

On-line Data Entry System for MA Piping Plover Census Form (PIPLODES)



Photo courtesy of J. LeClaire

REFERENCE MANUAL

Table of Contents

| | |
|--|---|
| How to Use this Reference Manual | 2 |
| PIPL Automated State Census System Table Layout | 2 |
| Table Definitions..... | 3 |
| Data Dictionary Layout | 4 |
| Appendix 1: PIPLODES Abbreviated Data Dictionary | 5 |

How to Use this Reference Manual

This Reference Manual is primarily about features of the Massachusetts Automated State Census System for Piping Plover (*Charadrius melodus*) and specifically answers the question, "What is X?". Each dialog box, field, tab and button is explained.

The bulk of the field descriptions are laid out in the data dictionary.

PIPL Automated State Census System Table Layout

28 May 2015

Table design for PIPL database

Tom McGonegal

Mass Audubon

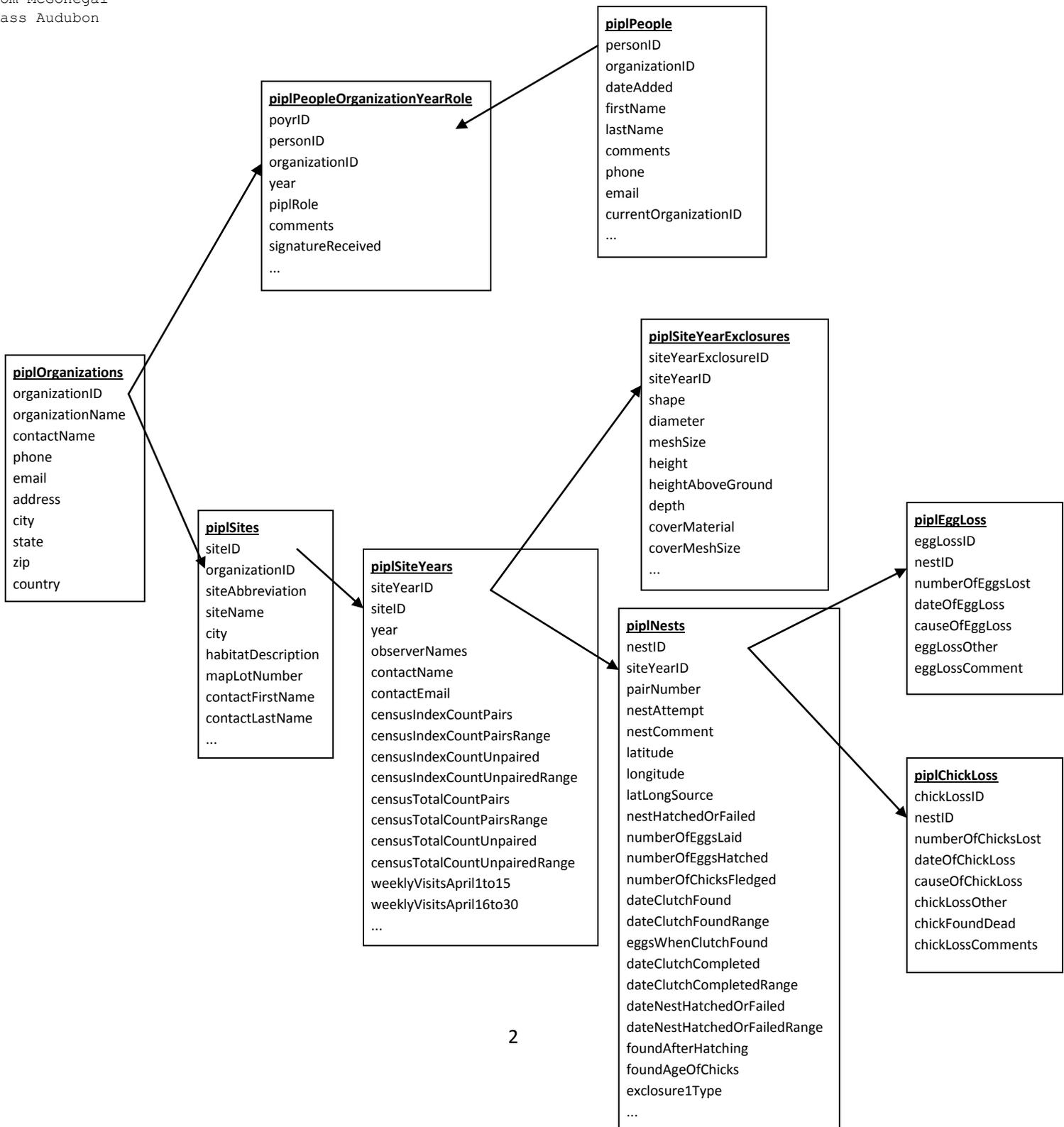


Table Definitions

The PIPL Automate State Census System is a relational database that consists of eight tables that cover all data required to populate a PIPL census form and support reports across all forms.

| Table Name | Definition | Number of Fields |
|--------------------------------------|---|-------------------------|
| Organizations | Stores the names of the organizations (Mass Audubon and partners) who have users in the system. | 10 |
| People | Details of each system user | 18 |
| People-Organization-Year-Role | Annual data access permission details of each system user, allowing many-to-many between orgs and people, varying by year | 11 |
| Sites | Store the details of the locations and ownership of the beaches where nests are found. | 12 |
| Site-Year | Store the details of each site that change year-to-year, including counts and dates | 48 |
| Site-Year Exclosures | Define a set of fence types that are used across multiple nests at a site | 10 |
| Nests | Store all nest details - dates, locations, exclosures and counts. | 37 |
| Egg Loss | Store the details of each egg loss for a particular nest. | 7 |
| Chick loss | Store the details of each chick loss for a particular nest. | 8 |

Data Dictionary Layout

The data dictionary, or metadata repository, is a centralized repository of data information such as meaning, relationships to other data, origin, usage, and format. Each table is defined and includes the following data points for each field:

| Column Header | Description |
|-----------------------------|--|
| Field Name | Table element |
| Field Type | <p>There are a variety of field types:</p> <p>Datetime- time field that captures both the date and the time</p> <p>Double – Numeric field</p> <p>Int – integer (whole number that can be negative, zero or positive) (usually up to 255 characters)</p> <p>Longtext – An extremely long text field up to 4Gb of data.</p> <p>Mediumtext – A text field containing up to 64 Mb of data.</p> <p>Tinyint – number between -255 and +255</p> <p>VARCHAR – characters string with variable length</p> |
| Maximum Field Length | The maximum length of characters in the field |
| Minimum Field Length | The minimum length of characters in a field (if required) |
| Not Null | <p>Not Null is defined as being a required field.</p> <p>Default Null is defined as the field NOT being required.</p> <p>If the field is blank in the data dictionary then it is the same as a Default Null (or not required)</p> |
| Auto Increment | Auto Increment refers to when a new row is added the system automatically assigns a new number to that field, incrementing by one. |
| Business Definition | Business definition of the field |
| Business Details | Specific business information regarding the field |

Appendix 1: PIPLODES Abbreviated Data Dictionary

PIPLODES: Data Dictionary Row Definitions

| Column Header | Description |
|-----------------------------|---|
| Visible Field Name | How the field appears in the PIPLODES system |
| Maximum Field Length | The maximum length of characters in the field |
| Definition | Definition of the field |
| Details | Specific information regarding the field |

PIPLODES: Organization Table

| Visible field Name | Maximum Field Length | Definition | Details |
|----------------------|-----------------------|-------------------------------------|---|
| N/A | 10 | System generated | |
| Organization Name | 100 | Name of organization | |
| Primary Contact Name | 100 | Contact for organization | This usually is the administrator that is responsible for submitting PIPL census forms to the Massachusetts Natural Heritage & Endangered Species Program |
| Phone | 50 | Phone number for org | Main contact number of the organization or for the administrator |
| Email | 100 | Email address for org | Main email address of the organization or for the administrator |
| Address | 50 | Street address of the organization | |
| City | 50 | City location of the organization | |
| ST | 2 | State location for the organization | |
| Zip+4 | 15 | Zip code for the organization | |
| Country | 40 | Country for the organization | |
| N/A | organizationID | | |

PIPLODES: People Table

| Visible Field Name | Maximum Field Length | Definition | Details |
|---|----------------------|--|--|
| N/A | 10 | name of user | |
| N/A | 10 | name of organization user is associated with | |
| First | 50 | first name of user | |
| Last | 50 | last name of user | |
| Comments | 200 | additional comments for user | |
| Phone | 25 | phone number for user | This is usually user's organization |
| Email | 50 | e-mail for user | Usually the user's email at their associated organization |
| Line 1 | 50 | address where user is located | The user's organizational address |
| City | 50 | city where organization is located that user is associated with | |
| ST | 2 | state where organization is located that user is associated with | |
| Zip+4 | 15 | zip code for person's organization | |
| Country | 40 | country where organization is located | |
| Set a new password. Enter a new password; Re-enter the password | 32 | encrypted password | Passwords are generic when first created. All users are requested to change their password upon entry into the system. This can be done from the link on the Dashboard page. |
| Set working organization | 10 | ID of organization org user is currently editing | |
| N/A | 10 | Administration user that established the account | |
| N/A | DEFAULT | When the user's account was created | |
| N/A | 10 | Administration user that updated the account | Allows tracking of user's changes |
| N/A | DEFAULT | When the user's account was updated | Allows tracking of user's changes |
| N/A | personID | | |

PIPLODES: People - Organization - Year - Role Table

| Visible Field Name | Type | Maximum Field Length | Definition | Details |
|--------------------|------------|----------------------|--|------------------------------------|
| N/A | int | 10 | | |
| N/A | int | 10 | Users id | |
| | int | 10 | Organization the user is associated with | |
| Year | int | 10 | The year the user was associated with the organization | |
| User Access | varchar | 10 | The user's access level | Org User / Org Admin / Super Admin |
| | varchar | 200 | Comments field for additional information | |
| Admin | int | 10 | Administrator that created the user record | |
| | datetime | | Date the user record was created | |
| | int | 10 | Administrator that updated the user record | |
| | datetime | | Date the user record was updated | |
| | KEY | poyrID | | |

PIPLODES: Site Table

| Visible Field Name | Maximum Field Length | Definition | Details |
|---------------------|----------------------|---------------------------------------|---|
| N/A | 10 | Site id - system generated | |
| N/A | 10 | | |
| Abbreviation | 10 | abbreviated name for site | typically first characters represents first letter of town site is located; often an acronym |
| Site Name | 50 | full name of site | please use the site name that is most appropriate for your site; use historical names. If the site is combined between two or more sites, be sure to put both sites together, for example "Shifting Lots-Ellisville State Beach" or "Little Beach-Barney's Joy" or "Wychmere-Merkel-Bank Street". Do this when you believe the pairs act as one unit across 2+ "sites". |
| Town/City | 20 | name of city for site | |
| Habitat description | 255 | description for habitat | |
| Map Lot Number | 8 | | |
| First name | 30 | first name of contact for site | Under Census Form there is a "contact" required. This contact is the organization's contact for follow-up questions from NHESP |
| Last Name | 30 | last name of contact for site | |
| Cell phone | 30 | cell number for site contact | Please enter the phone number most appropriate for your site; DO NOT enter your personal phone number |
| Email | 50 | e-mail for site contact | Please enter the most appropriate email address |
| Comments | | additional comments for site comments | |
| Name | 50 | Name of caretaker for the site | |
| Email | 50 | email for caretaker | |
| Mailing address | 60 | mailing address for caretaker | |
| | 40 | phone number for caretaker | |
| N/A | siteID | | |

PIPLODES: Site Year Table

| Visible Field Name | Maximum Field Length | Definition | Details |
|-------------------------------|----------------------|---|--|
| N/A | 10 | | |
| N/A | 10 | | |
| N/A | 10 | year site was monitored | |
| Observer names | 300 | full name of observer | List the observer FULL NAMES for the season; only list those who would be relevant to any questions in the future; do not list, for example, people that only monitored the site once. |
| Contact Name | 80 | full name of contact for site | |
| Email | 100 | e-mail for site contact | |
| | | | Means all pairs and unpaired adults for which you can account for being present ANY time during June 1-9. INCLUDE ZEROES FOR BOTH PAIRS AND ADULTS. |
| | | | Be sure not to double count any index count pairs that may have moved during the window to an adjacent beach; talk to your neighboring monitors if you suspect this is the case. |
| | | | Examples: a) if you found a 4 egg nest on June 12 but had never observed the nest or pair prior to this date, you would include this pair in the index count, because they had to have been present (it takes at least 6-7 days to lay 4 eggs). b) If you last saw a pair and a 4 egg nest lost on May 31, but found the nest lost June 1 and never saw the pair again, then it would NOT be included in the census count. c) If the pair was present and scraping any time during June 1-9, that SHOULD be included in the census count, even if the pair never nested. d) if you saw an unpaired adult between Jun 1-9 that appeared tied to the site (territorial, scraping, etc.) that WOULD be included under "unpaired adult" |
| Index Count (Number of Pairs) | 1000 | number of pairs for index count | |
| N/A | 20 | range for number of pairs for index count | if the value is a simple number, it would be stored in the "pairs" column. If it's not, it would be in the "pairsRange" column. There should never be a value in both columns. |
| Index Count (Unpaired Adults) | 1000 | number of unpaired adults for index count | |
| N/A | 20 | range for number of unpaired adults for index count | |

| Visible Field Name | Maximum Field Length | Definition | Details |
|-------------------------------|----------------------|---------------------------------|--|
| Total Count (Number of Pairs) | 1000 | number of pairs for total count | <p>Refers to all pairs and unpaired adults for which you can account for being present and showing signs of territoriality, courtship or breeding behavior for ≥ 2 weeks. INCLUDE ZEROES FOR BOTH PAIRS AND ADULTS. If you suspect pair movement to another site at another point and subsequent renesting at that site, but could still include it in the total count because it was present for > 2 weeks, be sure to only include it on one census form. List the pair as present and breeding in the "total Count", but be clear not to double count any total count pairs that may have moved during the window to an adjacent beach; talk to your neighboring monitors if you suspect this is the case-they may not work for Mass Audubon! We recommend that regardless of whether you count the pair or not, an * is placed next to your number, and clarify the asterisk in "Census remarks", for example: *Though we list 3 pairs in the total count, there were actually 4 pairs. However, this pair first nested at Town Neck on May 25, failed June 6, and was first observed on Spring Hill Jun 13. We count the pair on the total count for Town Neck instead (see Town Neck census form 2013).</p> <p>If you suspect pair movement to another site at another point and subsequent renesting at that site, but could still include it in the total count because it was present for > 2 weeks, be sure to only include it on one census form. List the pair as present and breeding in the "total Count", but be clear not to double count any total count pairs that may have moved during the window to an adjacent beach; talk to your neighboring monitors if you suspect this is the case-they may not work for Mass Audubon! We recommend that regardless of whether you count the pair or not, an * is placed next to your number, and clarify the asterisk in "Census remarks", for example: *Though we list 3 pairs in the total count, there were actually 4 pairs. However, this pair first nested at Town Neck on May 25, failed June 6, and was first observed on Spring Hill Jun 13. We count the pair on the total count for Town Neck instead (see Town Neck census form 2013).</p> |

| Visible Field Name | Maximum Field Length | Definition | Details |
|--|----------------------|---|--|
| N/A | 20 | range for number of pairs for total count | |
| Total Count (Unpaired Adults) | 1000 | number of unpaired adults for total count | |
| N/A | 20 | range of unpaired adults for total count | |
| April 1st - 15th | 20 | number of site visits between April 1-15 | If a site was visited ≤ 5 times, please give actual dates under additional comments. |
| April 16th - EOM | 20 | number of site visits between April 16-30 | If a site was visited ≤ 5 times, please give actual dates under additional comments. |
| May 1st - 15th | 20 | number of site visits between May 1-15 | If a site was visited ≤ 5 times, please give actual dates under additional comments. |
| May 16 - EOM | 20 | number of site visits between May 16-31 | If a site was visited ≤ 5 times, please give actual dates under additional comments. |
| June 1st - 15th | 20 | number of site visits between June 1-15 | If a site was visited ≤ 5 times, please give actual dates under additional comments. |
| June 16th - EOM | 20 | number of site visits between June 16-30 | If a site was visited ≤ 5 times, please give actual dates under additional comments. |
| July 1st - 15th | 20 | number of site visits between July 1-15 | If a site was visited ≤ 5 times, please give actual dates under additional comments. |
| July 16th - EOM | 20 | number of site visits between July 16-31 | If a site was visited ≤ 5 times, please give actual dates under additional comments. |
| Census remarks | | additional remarks for census counts | <p>Use this section to clarify or explain aspects of your census results. Note any factors that may have affected the accuracy of your <i>Index Count</i>, for example: wind, rain, or fog; the site was incompletely surveyed, or surveyed by an inexperienced observer. If a site was only surveyed ≤ 5 times, please report the date(s). Please indicate which pairs, if any, you believe were not present during the June 1-9 Index Count period. Also indicate which pairs, if any, you believe were present during the Index Count period but did not have a nest or chicks during that period. If you suspect that any pair(s) failed at your site and departed early enough (before approximately June 10) to have re-nested elsewhere, or if you had late-arriving pairs (after June 1) that may have nested unsuccessfully elsewhere before moving to your site, please note those pairs here, along with the dates they were first or last seen. (Please communicate with monitors at adjacent sites to compare dates of arrival/departure of such pairs; this can help minimize double-counting and improve the accuracy of the Total Count).</p> <p>Census Remarks: Dates/notes on behavior of pairs that did not nest but were included in the index or total count *notes regarding pairs that were counted on another census form (at another site) Any information regarding "confusing" pairs; i.e. pairs for which you believed nested but never found the nest, or strange behavior Any incidents of double brooding, or courtship after fledging chicks If you only visited a site < 5 times, please include dates and notes If weather impacted your ability to obtain an accurate index count, please list it here</p> |
| List pairs not present during the index count period | 300 | number of pairs not present in index or total count | List the total number of pairs and then the specific pair numbers in this field |
| Symbolic fencing | | Symbolic fencing | whether symbolic fencing was used to protect nests and provide chick refuge areas and when fencing was erected, |
| Exclosures | | Exclosures | Any details with exclosures that were not captured in the exclosure table, why erected (particular predator), how effective |
| Predator fencing | | Predator fencing | Additional fencing beyond symbolic fencing (include dog lines, triple fencing) |
| Electric fencing | | Electric fencing | If electric fencing was used, when, how many panels, average voltage, height of fence, if scent caps were used etc. |
| Lethal Predator control | | Lethal predator control | If lethal action was taken, what, where, when, how and duration |
| Predator harassment | | Predator harassment | Specifics on which predators were present during season and/or responsible for egg/chick loss, tracks, observations |

| Visible Field Name | Maximum Field Length | Definition | Details |
|---------------------------------------|----------------------|--|---|
| Signage | | Signage | Specific type of signage used at site and any special signs (No Dogs, Stay off Dunes, No Landing, educational placards etc) |
| Public outreach | | Public Outreach | Any special education or outreach that occurred (also include if materials used). Also can include general overall interactions with the public |
| Construction/project/event management | | Construction project/Project/Event Management | Describe any dune building projects or construction that occurred |
| Research | | Research | Any additional projects that occurred at the site |
| Other | | other managements notes | <p>Other Management / Remarks – THIS SECTION WILL BE THE HISTORICAL RECORD FOR YOUR SITE, AND USED FOR MANY YEARS TO COME AFTER YOU HAVE COMPLETED THE SEASON.</p> <ul style="list-style-type: none"> - When monitoring began, - Were steps taken to manage off-road vehicles, pedestrians, pets, predators, kites/kiteboarders? - Describe any “problems”, or other limiting factors, problems you encountered, etc. DO NOT list problem landowners by personal name. DO NOT use negative language such as “The landowner at 151 S. Shore Boulevard was extremely unpleasant and often told us Piping Plovers taste like Chicken, and did not want any fencing”. Instead, “the landowner at 151 S. Shore Boulevard allowed symbolic fencing only after discussions with MA Natural Heritage and Endangered Species Program, thus the nest was only protected from foot traffic for 1 week; fencing did not allow for protection from disturbance, and the bird often flushed off the nest. This may have contributed to nest loss by predation because the pair was noticeable and often displaying off the nest.” - IMPORTANT: Recommend other management needs and add remarks about special circumstances or observations that are noteworthy or need clarification; keep in mind that your recommendations can and will be read by Town, State and Federal employees, as well as the general public |
| Additional comments | | additional comments | |
| N/A | 10 | Which user created the record | |
| N/A | | When the user created the record | |
| N/A | 10 | Which user updated the record | |
| N/A | | What date the user updated the record | |
| Approved for internal review | 10 | Who approved the record to be reviewed by internal admin | |
| N/A | | What date the user noted the record could be reviewed internally | |
| Map ready | 10 | What user denoted the map was ready | |
| N/A | | what date the user indicated the map was ready | |
| Approved for external review | 10 | What user indicated the site census could be reviewed by the State | |
| N/A | | What date the user indicated the site census was ready for the State | |
| N/A | siteYearID | | |
| N/A | siteID | | |
| N/A | year | | |

PIPLODES: Site Year Exclosure Table

| Visible feild name | Maximum Field Length | Definition | Details |
|---------------------|--------------------------|---|---|
| N/A | 10 | Defines the site & year exclosure was erected | |
| N/A | 10 | What year is the site being reported on | |
| Shape | 11 | shape of exclosure | Options available in dropdown: round, square, rectangular, triangular, other - Note: if appropraite option is not available in the dropdown please type into this field |
| Diameter | | diameter of exclosure (feet) | |
| Mesh size | 10 | size of mesh in netting (inches) | 2" x 2", 2" x 4", other - Note: if appropraite option is not available in the dropdown please type into this field |
| Total height | | height of exclosure (inches) | |
| Height above ground | | height of exclosure above ground (inches) | Height of exclosure above ground after installing exclosure. Note the above ground and below ground measurements need to equal the total height of the exclosure. |
| Depth | | depth of exclosure buried (inches) | Depth of exclosure below ground after installing exclosure. Note the above ground and below ground measurements need to equal the total height of the exclosure. |
| Cover material | 15 | What materials was used to cover the exclosure to prevent predators from accessing from above the exclosure | Options available in dropdown: bird netting, string. Note: if appropraite option is not available in the dropdown please type into this field |
| Cover mest size | 10 | What mesh size was the material that was used as the cover material | Options available in dropdown: 3/4" x 3/4", 3/4" x 5/8" Note: if appropraite option is not available in the dropdown please type into this field |
| N/A | teYearExclosureID | | |
| N/A | siteYearID | | |

PIPLODES: Nest Table

| Visible Field Name | Maximum Field Length | Definition | Details |
|--------------------|----------------------|--|---|
| N/A | 10 | individual ID for nest attempt | |
| N/A | 10 | What year is the site being reported on | |
| Pair number | 5 | number assigned to pair | number of pair followed by nest attempt number. If you are describing a continuation nest, use -cont in the pair/nest number, for example, 01B-cont. |
| Nest attempt | 8 | attempt number for pair | letter, "a"= first nest attempt, "b"=second nest attempt, etc. Options available in dropdown: A, B, C, D, E, Unknown |
| Nest Comment | | additional comments for nest attempt | |
| Observers | | actual observer of the nest | |
| Latitude | 20 | latitude of nest location | <p>Each longitude should have a "-" in front of it. No "..." or other characters in the latitude or longitude columns (i.e. no words) Each GPS point should be in decimal format - there should be no degree symbol, ", or N/W</p> <ul style="list-style-type: none"> · Incorrect: 41°33'30.91"N 70°56'6.63"W · Correct: 42.373825 -70.969888 |
| Longitude | 20 | longitude of nest location | <p>Each longitude should have a "-" in front of it. No "..." or other characters in the latitude or longitude columns (i.e. no words) Each GPS point should be in decimal format - there should be no degree symbol, ", or N/W</p> <ul style="list-style-type: none"> · Incorrect: 41°33'30.91"N 70°56'6.63"W · Correct: 42.373825 -70.969888 |
| Lat/Long source | 50 | source of GPS point associated with nest attempt | Options available in dropdown: Handheld GPS, Google |
| Hatched or Failed | 20 | fate of nest | Options available in dropdown Hatched, Failed, Unknown |

| Visible Field Name | Maximum Field Length | Definition | Details |
|----------------------------|----------------------|--|---|
| Number of eggs laid | 10 | total number of eggs laid | Options available in dropdown are: 0, 1, 1+, 1-2, 1-3, 1-4, 2, 2+, 2-3, 2-4, 3, 3-4, 4, Unknown, or range. The number of eggs can be a range if the nest was not observed prior to hatching or loss. Only record what you observed: For example, if you saw 3 eggs but the bird was on the 6th day of laying, and the nest was lost, record >3 in the "eggs" column because you do not know whether a 4th egg was laid. Or, if you know 4 eggs were in the nest bowl, but only ever saw 2 chicks, record 2-4 in the "number of chicks hatched" column If you aren't sure record a range. Then use Nest Comments to reference explanations of uncertainty and why. |
| Number of eggs hatched | 10 | total number of eggs hatched | Options available in dropdown are: 0, 1, 1+, 1-2, 1-3, 1-4, 2, 2+, 2-3, 2-4, 3, 3-4, 4, Unknown, or range. The number of eggs can be a range if the nest was not observed prior to hatching or loss. Only record what you observed: For example, if you saw 3 eggs but the bird was on the 6th day of laying, and the nest was lost, record >3 in the "eggs" column because you do not know whether a 4th egg was laid. Or, if you know 4 eggs were in the nest bowl, but only ever saw 2 chicks, record 2-4 in the "number of chicks hatched" column as you saw 2 however 4 could have hatched and now only 2 survive but the observer didn't see the loss of the other 2. |
| Number of chicks fledged | 6 | total number of chicks fledged | Options available in dropdown are: 0, 1, 2, 3, 4, 5, 6 or range. You should include all chicks that reached 25 days of age regardless of whether they could fly or not, HOWEVER, if you suspect that a chick that couldn't fly and was lost after 25 days, record that in Nest Comments. |
| Date clutch found | | date clutch found | Options available April 1 through July 31; Choose one date or a range of dates |
| N/A | 30 | | |
| Comments on fledged chicks | | additional comments for fledged chicks | |
| Eggs when clutch found | 10 | number of eggs when nest found | Options available in dropdown are: 1, 2, 3, 4, 5, 6, unknown |
| Date clutch completed | | date clutch completed | Options available April 1 through July 31; Choose one date or a range of dates |
| N/A | 30 | | |

| Visible Field Name | Maximum Field Length | Definition | Details |
|-----------------------------|----------------------|---|--|
| Date nest hatched or failed | | date nest hatched or failed | <p>If a single date is not certain, enter a date range. If the date that a nest hatched or failed is not known precisely (and it often is not!), please give the range of dates within which hatching or nest failure occurred. For example, you last saw the nest on 6/2, and the site was checked 6/6; a range of 6/2-6/6 is appropriate, unless you have data to suggest otherwise (for example, presence of fresh tracks and yolk after rain the night before would suggest the nest was in fact lost that night). If so, back up your dates with these remarks.</p> <p>Rule of thumb- If your last visit was in the AM, then that date should be included in the range. If your last visit was in the PM, that should not be included in the date range.</p> |
| N/A | 30 | | |
| Found after hatching | 1 | check box field. A check means "yes" chicks were found after hatching | |
| Age range (days) | 30 | approximate age of chicks as first observed | Use this section when no nest discovered prior to observing chicks |
| Type | 10 | type of enclosure | Choice from site list specified under enclosure description |
| Date Installed | | date enclosure installed | Options available April 1 through July 31 |
| Date Removed | | date enclosure removed | |
| Removed Reason | 100 | reason enclosure removed prior to hatching | |
| Type | 10 | type of enclosure | Choice from site list specified under enclosure description |
| Date Installed | | date enclosure installed | Options available April 1 through July 31 |
| Date Removed | | date enclosure removed | |
| Removed Reason | 100 | reason enclosure removed prior to hatching | |
| Type | 10 | type of enclosure | Choice from site list specified under enclosure description |
| Date Installed | | date enclosure installed | Options available April 1 through July 31 |
| Date Removed | | date enclosure removed | |
| Removed Reason | 100 | reason enclosure removed prior to hatching | |
| N/A | 10 | record of which user created the nest data | |
| N/A | | date record of nest data was inputted | |
| N/A | 10 | record of which user updated the nest data | |
| N/A | | date record of nest data was updates | |
| Adult mortality 1 | 1 | Check box if there was an adult mortality | Unless this box is checked, the associated boxes are not accessible |

| Visible Field Name | Maximum Field Length | Definition | Details |
|-----------------------|----------------------|---|---------|
| Mortality with a nest | 1 | Check box if there was an adult mortality associated with a particular nest | |
| Date found | | Date the mortality was found | |
| N/A | 30 | The date range | |
| Number found dead | 6 | How many adults were found dead | |
| Mortality comments | | Comments about the mortality | |
| Adult mortality 2 | 1 | Check box if there was a second adult mortality | |
| Mortality with a nest | 1 | Check box if there was a second adult mortality associated with a particular nest | |
| Date found | | Date the second mortality was found | |
| N/A | 30 | The date range | |
| Number found dead | 6 | How many adults were found dead | |
| Mortality comments | | Comments about the second mortality | |
| N/A | nestID | | |
| N/A | siteYearID | | |

PIPLODES: Egg Loss Table

| Visible Field Name | Maximum Field Length | Definition | Details |
|---------------------|----------------------|--------------------------------|--|
| N/A | 10 | | |
| N/A | 10 | individual ID for nest attempt | |
| Number of eggs lost | 15 | number of eggs lost | Select number from dropdown or type in. Type in a range if unsure of number of eggs lost. |
| Date of loss | 30 | date eggs lost | If a single date is not certain, enter a date range. If the date that an egg was loss is not known precisely (and it often is not!), please give the range of dates within which the loss occurred. For example, you last saw the nest on 6/2, and the site was checked 6/6; a range of 6/2-6/6 is appropriate, unless you have data to suggest otherwise (for example, presence of fresh tracks and yolk after rain the night before would suggest the egg was in fact lost that night). If so, back up your dates with these remarks. Rule of thumb - If your last visit was in the AM, then that date should be included in the range. If your last visit was in the PM, that should not be included in the date range. |
| Cause of loss | 50 | Specific cause | Click on the "+" sign to select one or more causes of loss. The exclamation point provides definitions of all options - PLEASE read! |
| Specific cause | 50 | | If predator was selected as the cause of loss, then a predator drop down becomes available. An extensive list of predators with an option of "other" is available or type in predator if option not available. |
| | 30 | | Provide more details in the comments section as necessary. |

| Visible Field Name | Maximum Field Length | Definition | Details |
|--------------------|----------------------|---|---|
| Comment | | additional comments to clarify egg loss | <p>Report in detail any observations or evidence of causes of egg or chick mortality. While causes of nest loss can often be determined fairly reliably from tracks or other signs, causes of chick mortality are usually difficult to determine with any degree of certainty. Please be as specific and detailed as possible as to the actual evidence on which reported causes of egg or chick loss are based.</p> <p style="text-align: right;"><u>Examples of the level of detail:</u> "<u>Nest 2B</u> - fox predation; fox tracks approached to within 1 foot of nest scrape, all 4 eggs gone". "<u>Nest 1A</u> - crow predation suspected; crow tracks abundant on beach and as close as 20 feet from nest, but gravelly substrate closer to nest made it impossible to confirm tracks at the nest itself. All eggs gone, no eggshell fragments observed." "<u>Nest 5A</u> -abandoned June 2 or3, cause unknown; both members of pair believed still alive /present for at least 2-3 days post-abandonment." <u>REMEMBER:</u> If you don't know the cause of loss, report UNKNOWN. Do not hesitate to list multiple predators in the area if you are unsure, for example "crow tracks surrounding the nest bowl within 1 inch, with yolk and shell fragments in the area; striped skunk tracks also observed leading directly to the nest bowl within 3"; not clear whether the skunk or crow was the primary predator; it appears that one may have come in after the other had already predated the nest. If you had not visited a nest for multiple days that you often will not be able to determine what happened to it; for example: Nest was last observed 5/20, and on 5/25 was observed lost. "A high tide wrackline was found 1m above the former nest location, and the bowl was gone. No eggs were found in the wrackline. Unknown as to cause of loss." If there is additional documentation (photos, reports) please note it in the Comments Section.</p> |
| N/A | eggLossID | | |
| N/A | nestID | | |
| | | | |

Egg Loss Table

PIPLODES: Chick Loss Table

| Visible Field Name | Maximum Field Length | Definition | Details |
|-----------------------|----------------------|---------------------------------------|--|
| N/A | 11 | | |
| N/A | 10 | individual ID for nest attempt | |
| Number of chicks lost | 15 | number of chicks lost | Select number from dropdown or type in. Type in a range if unsure of number of chicks lost. |
| Date of loss | 30 | date of chick loss (missing) | Can be a range of dates from time chick last observed to day chick discovered as missing. If a single date is not certain, enter a date range. If the date that a chick was lost is not known precisely (and it often is not!), please give the range of dates within which the loss occurred. For example, you last saw the chick on 6/2, and the site was checked 6/6; a range of 6/2-6/6 is appropriate. Rule of thumb - If your last visit was in the AM, then that date should be included in the range. If your last visit was in the PM, that should not be included in the date range. |
| Cause of loss | 50 | cause of chick loss | Drop down with selection defined by Natural Heritage and Endangered Species Program. PLEASE read detailed explanation of options. Note: cause of chick loss is difficult to ascertain if not seen. Click on the "+" sign to select one or more causes of loss. The exclamation point provides definitions of all options - PLEASE read! |
| Specific Cause | 50 | Specific cause | If predator was selected as the cause of loss, then a predator drop down becomes available. An extensive list of predators with an option of "other" is available or type in predator if option not available. |
| Chick found dead? | 1 | check off box if chick was found dead | Only check off if body of chick was found |

| Visible Field Name | Maximum Field Length | Definition | Details |
|--------------------|----------------------|---|--|
| Comment | | additional comments to clarify chick loss | DO list suspected predators, for example "crows observed harassing adult piping plovers continuously the day before the chicks disappeared" or weather that may have impacted chick survival "extreme heat of 90 degrees on hatch day which occurred on a Saturday; suspect chicks could have been impacted by high heat and disturbance" or "heavy rain and thunderstorms during hatch day and subsequent 2 days; chicks were never observed after this date. Report in detail any observations or evidence of causes of chick mortality. While causes of chick loss can often be determined fairly reliably from tracks or other signs, causes of chick mortality are usually difficult to determine with any degree of certainty. Please be as specific and detailed as possible as to the actual evidence on which reported causes of egg or chick loss are based. |
| N/A | chickLossID | | |
| N/A | nestID | | |

Chick Loss Table