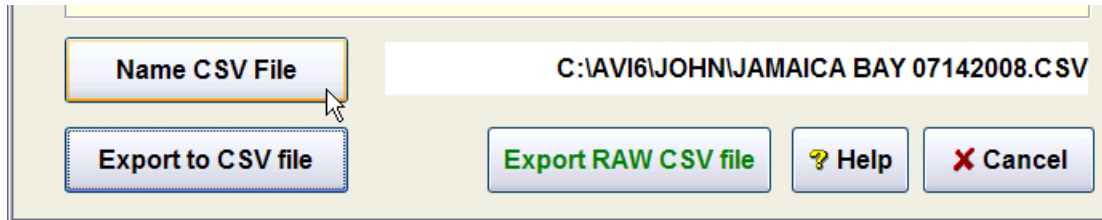
Here's what you need to do:
- Click Name CSV File. You need to enter only the file name, such as in this case "JAMAICA BAY 07142008". AviSys will automatically point it at your data set folder, such as C:\AVI6\JOHN—you can change the path to a different folder if you wish. The dialog will ensure that the file has the .CSV extension required by eBird. The name and complete path will be posted for your review.
- Then click Export to CSV File—the file will be written.
- Following the instructions on the eBird web site, **http://ebird.org**, sign on and point eBird to your new .CSV file for upload.

Export RAW CSV File

You now see this additional button. If you should decide that for a given set of data you don't want to divide it into proper outings, and you don't want to deal with entering effort data, etc., you have the option of simply listing the records and exporting the resulting raw data as a CSV file, without any effort or associated location data. AviSys sorts the data by Place + date, which groups it in "outings" for eBird. This results in automatic Casual Submissions, which eBird will receive and process, **but eBird will prompt you for latitude and longitude data for each and every location which it doesn't already have in the list of locations in your personal account.**

Each time you provide eBird with location data, it stores it away for future use within eBird. **Warning!** If you have two locations (Places) which are named exactly the same, eBird can't tell the difference—it doesn't differentiate by the Place categories (Sites . . . Continents) like AviSys does. For example, if in your Places tables you have a city in Oregon named Lincoln, and a county in Illinois named Lincoln, you might want to change one of the names, such as "Lincoln County."

HELP

The Help button simply produces this document in your Adobe Acrobat Reader.

CSV?

If you "open" the CSV file, it will open in whatever program Windows has registered to open .CSV files, such as Microsoft Excel. If you do so, do not change the formatting or the file will no longer be compatible with eBird.

Special Information

Leeward Islands

AviSys considers certain of the Leeward Islands as one "nation," even though the group consists of several islands that are independent or belong to the United Kingdom. All your AviSys Leeward sightings in that group are assigned to one "nation," Leeward Islands with a Nation code of MS.

eBird divides the Leeward Islands, creating the following exceptions to the AviSys structure:
- Monserrat – MS
- Antigua and Barbuda – AG
- Anguilla – AI
- Saint Kitts and Nevis – KN

At this time, AviSys eBird facility does not have a means to separate those records for eBird purposes. If you export Leeward Islands sightings, they will be assigned in eBird to Monserrat – MS. You may want to hold off on exporting Leeward Islands records until we arrive at some solution.

State Codes

While eBird can recognize three-character state codes for Mexico and state numbers for Cuba, AviSys does not yet have provisions for those codes. However, if you have an AviSys association with an eBird Hot Spot in those countries, the proper state code is provided by the eBird Hot Spot list and exported by AviSys.

To Clarify Latitude/Longitude Handling

For other than RAW exports, Lat/Long will be provided with this priority:
- If a record Place has a Lat/Long Association, then those Lat/Long data are exported, otherwise . . .
- . . . if there is only one Place in the record listing, and Lat/Long data are provided in the AviSys eBird Export dialog, then those data are exported, otherwise . . .
- . . . no Lat/Long data are exported; you will be prompted by the eBird web site to supply them.

Support

For support with the AviSys functions in preparing data for eBird, please use email to:
 support@avisys.net

For support with the eBird web site functions, please consult the eBird web site FAQ:
 http://ebird.org/content/ebird/about/faq