

NCPN Invasive Exotic Plant Monitoring Database Table and Field Definitions

The table and field definitions in this appendix correspond to version 1.00 of the invasive exotic plant (IEP) monitoring database. The database consists of three types of tables: data tables, lookup tables, and metadata tables. Tables appear in alphabetical order within each of these three categories.

Data Tables

Table Name: tbl_BFP

Description: Table of between feature position (BFP) points

Field Name	Field Description	Field Type	Field Width
BFP_ID	Unique record identifier - primary key	dbText	50
Unit_Code	Park Code.	dbText	4
Route	Route	dbText	50
GPS_File_Name	GPS file name	dbText	50
Rcvr_Type	GPS unit type	dbText	50
Elevation	Elevation in meters	dbInteger	2
Easting	UTM East of Transect	dbDouble	8
Northing	UTM North of Transect	dbDouble	8
UTM_Zone	UTM Zone (UTM_Zone)	dbInteger	2
Datum	Datum of mapping ellipsoid (Datum)	dbText	5
Max_PDOP	Horizontal accuracy	dbDouble	8
Corr_Type	Correction type	dbText	25
GPS_Date	Recording Date	dbDate	8
GPS_Time	Recording time	dbDate	8
Update_Status	Update status	dbText	25
Feat_Name	Feature name	dbText	50
Unfilt_Pos	Unfiltered position	dbInteger	2
Vert_Prec	Vertical precision	dbDouble	8
Horz_Prec	Horizontal precision	dbDouble	8
Std_Dev	Standard deviation	dbDouble	8

Table Name: tbl_EDSW

Description: Table of effective detection swath width (EDSW) measurements

Field Name	Field Description	Field Type	Field Width
Unit_Code	Park code	dbText	4
Route	Route name	dbText	50
Northing	UTM N	dbDouble	8
Easting	UTM E	dbDouble	8
GPS_Date	Date	dbDate	8
GPS_Time	Time	dbDate	8
EDSW_m	Effective Detection Swath Width in meters	dbDouble	8
Max_PDOP	Horizontal accuracy	dbDouble	8
Corr_Type	Correction type	dbText	255
Rcvr_Type	GPS unit type	dbText	255
Update_Sta	Update status	dbText	255
Feat_Name	Feature name	dbText	255
Datafile	GSP data file name	dbText	255
Unfilt_Pos	Unfiltered position	dbDouble	8
GPS_Height	Elevation in meters	dbDouble	8
Vert_Prec	Vertical precision	dbDouble	8
Horz_Prec	Horizontal precision	dbDouble	8
Std_Dev	Standard deviation	dbDouble	8

Table Name: tbl_Events

Description: Table of monitoring transect events

Field Name	Field Description	Field Type	Field Width
Event_ID	Event identifier (Event_ID)	dbText	50
Location_ID	Link to tbl_Locations (Loc_ID)	dbText	50
Protocol_Name	The name or code of the protocol governing the event (Protcl_Nam)	dbText	100
version_key_number	Master protocol version key	dbLong	4
Start_Date	Starting date for the event (Start_Date)	dbDate	8
Start_Time	Start time from GPS	dbDate	8
Comments	Plot/transect visit comments	dbMemo	0
Observer	Plot/transect visit observer	dbText	50

Table Name: tbl_Infestation

Description: Table of infestations observed

Field Name	Field Description	Field Type	Field Width
Infestation_ID	Infestation identifier	dbText	50
Infest_Event_ID	Foreign key to event ID	dbText	50
Master_Code	Master plant species code	dbText	10
Size_Value	Numeric size code	dbSingle	4
Size_Text	Size text	dbText	25
Cover_Value	Numeric code for cover percentage	dbSingle	4
Cover_Text	Text cover description	dbText	25
Pulled	Was weed pulled	dbBoolean	1
Growth_Stage	Growth stage of trees	dbText	15
Prior_Treatment	Was area previously treated	dbBoolean	1
Disturbance	Disturbance at site	dbText	50
Surveyor	Person surveying the route	dbText	50
PSR	Patch separation resolution	dbInteger	2
GPS_File_Name	GPS file name	dbText	50
Rcvr_Type	GPS unit type	dbText	50
Elevation	Elevation in meters	dbInteger	2
E_Coord	UTM East of Infestation	dbDouble	8
N_Coord	UTM North of Infestation	dbDouble	8
UTM_Zone	UTM Zone (UTM_Zone)	dbInteger	2
Datum	Datum of mapping ellipsoid (Datum)	dbText	5
Max_PDOP	Horizontal accuracy	dbDouble	8
Corr_Type	Correction type	dbText	25
GPS_Time	Recording time	dbDate	8
Update_Status	Update status	dbText	25
Feat_Name	Feature name	dbText	50
Unfilt_Pos	Unfiltered position	dbInteger	2
Vert_Prec	Vertical precision	dbDouble	8
Horz_Prec	Horizontal precision	dbDouble	8
Std_Dev	Standard deviation	dbDouble	8
Comments	Notes	dbMemo	0

Table Name: tbl_Infestation_Events

Description: Table of infestation events

Field Name	Field Description	Field Type	Field Width

Field Name	Field Description	Field Type	Field Width
Infest_Event_ID	Event identifier (Event_ID)	dbText	50
Location_ID	Link to tbl_Locations (Loc_ID)	dbText	50
Protocol_Name	The name or code of the protocol governing the event (Protcl_Nam)	dbText	100
version_key_number	Master protocol version key	dbLong	4
Start_Date	Starting date for the event (Start_Date)	dbDate	8
Start_Time	Starting time	dbDate	8
Comments	Infestation comments	dbMemo	0
Observer	Infestation observer	dbText	50

Table Name: tbl_Locations

Description: Location/route definition table

Field Name	Field Description	Field Type	Field Width
Location_ID	Location identifier (Loc_ID)	dbText	50
GIS_Location_ID	Link to GIS feature, equivalent to NPS_Location_ID (GIS_Loc_ID)	dbText	50
Meta_MID	Link to NR-GIS Metadata Database (Meta_MID)	dbText	50
Unit_Code	Park code	dbText	4
Plot_ID	Route name	dbText	50
Area	Area (applicable to GOSP only)	dbText	50
Observer	Person establishing route	dbText	50
Plot_Directions	Directions to route	dbMemo	0
Updated_Date	Date of entry or last change (Upd_Date)	dbDate	8

Table Name: tbl_Quadrat_Species

Description: Table of invasive plant species observed for a monitoring transect

Field Name	Field Description	Field Type	Field Width
Species_ID	Unique record identifier - primary key	dbText	50
Transect_ID	Foreign key to tbl_Quadrat_Transect	dbText	50
Plant_Code	Plant code from lookup table	dbText	50
Q1_hm	Percent cover Q1 @ 0.5m	dbSingle	4
Q2_5m	Percent cover Q2 @ 5m	dbSingle	4
Q3_10m	Percent cover Q3 @ 10m	dbSingle	4
Average_Cover	Average cover percentage	dbSingle	4
Q1_3m	Percent cover Q1 @ 3m (used in 2009)	dbSingle	4
Q2_8m	Percent cover Q2 @ 8m (used in 2009)	dbSingle	4
Q3_13m	Percent cover Q3 @ 13m (used in 2009)	dbSingle	4
Avg_Cover_2009	Average cover percentage (2009)	dbSingle	4
Q1	Percent cover Q1 (used in 2008)	dbSingle	4
Q2	Percent cover Q2 (used in 2008)	dbSingle	4
Q3	Percent cover Q3 (used in 2008)	dbSingle	4
Avg_Cover_2008	Average cover percentage (2008)	dbSingle	4

Table Name: tbl_Quadrat_Transect

Description: Table of measurements recorded for a monitoring transect

Field Name	Field Description	Field Type	Field Width
Transect_ID	Unique record identifier - primary key	dbText	50
Event_ID	Foreign key to tbl_Events	dbText	50
Transect	Transect number	dbInteger	2

Field Name	Field Description	Field Type	Field Width
Start_Time	Start time of this transect's observations - defaults to GPS time, but can be overwritten by data entry	dbDate	8
GPS_File_Name	GPS file name	dbText	50
Rcvr_Type	GPS unit type	dbText	50
Elevation	Elevation in meters	dbInteger	2
E_Coord	UTM East of Transect	dbDouble	8
N_Coord	UTM North of Transect	dbDouble	8
UTM_Zone	UTM Zone (UTM_Zone)	dbInteger	2
Datum	Datum of mapping ellipsoid (Datum)	dbText	5
Max_PDOP	Horizontal accuracy	dbDouble	8
Corr_Type	Correction type	dbText	25
GPS_Time	Recording time	dbDate	8
Update_Status	Update status	dbText	25
Feat_Name	Feature name	dbText	50
Unfilt_Pos	Unfiltered position	dbInteger	2
Vert_Prec	Vertical precision	dbDouble	8
Horz_Prec	Horizontal precision	dbDouble	8
Std_Dev	Standard deviation	dbDouble	8
Comments	Notes	dbMemo	0
Stop_Time	Stop time - not currently used but may be in legacy data	dbDate	8
Observer	Name of person surveying the monitoring route	dbText	50
Recorder	Name of person recording observations	dbText	50
Dead_Wood_Q1	Dead wood cover percentage quadrat 1	dbSingle	4
Dead_Wood_Q2	Dead wood cover percentage quadrat 2	dbSingle	4
Dead_Wood_Q3	Dead wood cover percentage quadrat 3	dbSingle	4
Dung_Q1	Dung cover percentage quadrat 1	dbSingle	4
Dung_Q2	Dung cover percentage quadrat 2	dbSingle	4
Dung_Q3	Dung cover percentage quadrat 3	dbSingle	4
Fungus_Q1	Fungus cover percentage quadrat 1	dbSingle	4
Fungus_Q2	Fungus cover percentage quadrat 2	dbSingle	4
Fungus_Q3	Fungus cover percentage quadrat 3	dbSingle	4
Lichen_Q1	Lichen cover percentage quadrat 1	dbSingle	4
Lichen_Q2	Lichen cover percentage quadrat 2	dbSingle	4
Lichen_Q3	Lichen cover percentage quadrat 3	dbSingle	4
Litter_Duff_Q1	Litter/Duff cover percentage quadrat 1	dbSingle	4
Litter_Duff_Q2	Litter/Duff cover percentage quadrat 2	dbSingle	4
Litter_Duff_Q3	Litter/Duff cover percentage quadrat 3	dbSingle	4
Root_Bole_Q1	Root/Bole cover percentage quadrat 1	dbSingle	4
Root_Bole_Q2	Root/Bole cover percentage quadrat 2	dbSingle	4
Root_Bole_Q3	Root/Bole cover percentage quadrat 3	dbSingle	4
Mineral_Soil_Sediment_Q1	Mineral Soil/Sediment cover percentage quadrat 1	dbSingle	4
Mineral_Soil_Sediment_Q2	Mineral Soil/Sediment cover percentage quadrat 2	dbSingle	4
Mineral_Soil_Sediment_Q3	Mineral Soil/Sediment cover percentage quadrat 3	dbSingle	4
Moss_Q1	Moss cover percentage quadrat 1	dbSingle	4
Moss_Q2	Moss cover percentage quadrat 2	dbSingle	4
Moss_Q3	Moss cover percentage quadrat 3	dbSingle	4
Cryptogram_Q1	Cryptogram cover percentage quadrat 1	dbSingle	4
Cryptogram_Q2	Cryptogram cover percentage quadrat 2	dbSingle	4
Cryptogram_Q3	Cryptogram cover percentage quadrat 3	dbSingle	4
Road_Q1	Road cover percentage quadrat 1	dbSingle	4

Field Name	Field Description	Field Type	Field Width
Road_Q2	Road cover percentage quadrat 2	dbSingle	4
Road_Q3	Road cover percentage quadrat 3	dbSingle	4
Rock_Q1	Rock cover percentage quadrat 1	dbSingle	4
Rock_Q2	Rock cover percentage quadrat 2	dbSingle	4
Rock_Q3	Rock cover percentage quadrat 3	dbSingle	4
Standing_Water_Flooded_Q1	Standing Water/Flooded cover percentage quadrat 1	dbSingle	4
Standing_Water_Flooded_Q2	Standing Water/Flooded cover percentage quadrat 2	dbSingle	4
Standing_Water_Flooded_Q3	Standing Water/Flooded cover percentage quadrat 3	dbSingle	4
Stream_Q1	Stream cover percentage quadrat 1	dbSingle	4
Stream_Q2	Stream cover percentage quadrat 2	dbSingle	4
Stream_Q3	Stream cover percentage quadrat 3	dbSingle	4
Trash_Junk_Q1	Trash/Junk cover percentage quadrat 1	dbSingle	4
Trash_Junk_Q2	Trash/Junk cover percentage quadrat 2	dbSingle	4
Trash_Junk_Q3	Trash/Junk cover percentage quadrat 3	dbSingle	4

Table Name: tbl_Target_Plant_Lists

Description: Table of target (high priority) invasive plants for each park and year

Field Name	Field Description	Field Type	Field Width
Year	Year of data collection (yyyy)	dbInteger	2
Unit_Code	Park code	dbText	4
Priority	Priority of target species determined by park	dbInteger	2
Report_Scientific_Name	Scientific name used in annual report (retained for historical purposes)	dbText	50
Report_Common_Name	Common name used in annual report (retained for historical purposes)	dbText	50
Master_Plant_Code	Master plant species code from tlu_NCPN_Plants	dbText	20
Comments	Any comments about the record	dbMemo	0

Lookup Tables

Table Name: tlu_Contacts

Description: Contact data for project-related personnel

Field Name	Field Description	Field Type	Field Width
Contact_ID	Contact identifier (Contact_ID)	dbText	50
Last_Name	Last name (Cnt_Last)	dbText	50
First_Name	First name (Cnt_First)	dbText	50
Middle_Init	Middle initial (Cnt_MI)	dbText	4
Organization	Organization or employer (cntorg)	dbText	50
Position_Title	Title or position description (cntpos)	dbText	50
Address_Type	Address (mailing, physical, both) type (addrtype)	dbText	50
Address	Street address (cntaddr)	dbText	50
Address2	Address line 2, suite, apartment number (Cnt_Addr2)	dbText	50
City	City or town (city)	dbText	50
State_Code	State or province (state)	dbText	8
Zip_Code	Zip code (postal)	dbText	50
Country	Country (country)	dbText	50

Field Name	Field Description	Field Type	Field Width
Email_Address	E-mail address (cntemail)	dbText	50
Work_Phone	Phone number (cntvoice)	dbText	50
Work_Extension	Phone extension (Work_Ext)	dbText	50
Contact_Notes	Contact notes (Cnt_Notes)	dbMemo	0

Table Name: tlu_Cover_Code

Description: Quadrat cover class lookup table

Field Name	Field Description	Field Type	Field Width
Cover_Code	Cover code to be stored in database	dbSingle	4

Table Name: tlu_Cover_Value

Description: Table to cross reference cover percent descriptions to numeric values

Field Name	Field Description	Field Type	Field Width
Cover_Description	Cover percentage description	dbText	25
Cover_Value	Cover percentage number value	dbSingle	4

Table Name: tlu_Disturbance

Description: Lookup table of disturbance types

Field Name	Field Description	Field Type	Field Width
Disturbance	Disturbance type	dbText	50

Table Name: tlu_NCPN_Plants

Description: Contains all NCPN master plant species

Field Name	Field Description	Field Type	Field Width
Master_Family	Master_Family	dbText	50
Master_PLANT_Code	Master Species PLANTS Code	dbText	20
Master_Species	Master Species (ITIS)	dbText	50
UT_Family	Utah Family	dbText	50
CO_Family	Colorado Family	dbText	50
WY_Family	Wyoming Family	dbText	50
Utah_PLANT_Code	Utah Species PLANTS Code	dbText	20
Utah_Species	Utah Species (Welsh et al 2003)	dbText	50
Co_PLANT_Code	Colorado Species PLANTS Code	dbText	20
Co_Species	Colorado Species (Weber & Wittmann 2001)	dbText	50
Wy_PLANT_code	Wyoming species PLANTS code	dbText	20
Wy_Species	Wyoming Species (Dorn 2001)	dbText	50
Add_Synonyms	Additional Synonyms	dbMemo	0
Taxonomic_Notes	Taxonomic Notes	dbMemo	0
Master_Common_Name	Master Common Name	dbText	50
ARCH	Park presence descriptor for ARCH	dbText	15
BLCA	Park presence descriptor for BLCA	dbText	15
BRCA	Park presence descriptor for BRCA	dbText	15
CANY	Park presence descriptor for CANY	dbText	15
CARE	Park presence descriptor for CARE	dbText	15
CEBR	Park presence descriptor for CEBR	dbText	15
COLM	Park presence descriptor for COLM	dbText	15
CURE	Park presence descriptor for CURE	dbText	15
DINO (UT)	Park presence descriptor for DINO - Utah	dbText	15
DINO (CO)	Park presence descriptor for DINO - Colorado	dbText	15
FOBU	Park presence descriptor for FOBU	dbText	15
GOSP	Park presence descriptor for GOSP	dbText	15

Field Name	Field Description	Field Type	Field Width
HOVE (UT)	Park presence descriptor for HOVE - Utah	dbText	15
HOVE (CO)	Park presence descriptor for HOVE - Colorado	dbText	15
NABR	Park presence descriptor for NABR	dbText	15
PISP	Park presence descriptor for PISP	dbText	15
TICA	Park presence descriptor for TICA	dbText	15
ZION	Park presence descriptor for ZION	dbText	15
Lifeform	Lifeform derived from USDA Plants	dbText	255
Duration	Duration derived from USDA Plants	dbText	255
Nativity	Nativity derived from USDA Plants	dbText	255
Trinomial	True if species code represents a trinomial name	dbBoolean	1
Unique_Species	True if species code represents a genus and species designation	dbBoolean	1
New_Record	Is it a new record?	dbBoolean	1
LU_Code	Shorthand (a.k.a. 6-Letter) Lookup Code	dbText	25
Wetland_Code	Code identifying wetland designation (see http://plants.usda.gov/wetinfo.html#categories)	dbText	20

Table Name: tlu_Parks

Description: Look-up table of parks in the Northern Colorado Plateau Network

Field Name	Field Description	Field Type	Field Width
ParkCode	Four-letter abbreviation for park code	dbText	5
ParkName	Full name of park where data were collected	dbText	50
ParkState	State code.	dbText	2

Table Name: tlu_Route_Statistics

Description: Table of monitoring route statistics used for reporting

Field Name	Field Description	Field Type	Field Width
Unit_Code	Park code	dbText	4
Route	Route name	dbText	50
Visit_Year	Year of data collection (yyyy)	dbInteger	2
Route_Length_k	Length of route in kilometers	dbDouble	8
Route_Area_h	Area of route in hectares	dbDouble	8
Route_Length_m	Length of route in miles	dbDouble	8
Route_Area_a	Area of route in acres	dbDouble	8
Route_Type	Type of route	dbText	50

Table Name: tlu_Size_Value

Description: Table to cross reference infestation size descriptions to numeric values

Field Name	Field Description	Field Type	Field Width
Size_Description	Infestation size description	dbText	25
Size_Value	Size number value	dbInteger	2

Table Name: tlu_Species

Description: Table to cross reference plant common names to master plant codes

Field Name	Field Description	Field Type	Field Width
Species_Name	Common name as used by field crews	dbText	50
Master_PLANT_Code	Master Plant Code	dbText	10

Metadata Tables

Table Name: tbl_master_version

Description: Table of protocol version information

Field Name	Field Description	Field Type	Field Width
project_ID	Project ID number to ensure uniqueness across all projects	dbLong	4
version_key_number	Protocol version key number	dbLong	4
version_key_date	Date of protocol version key number	dbDate	8
narrative_version	Version of protocol narrative	dbDecimal	16
version_comments	Comments regarding version, if any	dbMemo	0

Table Name: tbl_SOP_version

Description: Table of SOP version information

Field Name	Field Description	Field Type	Field Width
version_key_number	Protocol version key number	dbLong	4
SOP_number	SOP number	dbLong	4
SOP_version_number	SOP version number	dbDecimal	16
active_flag	Yes indicates SOP is active	dbBoolean	1

Table Name: tlu_projects

Description: Table of NCPN project information

Field Name	Field Description	Field Type	Field Width
project_ID	Project ID number to ensure uniqueness across all projects	dbLong	4
project_name	Project name	dbText	50
project_linkfile	Path and file name of project database	dbText	255
project_include_flag	True indicates project is to be included in query results	dbBoolean	1
project_comments	Comments regarding project, if any	dbMemo	0

Table Name: tsys_App_Releases

Description: Application table - Application release history

Field Name	Field Description	Field Type	Field Width
Release_ID	Unique identifier for the release	dbText	50
Release_date	Date of the release	dbDate	8
Database_title	Title of the database	dbText	100
Version_number	Version control number	dbText	20
File_name	Filename, used to identify older versions of the database	dbText	50
Release_by	Person who made the release	dbText	50
Release_notes	Release notes, which may include a summary of revisions	dbMemo	0
Author_phone	Phone number of application author	dbText	50
Author_email	Email address of application author	dbText	50
Author_org	Organization (NPS Unit code) for the author's place of work	dbText	10
Author_org_name	Name of organization for author's place of work	dbText	100