

DATA ENTRY GUIDELINES

HMANA and the hawk watches wish to maximize the use of their raptor migration data over the widest range of projects and applications possible. Scientific research places the most rigid requirements on data collection and analysis procedures. Educational uses of data may be a less stringent. Recreational users may require even less exactitude and analysis to meet user expectations. All of these uses are valuable uses of raptor migration data, albeit with differing sets of user requirements.

An essential role of HMANA is to broker the middle ground between data users and data providers by establishing requirements, creating tools, training and outreach, and improving and democratizing data access. HawkCount provides an archival and retrieval mechanism which enables all these applications while simultaneously documenting the basis of and with what controls all data were collected. The following data entry guidelines are recommended to maximize the usefulness of the raptor migration data.

The data set to be collected is described by the **Daily Reporting Form**. This data set has been collected by hawk watches since 1975 when this form was originally developed. However, data archived via paper medium are not easily used, therefore HMANA strongly recommends that these data be entered into [HawkCount](#) instead, preferably on a day by day basis during the migration season. **The hourly-totals entry option into HawkCount is the official HMANA data entry policy.** Hawk watches entering hourly-totals data into HawkCount are not required to submit Daily Reporting Forms to the HMANA archives located at Hawk Mountain Sanctuary.

Because it is recognized that not all Hawk Sites are able to enter hourly data into HawkCount during the immediacy of the count season, a daily-total option is offered in HawkCount. In this case, HMANA requests that hourly data be entered later at the end of the season. **If hourly-totals data are not entered electronically, then a paper copy of the daily count sheet is required for archiving.** Hawk watches should submit their Daily Reporting Forms to the HMANA archives located at Hawk Mountain Sanctuary. It is important that this step be taken so that a continuum of standardized data is maintained. The set of data points collected in 1975 needs to be the same as that collected today, in as much detail as possible, in anticipation of future analysis applications. Extra detail can always be discarded during analysis in the case where detail level exceeds need, but missing data can never be recovered when recorded detail level is too low.

The value of data is dramatically increased through timely entry into HawkCount. There is a high demand for making the unofficial results available immediately, as evidenced by postings on BIRDHAWK and local hotlines. Timeliness is a critical component element of maximizing the recreational and educational impact to the raptor watching community at large. At the end of each season, these data and resultant analysis may be used by local web sites, local newsletters and HMANA's *Hawk Migration Studies*. Note that all raptor migration data entered into HawkCount is viewable by the HMANA state/provincial coordinators and continental Flyway Editors, therefore the Raptor Watch Site need take no additional actions for their data to be used in this journal. The Flyway Editors must deliver their reports by the first of April/October to the HMANA Editor in Chief in order to be printed with the current

seasons report. Please help them meet their deadlines by getting your material into HawkCount well in advance so that *Hawk Migration Studies* can be published without delay.

As the data moves through the user continuum of recreation, education, science and conservation, an increased importance is placed on use of standardized protocols and longevity of count data. Therefore, a major key to success will be to implement tools and techniques that shorten the publication cycle at all levels within an evolutionary process of continuous improvement in data quality. It is understood that not all hawk watches will meet all the criteria, however this only means that some data will not be used for particular applications requiring that criteria. Each hawk watch can aspire to improving their data collection procedures and protocols in order to enable their data to be used by a greater and greater number of applications. HMANA will establish a set of standards that satisfies the overwhelming majority of users and applications, while simultaneously providing the mechanism for supporting projects requiring other attributes.

By making raptor migration data, encounter, and ancillary data easily available on the Internet and via other electronic means, the uses of data will invariably increase. Therefore it is more important than ever that all data sets be as accurate as possible. Correcting data errors can be time consuming and expensive and one can always debate the rewards relative to the costs of correcting data errors. However, the HMANA encourages the Raptor Watch Watches to make every effort possible to maintain the highest accuracy feasible in all their data sets. HMANA actively solicits users to report errors, and has data correction as a high priority so that corrections are made in a timely manner.